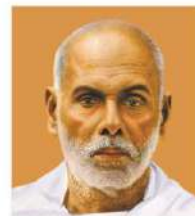


# **Sree Narayana Guru College of Engineering & Technology**

CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307

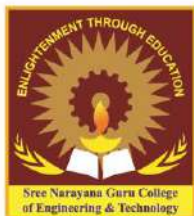


## **5.1 Student Support**

### **5.1.3 Percentage of Students Benefitted by Guidance for Competitive Examinations and Career Counseling Offered by The Institution During the Last Five Years**

**Table of Contents**

<b>Sl. No.</b>	<b>Contents</b>	<b>Page No.</b>
<b>1</b>	<b>AY 2022 – 2023 (Placement activities, students placed on and off campus, higher studies)</b>	<b>1</b>
<b>2</b>	<b>AY 2021 – 2022 (Placement activities, students placed on and off campus, higher studies)</b>	<b>333</b>
<b>3</b>	<b>AY 2020 - 2021(Placement activities, students placed on and off campus, higher studies)</b>	<b>412</b>
<b>4</b>	<b>AY 2019 - 2020(Placement activities, students placed on and off campus, higher studies)</b>	<b>455</b>
<b>5</b>	<b>AY 2018 - 2019(Placement activities, students placed on and off campus, higher studies)</b>	<b>582</b>



# **Sree Narayana Guru College of Engineering & Technology**

CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307



**AY 2022 – 2023**  
**(PLACEMENT ACTIVITIES, STUDENTS PLACED**  
**ON AND OFF CAMPUS,**  
**HIGHER STUDIES)**



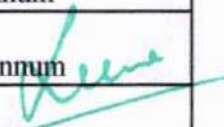


## Sree Narayana Guru College of Engineering & Technology

CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307

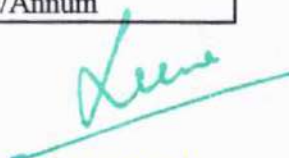


Year	Name of student placed	Program graduated from	Name of the employer with contact details	Pay package at appointment (In INR per annum) (applicable for students who got placement)
2022-23	ASHAYA RAMESH	BTECH IN CIVIL ENGINEERING	Arbee Structures Pvt.Ltd.	228000
	ASWITHA GANGADHARAN	BTECH IN CIVIL ENGINEERING	MaverixPro Ltd	200000
	ATHIRA ARUN K	BTECH IN CIVIL ENGINEERING	MaverixPro Ltd	200000
	AYSHATH SAIFA	BTECH IN CIVIL ENGINEERING	MaverixPro Ltd	200000
	SILMA M	BTECH IN CIVIL ENGINEERING	MaverixPro Ltd	200000
	SREEHARI K K	BTECH IN CIVIL ENGINEERING	Amerigon Structural Engineers Private Limited	200000
	HRISHIKA PRADEEP	B TECH IN COMPUTER SCIENCE AND ENGINEERING	MaverixPro Ltd	2.4 L/Annum
	THANYA MOHAN	B TECH IN COMPUTER SCIENCE AND ENGINEERING	QUALITEST MaverixPro Ltd	2.4 L/Annum
	THEJA RAJESH	B TECH IN COMPUTER SCIENCE AND ENGINEERING	MaverixPro Ltd	2.4 L/Annum
	PALLAVI SWAROOP KUMAR	B TECH IN COMPUTER SCIENCE AND ENGINEERING	Revenue Growth Associate	6 L/Annum
	AVANTIKA K	B TECH IN COMPUTER SCIENCE AND ENGINEERING	MaverixPro Ltd	2.4 L/Annum
	SIDARTH K	B TECH IN COMPUTER SCIENCE AND ENGINEERING	MaverixPro Ltd	2.4 L/Annum

  
**DR. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR

2022-23

FATHIMATHU SAHALA BEEVI	B TECH IN COMPUTER SCIENCE AND ENINERRING	MaverixPro Ltd	2.4 L/Annum
SAFA FATHIMA	B TECH IN COMPUTER SCIENCE AND ENINERRING	MaverixPro Ltd	2.4 L/Annum
U V VAISHNAV	B TECH IN COMPUTER SCIENCE AND ENINERRING	MaverixPro Ltd	2.4 L/Annum
SRAVAN R	B TECH IN COMPUTER SCIENCE AND ENINERRING	MaverixPro Ltd	2.4 L/Annum
VISHNU R	B TECH IN COMPUTER SCIENCE AND ENINERRING	MaverixPro Ltd	2.4 L/Annum
JEEVA NARAYANAN	B TECH IN COMPUTER SCIENCE AND ENINERRING	MaverixPro Ltd	2.4 L/Annum
SREENANDANA T V	B TECH IN COMPUTER SCIENCE AND ENINERRING	MaverixPro Ltd	2.4 L/Annum
SREENISHA K P	B TECH IN COMPUTER SCIENCE AND ENINERRING	MaverixPro Ltd	2.4 L/Annum
SMIJITH M	B TECH IN COMPUTER SCIENCE AND ENINERRING	MaverixPro Ltd	2.4 L/Annum
RAMRITHA RAJEEVAN	B TECH IN COMPUTER SCIENCE AND ENINERRING	Revenue Growth Associate	6 L/Annum
HRIDYASREE VALSAN	B TECH IN COMPUTER SCIENCE AND ENINERRING	Revenue Growth Associate	6 L/Annum
ARJUN ASHOK K	B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING	MaverixPro Ltd	2.4 L/Annum
SANISHMA SACHITHANAND	B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING	GOAN INSTITIUTE	3 L/Annum

  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR





# Sree Narayana Guru College of Engineering & Technology

KOROM, PAYYANUR, KANNUR-670 307



5.2.1 Percentage of outgoing students and students progressing to higher education during the last five years

Year	Name of students enrolling into higher education and contact details	Program graduated from	Name of institution joined	Name of program admitted to (applicable for students who progressed to higher education)
2022-23	SUNDER V	B.Tech Computer Science Engineering	Kalasalingam Academy of Research and Education	PHD in Computer Science Engineering
	THULASI BAI A	B.Tech Computer Science Engineering	Kalasalingam Academy of Research and Education	PHD in Computer Science Engineering
	VARSHA M	B.Tech Computer Science Engineering	Kalasalingam Academy of Research and Education	PHD in Computer Science Engineering
	MANEESHA K V	B.Tech in Civil Engineering	Government College of Engineering, Kannur	M.Tech in Civil Engineering
	NAGHA SREEVALSAN U	B.Tech in Civil Engineering	Government College of Engineering, Kannur	M.Tech in Civil Engineering
	ANULAKSHMI P V	B.Tech in Civil Engineering	Government College of Engineering, Kannur	M.Tech in Civil Engineering
	ANAGHA P	B.Tech in Civil Engineering	Government College of Engineering, Kannur	M.Tech in Civil Engineering(Geoinformatics)

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY, PAYYANUR**



**Korom, Chalakode P.O., Payyanur, Kannur - 670307**

**Managed by Sree Bhakthi Samvardhini Yogam, Talap, Kannur**

**Affiliated to APJ Abdul Kalam Technological University and Approved by AICTE**

## **TRAINING & PLACEMENT DEPARTMENT OF SNGCET**

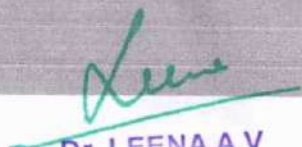
*Welcomes*



**MAVERIX<sup>PRO</sup>**

## **The Campus Recruitment Drive On 29th March 2023**



  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY**

**TRAINING & PLACEMENT CELL**

**REPORT ON PLACEMENT DRIVE BY MAVERIXPRO Ltd**

**Date: 29/03/2023**

**Venue: Seminar Hall**

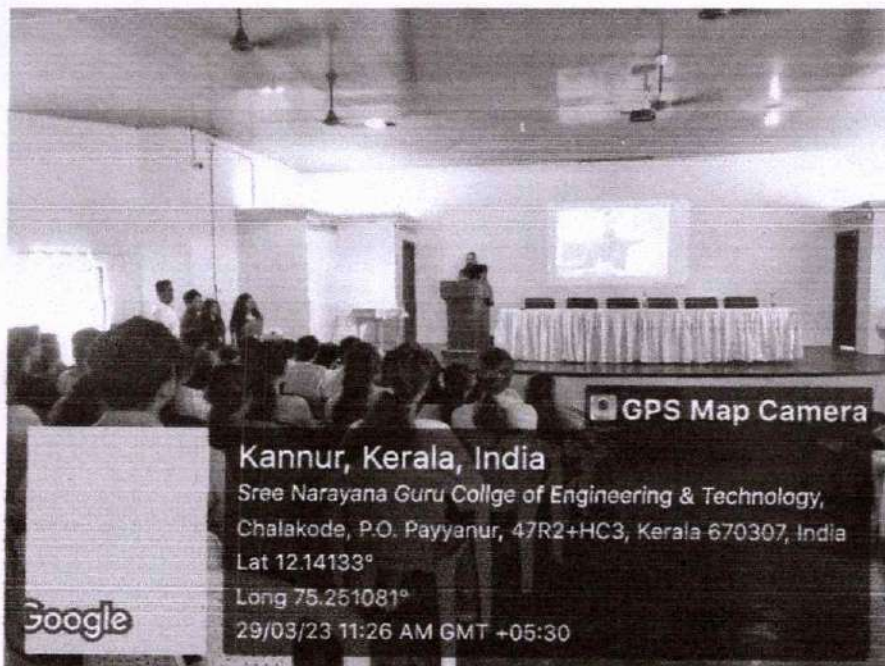
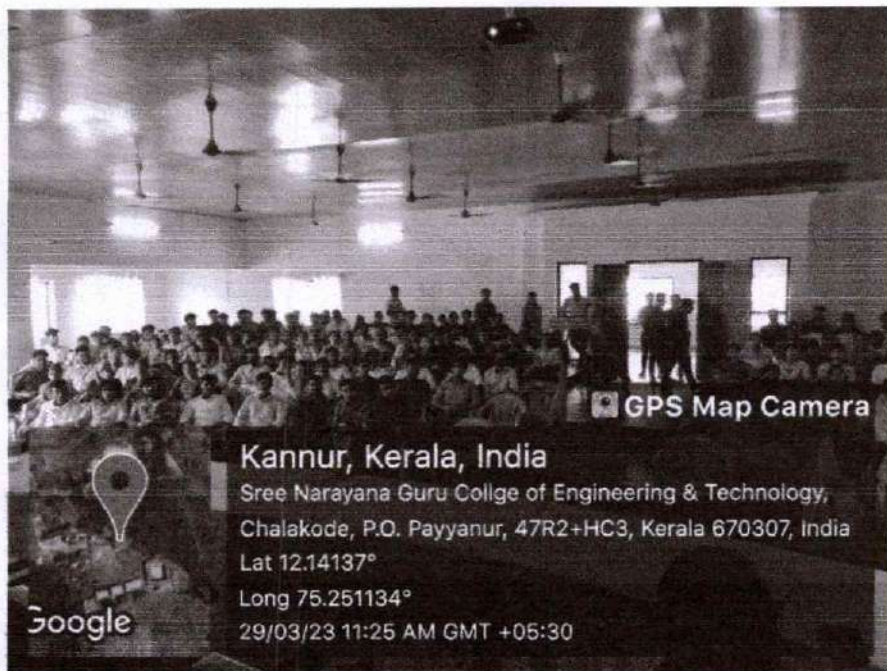
MaverixPro Ltd, a leading technology company, conducted a pool drive at SNGCET (Sree Narayana Guru College of Engineering & Technology) on 29th March 2023. The purpose of the drive was to recruit talented and enthusiastic engineering graduates for various roles within the company.

The recruitment event commenced at 9:00 AM in the college auditorium. A team of HR representatives and technical experts from MaverixPro Ltd were present to oversee the proceedings. The event was well-organized and structured, with different rounds designed to assess the candidates' skills and capabilities.

The candidates displayed a high level of enthusiasm and curiosity about the company and its offerings. Their technical knowledge and problem-solving skills were commendable, showcasing their strong academic background. Communication skills varied among candidates, with some showing exceptional articulation during the group discussion and interviews. The Q&A session indicated that candidates were interested not only in the job roles but also in understanding the company's long-term vision.

Twenty One students from various department of SNGCET got placed in the company. The pool drive concluded on a positive note, with the promise of potential collaborations between MaverixPro Ltd and the budding engineers of SNGCET. Both parties expressed gratitude for the opportunity to connect and collaborate in shaping the future of technology.

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



*Leena*

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



### List of students participated:

1	AKASH P V	CE	CREATIVE	akashpv10052001@gmail.com	8592921004
2	AADITHYA KRISHNAN C	CE	CREATIVE	aadithcnambiar@gmail.com	9567793503
3	KRISHNA PRASAD SL	CE	CREATIVE	kichuzzksd@gmail.com	9061624306
4	SREEHARI K K	CE	CREATIVE	sreeharikk8@gmail.com	8943405341
5	ABHIRAMY RAJ	CE	CREATIVE	abhiramyraj80@gmail.com	9895429496
6	Athira Arun k	CE	CREATIVE	athiraarun.05@gmail.com	8137954241
7	ASHAYA RAMESH	CE	CREATIVE	ashayaramesh8@gmail.com	7736718806
8	Ayshath Saifa	CE	CREATIVE	saifaabdulla42@gmail.com	8113091041
9	Sachin surendran. M	CE	CREATIVE	Sachinsurendran.mouvery@gmail.com	8590662672
10	Aadithya krishnan c	CE	CREATIVE	aadithcnambiar@gmail.com	9567793503
11	Manila Mahesh	CS	CREATIVE	manilamahesh989@gmail.com	9895202069
12	Anagha k	CS	CREATIVE	anaghak972@gmail.com	9747685071
13	smijith	CS	CREATIVE	smijithvineethm@gmail.com	07736912327
14	Varun	CS	CREATIVE	vc6238@gmail.com	6238909714
15	Aathish P Jagadeesh	CS	CREATIVE	aathishp007@gmail.com	9961047036
16	Jithin sasidharan nv	ECE	CREATIVE	Jithinnv200@gmail.com	8137868791
17	KEERTHANA CV	ECE	CREATIVE	keerthanaazhikode@gmail.com	7306005103
18	Jithin sasidharan nv	ECE	CREATIVE	Jithinnv200@gmail.com	8137868791
19	Sanishma sachithanand	ECE	CREATIVE	sanishma0202@gmail.com	8129133092
20	Devi Keerthana TP	EEE	CREATIVE	keerthanatp001@gmail.com	7736682369
21	Muhammed Ramadan	ME	CREATIVE	muhammed98ramadan@gmail.com	9746335404
22	Safvan im	ME	CREATIVE	safvanim9061@gmail.com	9061192878
23	Nithin A	ME	CREATIVE	Nithinworkofficial@gmail.com	9778769156
24	SANDESH K DINESH	ME	CREATIVE	sandesh27.skd@gmail.com	8848980796
25	Athul B	ME	CREATIVE	athuljr11@gmail.com	9497569602
26	Adarsh pk	ME	CREATIVE	adarshpk482@gmail.com	9074760795
27	Farhan C	ME	CREATIVE	farhanc1212@gmail.com	7994316955
28	Sreehari S Nambiar	ME	CREATIVE	nambiarsreeharis@gmail.com	8590078348
29	Mridul c	ME	CREATIVE	mridulc1998@gmail.com	7012950415
30	Mohammed Aafil Ismayil M K	ME	CREATIVE	muhdaafil@gmail.com	9947274758
31	BIPIN K	ME	CREATIVE	bipinkarivellur@gmail.com	9605243849
32	Muhammed Hannan	CE	FINANCE	Muhammedhannan13@gmail.com	9995442618
33	Nikhil sai k	CE	FINANCE	nikhilsaii2001@gmail.com	7025548812
34	Anjana c	CE	FINANCE	canjanadamu@gmail.com	8590282353
35	Ananjana	CE	FINANCE	ananjana246@gmail.com	8590789299
36	SHAMSHAD	CE	FINANCE	shamshadsadik@gmail.com	8129961302



	PV				
37	Prayag Prabhakaran	CE	FINANCE	prayag149@gmail.com	8943072291
38	Silna M	CE	FINANCE	silnarchandran535@gmail.com	8606894856
39	Pranav A K	CE	FINANCE	pranav143114@gmail.com	7907845523
40	Amar Rajendran	CS	FINANCE	amarrajendran15@gmail.com	9567292984
41	Mishab c p	CS	FINANCE	mishabcp01@gmail.com	8848659419
42	Muhammed Zahid AP	CS	FINANCE	zahid234579@gmail.com	9947609015
43	Abhijith Ram Raj P K	CS	FINANCE	abhijithramrajpk789@gmail.com	8547560021
44	Sreehari V	CS	FINANCE	srehari786123@gmail.com	7306843144
45	Vishal-k	EEE	FINANCE	kvishal234561@gmail.com	9447749330
46	VIDYASAGAR P	ME	FINANCE	pvidyasagar2000@gmail.com	8590199576
47	Arsh Ibrahim	ME	FINANCE	arshibrahim2213@gmail.com	9895591558
48	Anurag A	ME	FINANCE	anurag730620@gmail.com	7994776234
49	Anurag A	ME	FINANCE	anurag730630@gmail.com	7994776234
50	Aswitha Gangadharan	CE	IT	aswithaashs@gmail.com	7306999987
51	Anandhu ashok k p	CE	IT	anandhuashok261@gmail.com	7994303463
52	ANJALI M P	CE	IT	anjalimp15102000@gmail.com	7736498684
53	Muhammed Rufaid M	CE	IT	mohdrufaid00@gmail.com	8606460622
54	Kavya Devi M K	CS	IT	kaviadevy2001@gmail.com	8330827761
55	V K AYESHA	CS	IT	ayshavk783@gmail.com	9495143470
56	Thanya Mohan	CS	IT	thanyasparrow469@gmail.com	7736364360
57	Nipun S Anand	CS	IT	nipunjnhan@gmail.com	8547375275
58	Archana Chithran K	CS	IT	archanachithran10@gmail.com	9995564905
59	Megha pk	CS	IT	abmeghameghu162@gmail.com	+918606801676
60	SRAVAN R	CS	IT	sravanr107@gmail.com	6238614224
61	Amritha Rajeevan M	CS	IT	amritharajeev555@gmail.com	8086105948
62	UV VAISHNAV	CS	IT	vyshnavpramod10@gmail.com	7034467121
63	Theja Rajesh	CS	IT	thejarajesh58@gmail.com	9747928305
64	Pallavi Swaroop Kumar	CS	IT	pllviswaroop@gmail.com	9895098751
65	Thanmaya Sanjeev	CS	IT	thanmayasanjeev0814@gmail.com	7034160488
66	MUHAMMAD JISHAN PTK	CS	IT	jishanpcoz@gmail.com	8139076037
67	Hryshika Pradeep	CS	IT	Hryshikapradeep@gmail.com	8157924135
68	Safa Fathima	CS	IT	safafathimahere@gmail.com	9446771228
69	Parvathi K	CS	IT	parvathipradeep.2013@gmail.com	9747990249
70	Jeeva Narayanan	CS	IT	jeeva.narayanan2012@gmail.com	9895825715
71	smijith m	CS	IT	smijithvineethm@gmail.com	07736912327
72	Ramritha Rajeevan	CS	IT	ramritharajeev@gmail.com	7560922636
73	Anagha M	CS	IT	anaghasajith25@gmail.com	9994769711

SREE NARAYANA GURU COLLEGE OF  
 DISTANCE EDUCATION  
 KANNUR  
 7994769711



74	Hridyasree Valsan	CS	IT	hridyasreevalsan21@gmail.com	6238682520
75	Adarsh K	CS	IT	adarshadarsh9447@gmail.com	8943046433
76	Ajmal	CS	IT	ajmalaju96054@gmail.com	7025402317
77	althaf ashraf	CS	IT	ashrafalthaf433@gmail.com	9567434914
78	Avantika K	CS	IT	avanthkamanoj@gmail.com	9446605449
79	Vishnu R	CS	IT	vishnurayaroth405@gmail.com	8138859699
80	Ahmed Adil	CS	IT	adil52134@gmail.com	8136913950
81	ABHINAV SAJEEVAN	CS	IT	abhinavsajeevan456@gmail.com	7012804141-
82	Vishnu Prabhakaran	CS	IT	vishnucvcr9@gmail.com	7559879987
83	SAFA SAYEED V	CS	IT	safasayeed1226@gmail.com	9995588027
84	Sreenisha K P	CS	IT	sreenishakp7@gmail.com	8547102466
85	Fathimathu Sahala Beevi	CS	IT	sahalabeevi120@gmail.com	8606166116
86	Jijo Jaison	CS	IT	jijojaison03@gmail.com	8943003895
87	Sreenandana TV	CS	IT	nandanadhanaraj24@gmail.com	9544238742
89	Muhammed Rishal Ikbali	CS	IT	rishalrishu956@gmail.com	9567573242
90	Sidharth K	CS	IT	sidharthkeramam@gmail.com	9562236332
91	Mariyambi	ECE	IT	mariyambimuhammed121@gmail.com	9747910245
92	Arjun Ashok k	ECE	IT	arjunkolichal28@gmail.com	6238947548
93	Anusha jyothi	EEE	IT	anushajyothi83@gmail.com	9188191478
94	Vaishnav TV	EEE	IT	Vaishnavtv48@gmail.com	7025123728

  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



**Sree Narayana Guru College  
of Engineering & Technology**  
KOROM, PAYYANUR, KANNUR-670 307



**TRAINING AND PLACEMENT CELL**

**PLACEMENT APTITUDE TRAINING –  
FOR FINAL YEAR B.TECH STUDENTS**



FROM 7<sup>th</sup> AND 8<sup>th</sup>  
MAR 2023



SEMINAR HALL



9AM TO 4PM

CONDUCTED BY TRAINING AND PLACEMENT  
CELL OF SNGCET IN COORDINATION WITH  
TEAM PROGRESSUM

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY**  
**Promoted by Sree Bhakthi Samvardhini Yogam**  
**(Affiliated to KTU, Recognised by AICTE)**

**Report On Placement Aptitude Training  
Workshop for Final Year Students**

The "**Placement Aptitude Training Workshop**" was conducted by the Training and Placement Cell of SNGCET on 7<sup>th</sup> and 8<sup>th</sup> March 2023. The workshop emphasized the ability to perform well on their interview and react to situations at work. Aptitude training was conducted to enhance the ability of quick learning methods, along with improving the analytical skills required for the spontaneity in a particular situation.

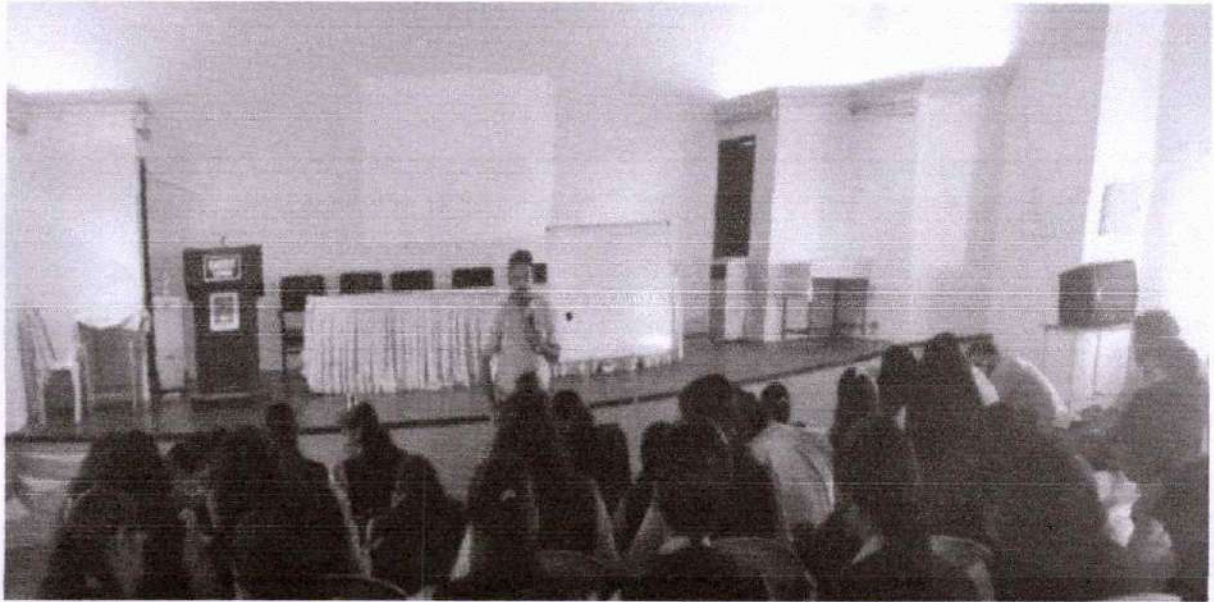
The resource persons from the team *Progressum* had conducted the workshop on, reasoning ability, quantitative aptitude, and resume building, to help students understand the concept of aptitude. The training allowed the students to think beyond boundaries and limitations, keeping in view the aspect of time management which would be very beneficial for them in their professional & personal growth. The students were encouraged to attend and contribute in aptitude classes for acquiring essential quick learning and analytical skills and consequently effectiveness and success on their job, in the future.

The training aimed at developing following skills in the students:

1. Reasoning and Quantitative
  - Statements assumption, conclusions, Assertion Test, Series & Coding Decoding, Sitting Arrangements.
2. Resume Building.

The Training and Placement Cell was able to organize the workshop successfully. The students got an opportunity to gain much knowledge in those covered topics, and the workshop had highlighted the importance of aptitude successfully among the students.

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





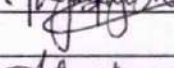
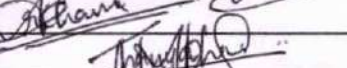
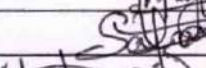

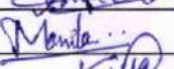



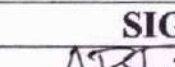
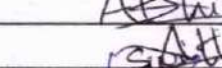
Placement Aptitude Training workshop

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

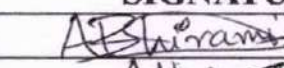





**NAME LIST OF STUDENTS WHO ATTENDED THE WORKSHOP  
FROM:**


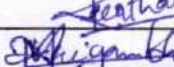
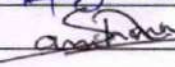

**CSE DEPARTMENT**

NAME OF THE STUDENTS	SIGNATURE
PALLAVI SWAROOP	
NIPUN	
THEJA RAJESH	
SREENISHA	
ARCHANA	
THANYA MOHAN	
SAFA	
MEGHA	
AVANTIKA	
MANILA	
KAVYA	
THANMAYA	

**CE DEPARTMENT**

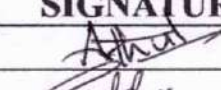
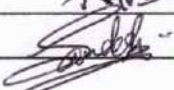
NAME OF THE STUDENTS	SIGNATURE
ABHIRAMY	
ASWITHA	
NIKHIL SAI	
SREEHARI	

**ECE DEPARTMENT**

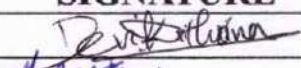
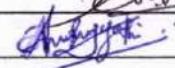
NAME OF THE STUDENTS	SIGNATURE
JITHIN	
KEERTHANA	
MARIYAMBI	
SANISHMA	

  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR

## ME DEPARTMENT

NAME OF THE STUDENTS	SIGNATURE
ATHUL B	
SANDESH	

## EEE DEPARTMENT

NAME OF THE STUDENTS	SIGNATURE
DEVI KEERTHANA	
ANUSHA JYOTHI	

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



## CCV → SAMPLE QUESTIONS

1. The mass per unit volume of a liquid at a standard temperature and pressure is called
2. The volume per unit mass of a liquid is called specific volume
- ✓ 3. The weight per unit volume of a liquid at a standard temperature and pressure is called 12
4. The specific weight of water in S.I. units is taken as
- ✓ 5. The ratio of specific weight of a liquid to the specific weight of pure water at a standard temperature is called 9
6. The specific gravity has no units
7. The specific gravity of water is taken as
- ✓ 8. The specific weight of sea water is 9
9. The density of a liquid in  $\text{kg} / \text{m}^3$  is numerically equal to its specific gravity.
10. The specific weight is also known as weight density.
- ✓ 11. The mass of  $2.5 \text{ m}^3$  of a certain liquid is 2 tonnes. Its mass density is 11
- ✓ 12. The specific gravity of an oil whose specific weight is  $7.85 \text{ kN} / \text{m}^3$ , is 12
- ✓ 13. The property of a liquid which offers resistance to the movement of one layer of liquid over another adjacent layer of liquid, is called 6
14. Kinematic viscosity is the product of dynamic viscosity and the density of the liquid.
- ✓ 15. The force per unit length is the unit of 15
- ✓ 16. The variation in the volume of a liquid with the variation of pressure is called its 16 17
17. The property of a liquid which enables it to resist tensile stress is called its surface tension
18. When a tube of smaller diameter is dipped in water, the water rises in the tube due to viscosity of water.
19. When a tube of smaller diameter is dipped in water, the water rises in the tube with an upward

20. A glass tube of smaller diameter is used while performing an experiment for the capillary rise of water because ↵
21. The mercury does not wet the glass. This is due to the property of the liquid known as *adhesion*
22. With an increase in size of tube, the rise or depression of liquid in the tube due to surface tension will
23. In the manufacturing of lead shots, the property of surface tension is utilised.
24. The unit of surface tension is *N/m*
25. The viscosity of a liquid is due to cohesion of its particles. *N*
26. Falling drops of water become spheres due to the property of *cohesion*
27. The intensity of pressure at any point, in a liquid, is
28. The pressure at a point 4m below the free surface of water is ↵
29. The height of a water column equivalent to a pressure of 0.15MPa is
30. According to Pascal's law, the intensity of pressure at any point in a fluid at rest is the same in all directions
31. The pressure measured with the help of a pressure gauge is called *gauge*
32. The atmospheric pressure at sea level is *1.01325 bar*
33. The density of air is same at different heights.
34. When the pressure intensity at a point is more than the local atmospheric pressure, then the difference of these two pressures is called
35. When the pressure intensity at a point is less than the local atmospheric pressure, then the difference of these two pressures is called vacuum pressure.
36. The vacuum pressure is always the negative gauge pressure.
37. The absolute pressure is equal to *1*
38. The pressure less than atmospheric pressure is known as
39. The pressure of a liquid measured with the help of a piezometer tube is



40. The vacuum pressure can be measured with the help of a piezometer tube.
41. The pressure measured with the help of a piezometer tube is in
42. A piezometer tube is used only for measuring  $\rho$
43. The liquid used in manometers should have  $\gamma$
44. This resistance per unit area to deformation, is called
45. The unit of stress in S.I. units is
46. The deformation per unit length is called
47. When a body is subjected to two equal and opposite pulls, as a result of which the body tends to extend its length, the stress and strain induced is
48. When a body is subjected to two equal and opposite forces, acting tangentially across the resisting section, as a result of which the body tends to shear off across the section, the stress and strain induced is
49. Hook's law holds good up to
50. The ratio of linear stress to the linear strain is called
51. The unit of modulus of elasticity is same as those of
52. When a change in length takes place, the strain is known as
53. The modulus of elasticity for mild steel is approximately equal to
54. Young's modulus may be defined as the ratio of
55. Modulus of rigidity may be defined as the ratio of
56. Two bars of different materials and same size are subjected to the same tensile force. If the bars have unit elongation in the ratio of 2 : 5, then the ratio of modulus of elasticity of the two materials will be
57. Strain rosetters are used to
58. A bar of length  $L$  metres extends by 1 mm under a tensile force of  $P$ . The strain produced in the bar is

59. The maximum stress produced in a bar of tapering section is at

60. Modular ratio of the two materials is the ratio of

Name: PRANAV A.K

Roll No:- SN19CE016



**SREE NARAYANA GURU COLLEGE OF ENGINEERING**  
**& TECHNOLOGY**

Internal Test	<u>1</u>	Academic Year/Semester	<b>2022-23 / S6</b>
Subject name with code	<u>CET404</u>	Branch	
Date of Exam		Duration	
Starting time		Max. Marks	

1. Which of the following statements regarding the cube strength of concrete are correct?

- (i) Strength increases with decrease in cube size  
(ii) Strength decreases with increase in slenderness ratio Time: 60 min. (iii) Strength increases with increase in slenderness ratio  
(iv) Strength decreases with decreases in cube size
- (A) (i) and (ii) are correct (B) (i), (ii), (iii) are correct  
(C) (i) and (iii) are correct (D) All the above

2. Which of the following statements regarding properties of concrete are correct?

- (p) Modulus of elasticity of M25 grade of concrete is 25000 MPa.  
(q) Approximate value of shrinkage strain of concrete is 0.0003  
(r) pH value of water used in concrete construction should not be less than 6.
- (A) p and q are correct (B) p and r are correct (C) q and r are correct  
(D) all the above are correct

3. The long term modulus of elasticity of M25 grade concrete with q value at 7 days to be 2.2 is

- (A) 25000 MPa (B) 7812.5 MPa



(C) 3500 MPa

(D) None

4. Consider the following statements regarding the air entrained concrete? (1) Increased resistance to freezing and thawing

(2) Improvement in workability.

(3) Increase in strength.

(4) Permits reduction in water content of these,

(A) 1, 2, 4 are correct

☒ (B) 2, 3, 4 are correct

(C) 1, 3, 4 are correct

(D) All the above are correct

5. Which of the following statements regarding admixtures are correct? (A) Retards the setting of cement ☒ (B) Accelerates the setting of cement (C) Improves the workability of concrete (D) All the above

6. Consider the following statements:

I. The compressive strength of concrete decreases with increase in water cement ratio of the concrete mix.

II. Water is added to the concrete mix for hydration of cement and workability.

III. Creep and shrinkage of concrete are independent of the water cement ratio in the concrete mix.

The true statements are

☒ (A) I and III

(B) I, II, III

(C) II and III

(D) I and II

7. Consider the following statements:

I. Modulus of elasticity of concrete increases with increase in compressive strength of concrete

II. Brittleness of concrete increases with decrease in compressive strength of concrete.

III. Shear strength of concrete increases with increase in compressive strength of concrete.

The true statements are

- (A) I and III      ☒ (B) I, II, III  
(C) II and III      (D) I and II

8. Consider the following statements:

- (p) Nominal mix proportions for M20 grade concrete is 1 : 1.5 : 3  
(q) Weight batching is preferred compared to nominal (volume) batching  
(r) Maximum cement content as per IS456-2000 is 450 kg/m<sup>3</sup>

- (A) p, q are correct      ☒ (B) p, r are correct  
(C) q, r are correct      (D) p, q and r are correct

9. Which of the following statements given below are correct.

- (p) Nominal cover to reinforcement is based on serviceability or durability requirements  
(q) Factors affecting the durability of concrete are w/c and maximum cement content  
(r) Minimum cement content is not based on exposure conditions.

- (A) p, q, r are correct      ☒ (B) p and q are correct  
(C) p and r are correct      (D) only p is correct

10. Consider the following statements regarding the addition of pozzolanas to cement causes

- (p) Increase in strength (q) Less heat of hydration (r) Decrease in workability

The true statements are

- ☒ (A) p, q, r are correct      (C) p and r are correct  
(B) p and q are correct      (D) q only is correct

11. The composition of air entrained concrete is given below:

Water : 180 kg/m<sup>3</sup>.

Ordinary Portland cement: 360 kg/m<sup>3</sup>

Sand : 601 kg/m<sup>3</sup> Coarse aggregate: 1160 kg/m<sup>3</sup>



Assume the specific gravity of OPC, sand and coarse aggregate to be 3.10, 2.65 and 2.74 respectively, the air content in liters/m<sup>3</sup> is \_\_\_\_\_

☒ (A) 53 liters/m<sup>3</sup>

(B) 50 liters/m<sup>3</sup>

(C) 45 liters/m<sup>3</sup>

(D) None

12. Consider the following statements

(p) Nominal maximum size of coarse aggregate to be used in R.C.C is 20 mm

(q) As per IS456-2000; fine sand to be used in R.C.C should confirm to zone II and medium sand.

(r) Minimum grade of concrete to be used in R.C.C is M30 The true statements are

(A) p and q are true

(B) p and r are true

☒ (C) p, q and r are true

(D) q and r are true

13. Which of the following statements given below are correct?

(p) In mild environment, surface crack width should not exceed 0.3 mm as per IS456-2000.

(q) Crack width increases with increase in stress in reinforcement bar.

(r) Concrete and steel exhibit high strength after being subjected to high temperature.

(A) p and r are correct

(B) p, q and r are correct

☒ (C) p and q are correct

(D) None

14. The ratio of the volume of air voids to the volume of voids, is called

A. void ratio

☒ B. air content

C. degree of saturation

☒ D. Porosity

15. The specific gravity of sandy soils is

A. 1.2

B. 1.8

C. 2.2

D. 2.7

16. According to Indian standards, the dispersing solution used in pipette method, for the determination of size of particle consists of

7 g sodium carbonate, 43 g sodium

7 g sodium carbonate, 33 g sodium

A. hexameta-phosphate and 1 litre  
distilled water

B. hexameta-phosphate and 1 litre  
distilled water

7 g sodium carbonate, 23 g sodium

C. hexameta-phosphate and 1 litre  
distilled water

D. any one of the above

17. The water content in a soil at which just shear strength develops is called

A. liquid limit

B. plastic limit

C. elastic limit

D. shrinkage limit

18. Which of the following gives the correct decreasing order of the densities of a soil sample?

A. Saturated, submerged, wet, dry

B. Saturated, wet, submerged, dry

C. Saturated, wet, dry, submerged

D. Wet, saturated, submerged, dry

19. The ratio of the unconfined compressive strength of undisturbed soil to the unconfined compressive strength of soil in a remoulded state, is called



A. sensitivity

B. thixotropy

C. relative density

D. bulk density

20. A body floating in a liquid is said to be in neutral equilibrium, if its metacentre

A. coincides with its centre of gravity

B. lies above its centre of gravity

C. lies below its centre of gravity

D. lies between the centre of buoyancy and centre of gravity

21. A flow through an expanding tube at constant rate is called

A. steady uniform flow

B. steady non-uniform flow

C. unsteady uniform flow

D. unsteady non-uniform flow

22. The total energy of a liquid particle in motion is equal to

A. pressure energy + kinetic energy + potential energy

B. pressure energy - (kinetic energy + potential energy)

C. potential energy - (pressure energy + kinetic energy)

D. kinetic energy - (pressure energy + potential energy)

23. The discharge over a rectangular notch is

A. inversely proportional to  $H^{3/2}$

B. directly proportional to  $H^{3/2}$

C. inversely proportional to  $H^{5/2}$

D. directly proportional to  $H^{5/2}$



24. The sheet of water flowing over a notch or a weir is known as

A. sill or crest

B. nappe or vein

C. orifice

D. none of these

25. The total energy line lies over the hydraulic gradient line by an amount equal to the

A. pressure head

B. velocity head

C. pressure head + velocity head

D. pressure head - velocity head

26. Select the wrong statement

A. An equivalent pipe is treated as an ordinary pipe for all calculations

B. The length of an equivalent pipe is equal to that of a compound pipe

C. The discharge through an equivalent pipe is equal to that of a compound pipe

D. The diameter of an equivalent pipe is equal to that of a compound pipe

27. When a cylindrical vessel, containing some liquid, is rotated about its vertical axis, the liquid surface is depressed down at the axis of its rotation and rises up near the walls of the vessel on all sides. This type of flow is known as

A. steady flow

B. turbulent flow

C. vortex flow

D. uniform flow

28. fluid whose viscosity does not change with the rate of deformation or shear strain is known

A. real fluid

B. ideal fluid

C. newtonian fluid

D. non-newtonian fluid

29. Whenever some external system of forces acts on a body, it undergoes some deformation. As the body undergoes some deformation, it sets up some resistance to the deformation. This resistance per unit area to deformation, is called

A. stress

B. stress

C. pressure

D. modulus of elasticity

30. A beam extending beyond the supports is called

A. simply supported beam

B. fixed beam

C. overhanging beam

D. cantilever beam

31. A concentrated load is one which

A. acts at a point on a beam

B. spreads non-uniformly over the whole length of a beam

C. spreads uniformly over the whole length of a beam

D. varies uniformly over the whole length of a beam

32. The section modulus ( $Z$ ) of a beam is given by



A.  $I/y$

B.  $I.y$

C.  $y/I$

D.  $M/I$

33. beam of T-section is subjected to a shear force of  $F$ . The maximum shear force will occur at the

A. top of the section

B. bottom of the section

C. neutral axis of the section

D. junction of web and flange

34. A rectangular beam of length  $l$  supported at its two ends carries a central point load  $W$ . The maximum deflection occurs

A. at the ends

B. at  $l/3$  from both ends

C. at the centre

D. none of these

35. The load required to produce a unit deflection in a spring is called

A. flexural rigidity

B. torsional rigidity

C. spring stiffness

D. Young's modulus

36. The Rankine's theory for active earth pressure is based on the assumption that

A. the retained material is homogeneous and cohesionless

B. the frictional resistance between the retaining wall and the retained

material is neglected

the failure of the retained material

C. takes place along a plane called  
rupture plane

D. all of the above

37. If percentage reduction in area of a certain specimen made of material 'A' under tensile test is 60% and the percentage reduction in area of a specimen with same dimensions made of material 'B' is 40%, then

A. the material A is more ductile than  
material B

B. the material B is more ductile than  
material A

C. the ductility of material A and B is  
equal

D. the material A is brittle and material B  
is ductile

38. Factor of safety is defined as the ratio of

A. ultimate stress to working stress

B. working stress to ultimate stress

C. breaking stress to ultimate stress

D. ultimate stress to breaking stress

39. The failure of foundation of a building is due to

A. withdrawal of subsoil moisture

B. unequal settlement of soil

C. lateral escape of the supporting  
material

D. all of these



40. The bearing capacity of soils can be improved by

- ☒ A. increasing the depth of footing      ☒ B. draining the sub-soil water
- ☐ C. ramming the granular material like  
crushed stone in the soil      ☐ D. all of the above

41. brick masonry, for good bonding

- ☐ A. all bricks need not be uniform in size      ☐ B. bats must be used in alternate courses  
only
- ☒ C. vertical joints in alternate courses  
should fall in plumb      ☐ D. cement mortar used must have surkhi  
as additive

42. The size of a step commonly adopted for residential buildings is

- ☒ A. 250 mm x 160 mm      ☐ B. 270 mm x 150 mm
- ☐ C. 300 mm x 130 mm      ☒ D. 350 mm x 100 mm

43. A weir, generally, used as a spillway of a dam is

- ☒ A. narrow crested weir      ☐ B. broad crested weir
- ☐ C. Ogee weir      ☒ D. submerged weir

44. The hydraulic mean depth for a circular pipe of diameter (d) is

A.  $d/6$

B.  $d/4$

C.  $d/2$

D.  $d$

45. The coefficient of venturiflume, generally lies between

A. 0.3 to 0.45

B. 0.50 to 0.75

C. 0.75 to 0.95

D. 0.95 to 1.0



Name: Aswatha Gargulhasan

Roll No:- 09.....



**SREE NARAYANA GURU COLLEGE OF ENGINEERING**  
**& TECHNOLOGY**

Internal Test		Academic Year/Semester	2022-23 / S8
Subject name with code	COMPREHENSIVE VIVA VOCE	Branch	CE
Date of Exam	03/05/2023	Duration	
Starting time		Max. Marks	

1. Which of the following statements regarding the cube strength of concrete are correct?

- (i) Strength increases with decrease in cube size  
(ii) Strength decreases with increase in slenderness ratio Time: 60 min. (iii) ☒ Strength increases with increase in slenderness ratio  
(iv) Strength decreases with decreases in cube size  
(A) (i) and (ii) are correct (B) (i), (ii), (iii) are correct  
(C) (i) and (iii) ☒ are correct (D) All the above

2. Which of the following statements regarding properties of concrete are correct?

- (p) Modulus of elasticity of M25 grade of concrete is 25000 MPa.  
(q) Approximate value of shrinkage strain of concrete is 0.0003  
(r) pH value of water used in concrete construction should not be less than 6.  
(A) p and q are correct (B) p and r are correct (C) q and r are correct  
(D) ☒ all the above are correct

3. The long term modulus of elasticity of M25 grade concrete with q value at 7 days to be 2.2 is

- (A) ☒ 25000 MPa (B) 7812.5 MPa

(C) 3500 MPa

(D) None

4. Consider the following statements regarding the air entrained concrete? (1) Increased resistance to freezing and thawing

(2) Improvement in workability.

(3) Increase in strength.

(4) Permits reduction in water content of these,

(A) 1, 2, 4 are correct

(B) 2, 3, 4 are correct

(C) 1, 3, 4 are correct

(D) All the above are correct

5. Which of the following statements regarding admixtures are correct? (A) Retards the setting of cement (B) Accelerates the setting of cement (C) Improves the workability of concrete (D) All the above

6. Consider the following statements:

I. The compressive strength of concrete decreases with increase in water cement ratio of the concrete mix.

II. Water is added to the concrete mix for hydration of cement and workability.

III. Creep and shrinkage of concrete are independent of the water cement ratio in the concrete mix.

The true statements are

(A) I and III

(B) I, II, III

(C) II and III

(D) I and II

7. Consider the following statements:

I. Modulus of elasticity of concrete increases with increase in compressive strength of concrete

II. Brittleness of concrete increases with decrease in compressive strength of concrete.

III. Shear strength of concrete increases with increase in compressive strength of concrete.



The true statements are

- (A) I and III                      (B) ~~I, II, III~~  
(C) II and III                    (D) I and II

8. Consider the following statements:

- (p) Nominal mix proportions for M20 grade concrete is 1 : 1.5 : 3  
(q) Weight batching is preferred compared to nominal (volume) batching  
(r) Maximum cement content as per IS456-2000 is 450 kg/m<sup>3</sup>

- (A) p, q are correct                      (B) p, r are correct  
(C) q, r are correct                      (D) ~~p, q and r are correct~~

9. Which of the following statements given below are correct.

- (p) Nominal cover to reinforcement is based on serviceability or durability requirements  
(q) Factors affecting the durability of concrete are w/c and maximum cement content  
(r) Minimum cement content is not based on exposure conditions.

- (A) p, q, r are correct                      (B) p and q are correct  
(C) p and r are correct                      (D) ~~only p is correct~~

10. Consider the following statements regarding the addition of pozzolanas to cement causes

- (p) Increase in strength (q) ~~Less heat of hydration~~ (r) Decrease in workability

The true statements are

- (A) p, q, r are correct                      (C) p and r are correct  
(B) p and q are correct                      (D) ~~q only is correct~~

11. The composition of air entrained concrete is given below:

Water : 180 kg/m<sup>3</sup>

Ordinary Portland cement: 360 kg/m<sup>3</sup>

Sand : 601 kg/m<sup>3</sup> Coarse aggregate: 1160 kg/m<sup>3</sup>

Assume the specific gravity of OPC, sand and coarse aggregate to be 3.10, 2.65 and 2.74 respectively, the air content in liters/m<sup>3</sup> is \_\_\_\_\_

(A) 53 liters/m<sup>3</sup>

(B) 50 liters/m<sup>3</sup>

(C) 45 liters/m<sup>3</sup>

(D) None

12. Consider the following statements

(p) Nominal maximum size of coarse aggregate to be used in R.C.C is 20 mm

(q) As per IS456-2000; fine sand to be used in R.C.C should confirm to zone II and medium sand.

(r) Minimum grade of concrete to be used in R.C.C is M30 The true statements are

(A) p and q are true

(B) p and r are true

(C) p, q and r are true

(D) q and r are true

13. Which of the following statements given below are correct?

(p) In mild environment, surface crack width should not exceed 0.3 mm as per IS456-2000.

(q) Crack width increases with increase in stress in reinforcement bar.

(r) Concrete and steel exhibit high strength after being subjected to high temperature.

(A) p and r are correct

(B) p, q and r are correct

(C) p and q are correct

(D) None

14. The ratio of the volume of air voids to the volume of voids, is called

A. void ratio

B. air content

C. degree of saturation

D. Porosity

15. The specific gravity of sandy soils is



A. 1.2

B. 1.8

C. 2.2

D. 2.7

16. According to Indian standards, the dispersing solution used in pipette method, for the determination of size of particle consists of

7 g sodium carbonate, 43 g sodium

7 g sodium carbonate, 33 g sodium

A. hexameta-phosphate and 1 litre  
distilled water

B. hexameta-phosphate and 1 litre  
distilled water

7 g sodium carbonate, 23 g sodium

C. hexameta-phosphate and 1 litre  
distilled water

D. any one of the above

17. The water content in a soil at which just shear strength develops is called

A. liquid limit

B. plastic limit

C. elastic limit

D. shrinkage limit

18. Which of the following gives the correct decreasing order of the densities of a soil sample?

A. Saturated, submerged, wet, dry

B. Saturated, wet, submerged, dry

C. Saturated, wet, dry, submerged

D. Wet, saturated, submerged, dry

19. The ratio of the unconfined compressive strength of undisturbed soil to the unconfined compressive strength of soil in a remoulded state, is called

A. sensitivity

B. ~~thixotropy~~

C. relative density

D. bulk density

20. A body floating in a liquid is said to be in neutral equilibrium, if its metacentre

A. ~~coincides~~ with its centre of gravity

B. lies above its centre of gravity

C. lies below its centre of gravity

D. lies between the centre of buoyancy and centre of gravity

21. A flow through an expanding tube at constant rate is called

A. steady uniform flow

B. ~~steady~~ non-uniform flow

C. unsteady uniform flow

D. unsteady non-uniform flow

22. The total energy of a liquid particle in motion is equal to

A. pressure energy + kinetic energy + potential energy

B. ~~pressure energy - (kinetic energy + potential energy)~~

C. potential energy - (pressure energy + kinetic energy)

D. kinetic energy - (pressure energy + potential energy)

23. The discharge over a rectangular notch is

A. inversely proportional to  $H^{3/2}$

B. directly proportional to  $H^{3/2}$

C. ~~inversely~~ proportional to  $H^{5/2}$

D. directly proportional to  $H^{5/2}$



24. The sheet of water flowing over a notch or a weir is known as

- A. sill or crest
- B. nappe or vein
- C. orifice
- D. none of these

25. The total energy line lies over the hydraulic gradient line by an amount equal to the

- A. pressure head
- B. velocity head
- C. pressure head + velocity head
- D. pressure head - velocity head

26. Select the wrong statement

- A. An equivalent pipe is treated as an ordinary pipe for all calculations
- B. The length of an equivalent pipe is equal to that of a compound pipe
- C. The discharge through an equivalent pipe is equal to that of a compound pipe
- D. The diameter of an equivalent pipe is equal to that of a compound pipe

27. When a cylindrical vessel, containing some liquid, is rotated about its vertical axis, the liquid surface is depressed down at the axis of its rotation and rises up near the walls of the vessel on all sides. This type of flow is known as

- A. steady flow
- B. turbulent flow
- C. vortex flow
- D. uniform flow

28. fluid whose viscosity does not change with the rate of deformation or shear strain is known

as

A. real fluid

B. ideal fluid

C. newtonian fluid

D. non-newtonian fluid

29. Whenever some external system of forces acts on a body, it undergoes some deformation. As the body undergoes some deformation, it sets up some resistance to the deformation. This resistance per unit area to deformation, is called

A. strain

B. stress

C. pressure

D. modulus of elasticity

30. A beam extending beyond the supports is called

A. simply supported beam

B. fixed beam

C. overhanging beam

D. cantilever beam

31. A concentrated load is one which

A. acts at a point on a beam

B. spreads non-uniformly over the whole length of a beam

C. spreads uniformly over the whole length of a beam

D. varies uniformly over the whole length of a beam

32. The section modulus (Z) of a beam is given by



A.  $I/y$

B.  $I.y$

C.  $y/I$

D.  $M/I$

33. beam of T-section is subjected to a shear force of  $F$ . The maximum shear force will occur at the

A. top of the section

B. bottom of the section

C. neutral axis of the section

D. junction of web and flange

34. A rectangular beam of length  $l$  supported at its two ends carries a central point load  $W$ . The maximum deflection occurs

A. at the ends

B. at  $l/3$  from both ends

C. at the centre

D. none of these

35. The load required to produce a unit deflection in a spring is called

A. flexural rigidity

B. torsional rigidity

C. spring stiffness

D. Young's modulus

36. The Rankine's theory for active earth pressure is based on the assumption that

A. the retained material is homogeneous and cohesionless

B. the frictional resistance between the retaining wall and the retained

material is neglected

the failure of the retained material

C. takes place along a plane called  
rupture plane

D. all of the above

37. If percentage reduction in area of a certain specimen made of material 'A' under tensile test is 60% and the percentage reduction in area of a specimen with same dimensions made of material 'B' is 40%, then

A. the material A is more ductile than  
material B

B. the material B is more ductile than  
material A

C. the ductility of material A and B is  
equal

D. the material A is brittle and material B  
is ductile

38. Factor of safety is defined as the ratio of

A. ultimate stress to working stress

B. working stress to ultimate stress

C. breaking stress to ultimate stress

D. ultimate stress to breaking stress

39. The failure of foundation of a building is due to

A. withdrawal of subsoil moisture

B. unequal settlement of soil

C. lateral escape of the supporting  
material

D. all of these



40. The bearing capacity of soils can be improved by

- A. increasing the depth of footing
- B. draining the sub-soil water
- C. ramming the granular material like crushed stone in the soil
- D. all of the above

41. brick masonry, for good bonding

- A. all bricks need not be uniform in size
- B. bats must be used in alternate courses only
- C. vertical joints in alternate courses should fall in plumb
- D. cement mortar used must have surkhi as additive

42. The size of a step commonly adopted for residential buildings is

- A. 250 mm x 160 mm
- B. 270 mm x 150 mm
- C. 300 mm x 130 mm
- D. 350 mm x 100 mm

43. A weir, generally, used as a spillway of a dam is

- A. narrow crested weir
- B. broad crested weir
- C. Ogee weir
- D. submerged weir

44. The hydraulic mean depth for a circular pipe of diameter (d) is

A.

$d/6$

B.

$d/4$

C.

$d/2$

D.

$d$

45. The coefficient of venturiflume, generally lies between

A.

0.3 to 0.45

B.

0.50 to 0.75

C.

0.75 to 0.95

D.

0.95 to 1.0



Name: Ananjana.....

Roll No:- 05.....



**SREE NARAYANA GURU COLLEGE OF ENGINEERING**  
**& TECHNOLOGY**

Internal Test		Academic Year/Semester	2022-23 / S6 98
Subject name with code		Branch	
Date of Exam	03/05/2023	Duration	
Starting time		Max. Marks	50

1. Which of the following statements regarding the cube strength of concrete are correct?

(i) Strength increases with decrease in cube size

(ii) Strength decreases with increase in slenderness ratio Time: 60 min. (iii) Strength increases with increase in slenderness ratio

(iv) Strength decreases with decreases in cube size

☒ (A) (i) and (ii) are correct

(B) (i), (ii), (iii) are correct

(C) (i) and (iii) are correct

(D) All the above

2. Which of the following statements regarding properties of concrete are correct?

(p) Modulus of elasticity of M25 grade of concrete is 25000 MPa.

(q) Approximate value of shrinkage strain of concrete is 0.0003

(r) pH value of water used in concrete construction should not be less than 6.

(A) p and q are correct

(B) p and r are correct (C) q and r are

correct

(D) all the above are correct

3. The long term modulus of elasticity of M25 grade concrete with q value at 7 days to be 2.2 is

☒ (A) 25000 MPa

(B) 7812.5 MPa

- (C) 3500 MPa (D) None

4. Consider the following statements regarding the air entrained concrete? (1) Increased resistance to freezing and thawing

(2) Improvement in workability.

(3) Increase in strength.

(4) Permits reduction in water content of these,

- (A) 1, 2, 4 are correct (B) 2, 3, 4 are correct  
(C) 1, 3, 4 are correct (D) All the above are correct

5. Which of the following statements regarding admixtures are correct? (A) Retards the setting of cement (B) Accelerates the setting of cement (C) Improves the workability of concrete (D) All the above

6. Consider the following statements:

I. The compressive strength of concrete decreases with increase in water cement ratio of the concrete mix.

II. Water is added to the concrete mix for hydration of cement and workability.

III. Creep and shrinkage of concrete are independent of the water cement ratio in the concrete mix.

The true statements are

- (A) I and III (B) I, II, III  
(C) II and III (D) I and II

7. Consider the following statements:

I. Modulus of elasticity of concrete increases with increase in compressive strength of concrete

II. Brittleness of concrete increases with decrease in compressive strength of concrete.

III. Shear strength of concrete increases with increase in compressive strength of concrete.



The true statements are

- (A) I and III                      (B) I, II, III  
(C) II and III                    (D) I and II

8. Consider the following statements:

- (p) Nominal mix proportions for M20 grade concrete is 1 : 1.5 : 3  
(q) Weight batching is preferred compared to nominal (volume) batching  
(r) Maximum cement content as per IS456-2000 is 450 kg/m<sup>3</sup>

- (A) p, q are correct                      (B) p, r are correct  
(C) q, r are correct                      ☒ (D) p, q and r are correct

9. Which of the following statements given below are correct.

- (p) Nominal cover to reinforcement is based on serviceability or durability requirements  
(q) Factors affecting the durability of concrete are w/c and maximum cement content  
(r) Minimum cement content is not based on exposure conditions.

- (A) p, q, r are correct                      ☒ (B) p and q are correct  
(C) p and r are correct                      (D) only p is correct

10. Consider the following statements regarding the addition of pozzolanas to cement causes

- (p) Increase in strength (q) Less heat of hydration (r) Decrease in workability

The true statements are

- (A) p, q, r are correct                      (C) p and r are correct  
(B) p and q are correct                      (D) q only is correct

11. The composition of air entrained concrete is given below:

Water : 180 kg/m<sup>3</sup>

Ordinary Portland cement: 360 kg/m<sup>3</sup>

Sand : 601 kg/m<sup>3</sup> Coarse aggregate: 1160 kg/m<sup>3</sup>

Assume the specific gravity of OPC, sand and coarse aggregate to be 3.10, 2.65 and 2.74 respectively, the air content in liters/m<sup>3</sup> is \_\_\_\_\_

- (A) 53 liters/m<sup>3</sup>
- (B) 50 liters/m<sup>3</sup>
- (C) 45 liters/m<sup>3</sup>
- (D) None

12. Consider the following statements

- (p) Nominal maximum size of coarse aggregate to be used in R.C.C is 20 mm
  - (q) As per IS456-2000; fine sand to be used in R.C.C should confirm to zone II and medium sand.
  - (r) Minimum grade of concrete to be used in R.C.C is M30
- The true statements are

- (A) p and q are true
- (B) p and r are true
- (C) p, q and r are true
- (D) q and r are true

13. Which of the following statements given below are correct?

- (p) In mild environment, surface crack width should not exceed 0.3 mm as per IS456-2000.
- (q) Crack width increases with increase in stress in reinforcement bar.
- (r) Concrete and steel exhibit high strength after being subjected to high temperature.

- (A) p and r are correct
- (B) p, q and r are correct
- (C) p and q are correct
- (D) None

14. The ratio of the volume of air voids to the volume of voids, is called

- ☒ A. void ratio
- B. air content
- C. degree of saturation
- D. Porosity

15. The specific gravity of sandy soils is



A. 1.2

B. 1.8

C. 2.2

D. 2.7

16. According to Indian standards, the dispersing solution used in pipette method, for the determination of size of particle consists of

7 g sodium carbonate, 43 g sodium

7 g sodium carbonate, 33 g sodium

A. hexameta-phosphate and 1 litre  
distilled water

B. hexameta-phosphate and 1 litre  
distilled water

7 g sodium carbonate, 23 g sodium

C. hexameta-phosphate and 1 litre  
distilled water

D. any one of the above

17. The water content in a soil at which just shear strength develops is called

A. liquid limit

B. plastic limit

C. elastic limit

D. shrinkage limit

18. Which of the following gives the correct decreasing order of the densities of a soil sample?

A. Saturated, submerged, wet, dry

B. Saturated, wet, submerged, dry

C. Saturated, wet, dry, submerged

D. Wet, saturated, submerged, dry

19. The ratio of the unconfined compressive strength of undisturbed soil to the unconfined compressive strength of soil in a remoulded state, is called

A. sensitivity

B. thixotropy

C. relative density

D. bulk density

20. A body floating in a liquid is said to be in neutral equilibrium, if its metacentre

A. coincides with its centre of gravity

B. lies above its centre of gravity

C. lies below its centre of gravity

D. lies between the centre of buoyancy and centre of gravity

21. A flow through an expanding tube at constant rate is called

A. steady uniform flow

B. steady non-uniform flow

C. unsteady uniform flow

D. unsteady non-uniform flow

22. The total energy of a liquid particle in motion is equal to

A. pressure energy + kinetic energy + potential energy

B. pressure energy - (kinetic energy + potential energy)

C. potential energy - (pressure energy + kinetic energy)

D. kinetic energy - (pressure energy + potential energy)

23. The discharge over a rectangular notch is

A. inversely proportional to  $H^{3/2}$

B. directly proportional to  $H^{3/2}$

C. inversely proportional to  $H^{5/2}$

D. directly proportional to  $H^{5/2}$



24. The sheet of water flowing over a notch or a weir is known as

A. sill or crest

☒ B. nappe or vein

C. orifice

D. none of these

25. The total energy line lies over the hydraulic gradient line by an amount equal to the

A. pressure head

B. velocity head

☒ C. pressure head + velocity head

D. pressure head - velocity head

26. Select the wrong statement

A. An equivalent pipe is treated as an ordinary pipe for all calculations

B. The length of an equivalent pipe is equal to that of a compound pipe

☒ C. The discharge through an equivalent pipe is equal to that of a compound pipe

D. The diameter of an equivalent pipe is equal to that of a compound pipe

27. When a cylindrical vessel, containing some liquid, is rotated about its vertical axis, the liquid surface is depressed down at the axis of its rotation and rises up near the walls of the vessel on all sides. This type of flow is known as

A. steady flow

☒ B. turbulent flow

C. vortex flow

D. uniform flow

28. fluid whose viscosity does not change with the rate of deformation or shear strain is known

as

A. real fluid

B. ideal fluid

C. newtonian fluid

D. non-newtonian fluid

29. Whenever some external system of forces acts on a body, it undergoes some deformation. As the body undergoes some deformation, it sets up some resistance to the deformation. This resistance per unit area to deformation, is called

A. strain

B. stress

C. pressure

D. modulus of elasticity

30. A beam extending beyond the supports is called

A. simply supported beam

B. fixed beam

C. overhanging beam

D. cantilever beam

31. A concentrated load is one which

A. acts at a point on a beam

B. spreads non-uniformly over the whole length of a beam

C. spreads uniformly over the whole length of a beam

D. varies uniformly over the whole length of a beam

32. The section modulus ( $Z$ ) of a beam is given by



A.  $I / y$

B.  $I \cdot y$

C.  $y / I$

D.  $M / I$

33. beam of T-section is subjected to a shear force of  $F$ . The maximum shear force will occur at the

A. top of the section

B. bottom of the section

C. neutral axis of the section

D. junction of web and flange

34. A rectangular beam of length  $l$  supported at its two ends carries a central point load  $W$ . The maximum deflection occurs

A. at the ends

B. at  $l / 3$  from both ends

C. at the centre

D. none of these

35. The load required to produce a unit deflection in a spring is called

A. flexural rigidity

B. torsional rigidity

C. spring stiffness

D. Young's modulus

36. The Rankine's theory for active earth pressure is based on the assumption that

A. the retained material is homogeneous and cohesionless

B. the frictional resistance between the retaining wall and the retained

material is neglected

the failure of the retained material

C. takes place along a plane called  
rupture plane

D. all of the above

37. If percentage reduction in area of a certain specimen made of material 'A' under tensile test is 60% and the percentage reduction in area of a specimen with same dimensions made of material 'B' is 40%, then

A. the material A is more ductile than  
material B

B. the material B is more ductile than  
material A

C. the ductility of material A and B is  
equal

D. the material A is brittle and material B  
is ductile

38. Factor of safety is defined as the ratio of

A. ultimate stress to working stress

B. working stress to ultimate stress

C. breaking stress to ultimate stress

D. ultimate stress to breaking stress

39. The failure of foundation of a building is due to

A. withdrawal of subsoil moisture

B. unequal settlement of soil

C. lateral escape of the supporting  
material

D. all of these



40. The bearing capacity of soils can be improved by

- A. increasing the depth of footing
- B. draining the sub-soil water
- C. ramming the granular material like crushed stone in the soil
- D. all of the above

41. brick masonry, for good bonding

- A. all bricks need not be uniform in size
- B. bats must be used in alternate courses only
- C. vertical joints in alternate courses should fall in plumb
- D. cement mortar used must have surkhi as additive

42. The size of a step commonly adopted for residential buildings is

- A. 250 mm x 160 mm
- B. 270 mm x 150 mm
- C. 300 mm x 130 mm
- D. 350 mm x 100 mm

43. A weir, generally, used as a spillway of a dam is

- A. narrow crested weir
- B. broad crested weir
- C. Ogee weir
- D. submerged weir

44. The hydraulic mean depth for a circular pipe of diameter (d) is

A.  $d/6$

☒ B.  $d/4$

C.  $d/2$

D.  $d$

45. The coefficient of venturiflume, generally lies between

A. 0.3 to 0.45

☒ B. 0.50 to 0.75

C. 0.75 to 0.95

D. 0.95 to 1.0



**Name:** ..... Preehavi K-K

**Roll No:- .....**



**SREE NARAYANA GURU COLLEGE OF ENGINEERING**  
**& TECHNOLOGY**

<i>Internal Test</i>		<i>Academic Year/Semester</i>	<b>2022-23 / S6</b>
<i>Subject name with code</i>		<i>Branch</i>	
<i>Date of Exam</i>		<i>Duration</i>	
<i>Starting time</i>		<i>Max. Marks</i>	

Chemical weathering of soil is caused due to

- A. oxidation  
B. hydration  
C. carbonation and leaching  
D. all of these

The property of a soil which is of great importance in finding settlement of structures, is

- A. permeability
- B. shear strength
- ☒ C. consolidation
- D. compressibility

The ratio of the volume of air voids to the volume of voids, is called

- A. void ratio  
B. air content  
C. degree of saturation  
D. Porosity

The ratio of the unit weight of soil solids to that of water is called

- A. void ratio  
B. porosity  
C. specific gravity  
D. degree of saturation





soil sample is having a specific gravity of 2.60 and a void ratio of 0.78. The water content in percentage required to fully saturate the soil at that void ratio will be

- ☒ A. 10
- B. 30
- C. 50
- D. 70

The specific gravity of sandy soils is

- A. 1.2
- B. 1.8
- C. 2.2
- ☒ D. 2.7

According to Indian standards, the dispersing solution used in pipette method, for the determination of size of particle consists of

- A. 7 g sodium carbonate, 43 g sodium hexameta-phosphate and 1 litre distilled water
- ☒ B. 7 g sodium carbonate, 33 g sodium hexameta-phosphate and 1 litre distilled water
- C. 7 g sodium carbonate, 23 g sodium hexameta-phosphate and 1 litre distilled water
- D. any one of the above

When the hydrometer analysis is performed, it requires correction for

- A. temperature only
- B. meniscus only
- C. dispersing agent only
- ☒ D. all of these

If the volume of voids is equal to the volume of soil solids, then the values of porosity and void ratio are respectively

- A. 0 and 0.5
- B. 0 and 1
- ☒ C. 0.5 and 1
- D. 1 and 0.5

A soil having uniformity co-efficient more than 10, is called

- ☒ A. uniform soil
- B. poor soil



C. well graded soil

D. coarse soil

According to Indian standards, in a 2 mm sieve

☒ A. there are two holes

B. each sieve is circular and its diameter is 2 mm

C. each hole is a square and its side is 2 mm

D. there are two holes per cm length of the mesh

The water content in a soil at which just shear strength develops is called

☐ A. liquid limit

☒ B. plastic limit

☐ C. elastic limit

☐ D. shrinkage limit

The ratio of the unconfined compressive strength of undisturbed soil to the unconfined compressive strength of soil in a remoulded state, is called

☐ A. sensitivity

☐ B. thixotropy

☒ C. relative density

☐ D. bulk density

The liquid limit minus plastic limit is termed as

A. flow index

B. plasticity index

☒ C. shrinkage index

D. liquidity index

The water content of soils can be accurately determined by

A. sand bath method

B. calcium carbide method

☒ C. oven drying method

D. Pycnometer method

Which of the following gives the correct decreasing order of the densities of a soil sample?

☒ A. Saturated, submerged, wet, dry

B. Saturated, wet, submerged, dry



C. Saturated, wet, dry, submerged

D. Wet, saturated, submerged, dry

For a given soil mass, the void ratio is 0.60, water content is 18% and specific gravity of the soil particles is 2.6. The degree of saturation of the soil is

A. 30%

B. 50%

☒ C. 78%

D. 82.50%

The relation between the air content ( $ac$ ) and the degree of saturation ( $s$ ) is

A.  $ac = s$

B.  $ac = 1 - s$

C.  $ac = 1 + s$

☒ D.  $ac = 1/s$

The minimum size of grains of silts is about

A. 0.0002 mm

B. 0.002 mm

☒ C. 0.02 mm

D. 0.2 mm

Chemical weathering of soil is caused due to

A. oxidation

☒ B. hydration

C. carbonation and leaching

D. all of these



Name: Shamsud P. U

Roll No:- SALCIA CEO19



**SREE NARAYANA GURU COLLEGE OF ENGINEERING**  
**& TECHNOLOGY**

<i>Internal Test</i>		<i>Academic Year/Semester</i>	<b>2022-23 / S6</b>
<i>Subject name with code</i>		<i>Branch</i>	
<i>Date of Exam</i>		<i>Duration</i>	
<i>Starting time</i>		<i>Max. Marks</i>	

Chemical weathering of soil is caused due to

- A. oxidation  
B. hydration  
C. carbonation and leaching  
D. all of these

The property of a soil which is of great importance in finding settlement of structures, is

- A. permeability                      B. shear strength  
C. consolidation                    D. compressibility

The ratio of the volume of air voids to the volume of voids, is called

- A. void ratio  
B. air content  
C. degree of saturation  
D. Porosity

The ratio of the unit weight of soil solids to that of water is called

- A. void ratio
- ~~B. porosity~~
- C. specific gravity
- D. degree of saturation



1951

1951

1951

1951

1951

1951

1951



soil sample is having a specific gravity of 2.60 and a void ratio of 0.78. The water content in percentage required to fully saturate the soil at that void ratio will be

- A. 10
- B. 30
- C. 50
- ☒ D. 70

The specific gravity of sandy soils is

- A. 1.2
- ☒ B. 1.8
- C. 2.2
- D. 2.7

According to Indian standards, the dispersing solution used in pipette method, for the determination of size of particle consists of

- A. 7 g sodium carbonate, 43 g sodium hexameta-phosphate and 1 litre distilled water
- ☒ B. 7 g sodium carbonate, 33 g sodium hexameta-phosphate and 1 litre distilled water
- ☒ C. 7 g sodium carbonate, 23 g sodium hexameta-phosphate and 1 litre distilled water
- D. any one of the above

When the hydrometer analysis is performed, it requires correction for

- ☒ A. temperature only
- B. meniscus only
- C. dispersing agent only
- D. all of these

If the volume of voids is equal to the volume of soil solids, then the values of porosity and void ratio are respectively

- A. 0 and 0.5
- ☒ B. 0 and 1
- C. 0.5 and 1
- D. 1 and 0.5

A soil having uniformity co-efficient more than 10, is called

- A. uniform soil
- ☒ B. poor soil

C. well graded soil

D. coarse soil

According to Indian standards, in a 2 mm sieve

A. there are two holes

B. each sieve is circular and its diameter is 2 mm

C. each hole is a square and its side is 2 mm

☒ D. there are two holes per cm length of the mesh

The water content in a soil at which just shear strength develops is called

A. liquid limit

B. plastic limit

☒ C. elastic limit

D. shrinkage limit

The ratio of the unconfined compressive strength of undisturbed soil to the unconfined compressive strength of soil in a remoulded state, is called

☒ A. sensitivity

B. thixotropy

C. relative density

D. bulk density

The liquid limit minus plastic limit is termed as

A. flow index

B. plasticity index

C. shrinkage index

☒ D. liquidity index

The water content of soils can be accurately determined by

A. sand bath method

☒ B. calcium carbide method

C. over drying method

D. Pycnometer method

Which of the following gives the correct decreasing order of the densities of a soil sample?

A. Saturated, submerged, wet, dry

B. Saturated, wet, submerged, dry





C. Saturated, wet, dry, submerged

D. Wet, saturated, submerged, dry

For a given soil mass, the void ratio is 0.60, water content is 18% and specific gravity of the soil particles is 2.6. The degree of saturation of the soil is

A. 30%

☒ B. 50%

C. 78%

D. 82.50%

The relation between the air content (ac) and the degree of saturation (s) is

A.  $ac = s$

B.  $ac = 1 - s$

☒ C.  $ac = 1 + s$

D.  $ac = 1/s$

The minimum size of grains of silts is about

A. 0.0002 mm

☒ B. 0.002 mm

C. 0.02 mm

D. 0.2 mm

Chemical weathering of soil is caused due to

A. oxidation

B. hydration

☒ C. carbonation and leaching

D. all of these





Name: Selva M.

Roll No:- .....



**SREE NARAYANA GURU COLLEGE OF ENGINEERING**  
**& TECHNOLOGY**

Internal Test		Academic Year/Semester	2022-23 / S6
Subject name with code		Branch	
Date of Exam		Duration	
Starting time		Max. Marks	

Chemical weathering of soil is caused due to

- A. oxidation                      B. hydration  
C. carbonation and leaching                      D. all of these

The property of a soil which is of great importance in finding settlement of structures, is

- A. permeability                      B. shear strength  
C. consolidation                      D. compressibility

The ratio of the volume of air voids to the volume of voids, is called

- A. void ratio                      B. air content  
C. degree of saturation                      D. Porosity

The ratio of the unit weight of soil solids to that of water is called

- A. void ratio                      B. porosity  
C. specific gravity                      D. degree of saturation

soil sample is having a specific gravity of 2.60 and a void ratio of 0.78. The water content in percentage required to fully saturate the soil at that void ratio will be

- A. 10
- B. 30
- C. 50
- D. 70

The specific gravity of sandy soils is

- A. 1.2
- B. 1.8
- C. 2.2
- D. 2.7

According to Indian standards, the dispersing solution used in pipette method, for the determination of size of particle consists of

- A. 7 g sodium carbonate, 43 g sodium hexameta-phosphate and 1 litre distilled water
- B. 7 g sodium carbonate, 33 g sodium hexameta-phosphate and 1 litre distilled water
- C. 7 g sodium carbonate, 23 g sodium hexameta-phosphate and 1 litre distilled water
- D. any one of the above

When the hydrometer analysis is performed, it requires correction for

- A. temperature only
- B. meniscus only
- C. dispersing agent only
- D. all of these

If the volume of voids is equal to the volume of soil solids, then the values of porosity and void ratio are respectively

- A. 0 and 0.5
- B. 0 and 1
- C. 0.5 and 1
- D. 1 and 0.5

A soil having uniformity co-efficient more than 10, is called

- A. uniform soil
- B. poor soil





C. well graded soil

D. coarse soil

According to Indian standards, in a 2 mm sieve

A. there are two holes

B. each sieve is circular and its diameter is 2 mm

☒ C. each hole is a square and its side is 2 mm

D. there are two holes per cm length of the mesh

The water content in a soil at which just shear strength develops is called

A. liquid limit

B. plastic limit

C. elastic limit

D. shrinkage limit

The ratio of the unconfined compressive strength of undisturbed soil to the unconfined compressive strength of soil in a remoulded state, is called

A. sensitivity

☒ B. thixotropy

C. relative density

D. bulk density

The liquid limit minus plastic limit is termed as

A. flow index

B. plasticity index

☒ C. shrinkage index

D. liquidity index

The water content of soils can be accurately determined by

A. sand bath method

B. calcium carbide method

C. over drying method

☒ D. Pycnometer method

Which of the following gives the correct decreasing order of the densities of a soil sample?

A. Saturated, submerged, wet, dry

☒ B. Saturated, wet, submerged, dry

C. Saturated, wet, dry, submerged

☒ D. Wet, saturated, submerged, dry

For a given soil mass, the void ratio is 0.60, water content is 18% and specific gravity of the soil particles is 2.6. The degree of saturation of the soil is

☒ A. 30%

B. 50%

C. 78%

D. 82.50%

The relation between the air content ( $a_c$ ) and the degree of saturation ( $s$ ) is

☒ A.  $a_c = s$

B.  $a_c = 1 - s$

C.  $a_c = 1 + s$

D.  $a_c = 1/s$

The minimum size of grains of silts is about

A. 0.0002 mm

☒ B. 0.002 mm

C. 0.02 mm

D. 0.2 mm

Chemical weathering of soil is caused due to

A. oxidation

☒ B. hydration

C. carbonation and leaching

D. all of these







# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

## COURSE TEAM MEETING CHECKLIST

SEMESTER: VIII

DATE OF THE MEETING: 4/12/23

VENUE: CE Dept.

TIME: 10:AM

1. NAME OF THE FACULTY: REVATHI-P
2. DEPARTMENT: CIVIL ENGINEERING
3. SUBJECT CODE AND NAME: CET404, COMPREHENSIVE COURSE VIVA
4. DETAILS REGARDING THE SUBJECT:

WHETHER HANDLING SUBJECT FOR THE FIRST TIME? IF NOT MENTION THE COUNT EXCLUDING THIS TIME	YES
TARGET PASS PERCENTAGE	100%
NATURE OF THE SUBJECT	EASY / MODERATE / TOUGH
CPS	COMPLETED / NOT COMPLETED
ATTENDANCE REGISTER	COMPLETED / NOT COMPLETED
ASSESSMENT PLAN	FILED / NOT FILED
ACADEMIC CALENDAR	FILED / NOT FILED
QP & SCHEME OF FIRST ASSIGNMENT	AVAILABLE / NOT AVAILABLE
QP & SCHEME OF SERIES TEST 1	AVAILABLE / NOT AVAILABLE
FEEDBACK OF THE TUTOR REGARDING THE CLASS	—
ACTION PLAN BY THE FACULTY TO ACHIEVE TARGET PASS PERCENTAGE	—
ANY OTHER REMARKS FROM THE FACULTY	—

*Revathi P*  
4/12/23  
FACULTY

*Long P*  
4/12/23  
COURSE CHAIRMAN

*Maya*  
HOD  
4/12/23



SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

**CET404 COMPREHENSIVE VIVA VOCE CUMULATIVE  
ATTENDANCE**

SL NO.	REG NO	NAME	ATTENDANCE (%)	ATTENDANCE (Marks)
1	SNC19CE001	AADITHYA KRISHNAN.C	87	9
2	SNC19CE002	ABHIRAMY RAJ	90	10
3	SNC19CE003	AKASH.P.V	87	9
4	SNC19CE004	ANANDHU ASHOK KP	83	8
5	SNC19CE005	ANANJANA.C	93	10
6	SNC19CE006	ANJALI MP	87	9
7	SNC19CE007	ANJANA.C	87	9
8	SNC19CE008	ASHAYA RAMESH	93	10
9	SNC19CE009	ASWITHA GANGADHARAN	87	9
10	SNC19CE010	ATHIRA ARUN K	87	9
11	SNC19CE011	AYSHATH SAIFA	77	7
12	SNC19CE012	KRISHNA PRASAD S L	83	8
13	SNC19CE013	MUHAMMED HANNAN	77	7
13	SNC19CE014	MUHAMMED RUFAID M	67	5
15	SNC19CE015	NIKHIL SAI.K	90	10
16	SNC19CE016	PRANAV.A.K	77	7
17	SNC19CE017	PRAYAG PRABHAKARAN	77	7
18	SNC19CE018	SACHIN SURENDRAN.M	77	7
19	SNC19CE019	SHAMSHAD.P.V	77	7
20	SNC19CE020	SILNA.M	83	8
21	LSNC19CE021	SREEHARI K K	87	9

*[Signature]*

[HOD, CE]

*[Signature]*

Dr. L. S. S. V.  
Principal  
Sree Narayana Guru College of Engineering & Technology  
Kannur





**APJ Abdul Kalam Technological University**  
**CET Campus, Thiruvananthapuram**  
**Kerala -695016**  
**India**

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

Students Examination Eligibility Details

Academic Year : 2022 - 2023

Degree Type : Regular

Program :  
B.Tech(Full Time)

Branch : CIVIL ENGINEERING

Semester : S8

Course Name : COMPREHENSIVE VIVA VOCE-  
CET404

Batch : 1

Eligibility For : Pursuing Students

Period of Registration : NA

Student Name	Attendance %, Internal Marks/50	Availed Leaves	Disc. Action	Eligible for Written Exam	Status:	In- eligibility Type
AADITHYA KRISHNAN C Register No : SNC19CE001	Attendance : 87.0 Internal Marks : 44.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
ABHIRAMY RAJ Register No : SNC19CE002	Attendance : 90.0 Internal Marks : 45.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
AKASH P V Register No : SNC19CE003	Attendance : 87.0 Internal Marks : 42.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
ANANDHU ASHOK K P Register No : SNC19CE004	Attendance : 83.0 Internal Marks : 41.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	

**Dr. LEENA A. V.**  
**PRINCIPAL**  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY, PAYYANUR  
 KANNUR



ANANJANA C Register No : SNC19CE005	Attendance : 93.0 Internal Marks : 44.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
ANJALI M P Register No : SNC19CE006	Attendance : 87.0 Internal Marks : 44.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
ANJANA C Register No : SNC19CE007	Attendance : 87.0 Internal Marks : 46.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
ASHAYA RAMESH Register No : SNC19CE008	Attendance : 93.0 Internal Marks : 46.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
ASWITHA GANGADHARAN Register No : SNC19CE009	Attendance : 87.0 Internal Marks : 46.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
ATHIRA ARUN K Register No : SNC19CE010	Attendance : 87.0 Internal Marks : 44.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
AYSHATH SAIFA Register No : SNC19CE011	Attendance : 77.0 Internal Marks : 38.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
KRISHNA PRASAD S L Register No : SNC19CE012	Attendance : 83.0 Internal Marks : 43.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
MUHAMMED HANNAN Register No : SNC19CE013	Attendance : 77.0 Internal Marks : 38.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
MUHAMMED RUFAD M Register No : SNC19CE014	Attendance : 67.0 Internal Marks : 0.0/50	Long Leave : Yes Duty Leave :		Yes	Submitted by college	



Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

NIKHIL SAI K Register No : SNC19CE015	Attendance : 90.0 Internal Marks : 42.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
PRANAV A K Register No : SNC19CE016	Attendance : 77.0 Internal Marks : 37.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
PRAYAG PRABHAKARAN Register No : SNC19CE017	Attendance : 77.0 Internal Marks : 40.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
SACHIN SURENDRAN M Register No : SNC19CE018	Attendance : 77.0 Internal Marks : 38.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
SHAMSHAD PV Register No : SNC19CE019	Attendance : 77.0 Internal Marks : 37.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
SILNA M Register No : SNC19CE020	Attendance : 83.0 Internal Marks : 43.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	
SREEHARI K K Register No : LSNC19CE021	Attendance : 87.0 Internal Marks : 46.0/50	Long Leave : Duty Leave :		Yes	Submitted by college	



**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR

## ANNEXURE 1

FORM P05/01

## PEER SUPPORT FOR LEARNING &amp; TEACHING THROUGH OBSERVATION

## PART 1: PRE-OBSERVATION MEETING

The faculty being observed should complete this form in preparation for a short meeting with their peer observation group / observer prior to the session to be observed.

## Peer Observation Group:

1. Name & Department Ms. Shanya Sukumaran, CE
2. Name & Department Ms. Revathi - P, CE

## Details of Teaching / Learning Session to be observed:

Observed: Revathi - PObserver: Shanya SukumaranDay/ Date / Time: 22/5/23, 10 AMGroup / Location: SE CE/classroomType of Session / Duration: Viva, 1hrNo of Students: 21Topic / Title of Session: ENVIRONMENTAL ENGINEERING

## What are the objectives for the session (both for you and for the students)?

objective type questions based on environmental engineering

Signature of policy approving authority	CHAIRMAN	Date of approval: <u>22/5/23</u>
---	----------	----------------------------------

Shanya  
22/05/23

Maya  
[HOD, CE]



What would you like feedback on? (e.g. use of visual aids / the white board, your voice, interaction with the students, pace, use of examples, use of new techniques etc.)

- interaction with students.

Are there any factors which the observer needs to be aware of? (e.g. problems relating to the group or individual students, you are trying out something new etc.)

- NIL

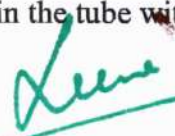
Signature of policy approving authority	CHAIRMAN	Date of approval: 22/5/23
---	----------	---------------------------

*[Signature]*  
22/5/23

*[Signature]*

## CCV → SAMPLE QUESTIONS

1. The mass per unit volume of a liquid at a standard temperature and pressure is called
2. The volume per unit mass of a liquid is called specific volume
- ✓ 3. The weight per unit volume of a liquid at a standard temperature and pressure is called 12
4. The specific weight of water in S.I. units is taken as
- ✓ 5. The ratio of specific weight of a liquid to the specific weight of pure water at a standard temperature is called 9
6. The specific gravity has no units
7. The specific gravity of water is taken as
- ✓ 8. The specific weight of sea water is 8
9. The density of a liquid in  $\text{kg} / \text{m}^3$  is numerically equal to its specific gravity.
10. The specific weight is also known as weight density.
- ✓ 11. The mass of  $2.5 \text{ m}^3$  of a certain liquid is 2 tonnes. Its mass density is 11
- ✓ 12. The specific gravity of an oil whose specific weight is  $7.85 \text{ kN} / \text{m}^3$ , is 11
- ✓ 13. The property of a liquid which offers resistance to the movement of one layer of liquid over another adjacent layer of liquid, is called 6
14. Kinematic viscosity is the product of dynamic viscosity and the density of the liquid.
- ✓ 15. The force per unit length is the unit of 11
- ✓ 16. The variation in the volume of a liquid with the variation of pressure is called its 11 13
17. The property of a liquid which enables into resist tensile stress is called its surface tension
18. When a tube of smaller diameter is dipped in water, the water rises in the tube due to viscosity of water.
19. When a tube of smaller diameter is dipped in water, the water rises in the tube with an upward

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR

20. A glass tube of smaller diameter is used while performing an experiment for the capillary rise of water because ↵
21. The mercury does not wet the glass. This is due to the property of the liquid known as *adhesion*
22. With an increase in size of tube, the rise or depression of liquid in the tube due to surface tension will
23. In the manufacturing of lead shots, the property of surface tension is utilised.
24. The unit of surface tension is *N/m*
25. The viscosity of a liquid is due to cohesion of its particles. *19*
26. Falling drops of water become spheres due to the property of *cohesion*
27. The intensity of pressure at any point, in a liquid, is
28. The pressure at a point 4m below the free surface of water is *5*
29. The height of a water column equivalent to a pressure of 0.15MPa is
30. According to Pascal's law, the intensity of pressure at any point in a fluid at rest is the same in all directions
31. The pressure measured with the help of a pressure gauge is called *gauge*
32. The atmospheric pressure at sea level is *2*
33. The density of air is same at different heights.
34. When the pressure intensity at a point is more than the local atmospheric pressure, then the difference of these two pressures is called
35. When the pressure intensity at a point is less than the local atmospheric pressure, then the difference of these two pressures is called vacuum pressure.
36. The vacuum pressure is always the negative gauge pressure.
37. The absolute pressure is equal to *17*
38. The pressure less than atmospheric pressure is known as
39. The pressure of a liquid measured with the help of a piezometer tube is



40. The vacuum pressure can be measured with the help of a piezometer tube.
41. The pressure measured with the help of a piezometer tube is in
42. A piezometer tube is used only for measuring  $p$
43. The liquid used in manometers should have  $\gamma$
44. This resistance per unit area to deformation, is called
45. The unit of stress in S.I. units is
46. The deformation per unit length is called
47. When a body is subjected to two equal and opposite pulls, as a result of which the body tends to extend its length, the stress and strain induced is
48. When a body is subjected to two equal and opposite forces, acting tangentially across the resisting section, as a result of which the body tends to shear off across the section, the stress and strain induced is
49. Hook's law holds good up to
50. The ratio of linear stress to the linear strain is called
51. The unit of modulus of elasticity is same as those of
52. When a change in length takes place, the strain is known as
53. The modulus of elasticity for mild steel is approximately equal to
54. Young's modulus may be defined as the ratio of
55. Modulus of rigidity may be defined as the ratio of
56. Two bars of different materials and same size are subjected to the same tensile force.  
If the bars have unit elongation in the ratio of 2 : 5, then the ratio of modulus of elasticity of the two materials will be
57. Strain rosetters are used to
58. A bar of length  $L$  metres extends by 1 mm under a tensile force of  $P$ . The strain produced in the bar is

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR

59. The maximum stress produced in a bar of tapering section is at

60. Modular ratio of the two materials is the ratio of



Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY  
PAYYANUR**

**DEPARTMENT OF CIVIL ENGINEERING**

**STUDENTS LIST S8 CE**

SL.NO	REGISTER NUMBER	NAME OF STUDENT
1	SNC19CE001	AADITHYA KRISHNAN.C
2	SNC19CE002	ABHIRAMY RAJ
3	SNC19CE003	AKASH.P.V
4	SNC19CE004	ANANDHU ASHOK KP
5	SNC19CE005	ANANJANA.C
6	SNC19CE006	ANJALI M P
7	SNC19CE007	ANJANA.C
8	SNC19CE008	ASHAYA RAMESH
9	SNC19CE009	ASWITHA GANGADHARAN
10	SNC19CE010	ATHIRA ARUN K
11	SNC19CE011	AYSHATH SAIFA
12	SNC19CE012	KRISHNA PRASAD S L
13	SNC19CE013	MUHAMMED HANNAN
14	SNC19CE014	MUHAMMED RUFAID M
15	SNC19CE015	NIKHIL SAI.K
16	SNC19CE016	PRANAV A.K
17	SNC19CE017	PRAYAG PRABHAKARAN
18	SNC19CE018	SACHIN SURENDRAN.M
19	SNC19CE019	SHAMSHAD P.V
20	SNC19CE020	SILNA.M
21	LSNC19CE021	SREEHARI K K

**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



CET404	COMPREHENSIVE COURSE VIVA	CATEGORY	L	T	P	CREDIT
		PCC	1	0	0	1

**Preamble:** The objective of this Course viva is to ensure the basic knowledge of each student in the most fundamental core courses in the curriculum. The viva voce shall be conducted based on the core subjects studied from third to eighth semester. This course helps the learner to become competent in placement tests and other competitive examinations.

#### Guidelines

1. The course should be mapped with a faculty and classes shall be arranged for practicing questions based on the core courses listed in the curriculum.
2. The viva voce will be conducted by the same three member committee assigned for final project phase II evaluation. It comprises of Project coordinator, expert from Industry/research Institute and a senior faculty from a sister department.
3. The pass minimum for this course is 25.
4. The mark will be treated as internal and should be uploaded along with internal marks of other courses.
5. Comprehensive Viva should be conducted along with final project evaluation by the three member committee.

#### Mark Distribution

Total marks: 50, only CIE, minimum required to pass : 25 Marks

*Maeylg*  
4/2/23  
[HOD, CE]

2014

*Dr. Leena A. V.*  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING AND TECHNOLOGY, PATTANUR  
TAMIL NADU



# **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

## **DEPARTMENT OF CIVIL ENGINEERING**

### **VISION OF THE DEPARTMENT**

- To pursue excellence in Civil Engineering and related technology towards sustainable development and to bring out professionals with futuristic vision

### **MISSION OF THE DEPARTMENT**

- To mould students into outstanding Civil Engineers by inculcating technological competency in planning, designing, analyzing and execution, through conducive environment for education and committed faculty.
- To contribute to nation building and development of society through innovation and design of sustainable infrastructure.
- To enhance employability, imbibe professional ethics, encourage entrepreneurship and equip for higher education.

*Maya*

*Leena*  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

CET404	COMPREHENSIVE COURSE VIVA	CATEGORY	L	T	P	CREDIT
		PEC	1	0	0	1

**Preamble:** The objective of this Course viva is to ensure the basic knowledge of each student in the most fundamental core courses in the curriculum. The viva voce shall be conducted based on the core subjects studied from third to eighth semester. This course helps the learner to become competent in placement tests and other competitive examinations.

#### Guidelines

1. The course should be mapped with a faculty and classes shall be arranged for practicing questions based on the core courses listed in the curriculum.
2. The viva voce will be conducted by the same three member committee assigned for final project phase II evaluation. It comprises of Project coordinator, expert from Industry/research Institute and a senior faculty from a sister department.
3. The pass minimum for this course is 25.
4. The mark will be treated as internal and should be uploaded along with internal marks of other courses.
5. Comprehensive Viva should be conducted along with final project evaluation by the three member committee.

#### Mark Distribution

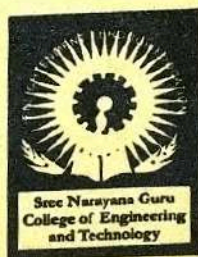
Total marks: 50; only CIE, minimum required to pass : 25 Marks



*[Signature]*  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA JAGADGUR COLLEGE OF  
ENGINEERING, PAYYANUR



DEGREE / BRANCH..CIVIL.....ENGINEERING.....  
SEMESTER.....58.....SUBJECT CODE.CET 404.....  
SUBJECT ..COMPREHENSIVE.....COURSE ..VIVA.....  
CLASSES  
COMMENCING DATE ..30/1/23.....ENDING DATE..26/5/23.....  
ACADEMIC YEAR ..2022-2023.....



# **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**P.O. CHALAKKODE - PAYYANUR.**

Approved by AICTE, New Delhi, Affiliated to APJ Abdul Kalam Technological University, and Managed by Sree Bhakthi Samvardhini Yogam, Talap, Kottur

## **ATTENDANCE AND ASSESSMENT RECORD**



### Mission

To provide technical education of the highest quality and standard of excellence for socio-economic progress embedded in clearly articulated values and supported by commitments.

### Vision

A knowledge society promoting human excellence and enlightenment through effective education.

**SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY**



## **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

P.O. CHALAKKODE - PAVANUR.

Approved by ANTE, New Delhi, Affiliated to APJ Abdul Kalam Technological University, and Managed by Sree Bhakti Samvardhani Yogan, Talas, Kanner

## **ATTENDANCE AND ASSESSMENT RECORD**

NAME OF STAFF Ms. REVATHI.P  
DESIGNATION ASSISTANT PROFESSOR  
DEPARTMENT CIVIL ENGINEERING











Signature of Staff Member

Module Co-ordinator

HOD



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY  
PAYYANUR**

**DEPARTMENT OF CIVIL ENGINEERING**

**STUDENTS LIST S8 CE**

SLNO	REGISTER NUMBER	NAME OF STUDENT
1	SNC19CE001	AADITHYA KRISHNAN.C
2	SNC19CE002	ABHIRAMY RAJ
3	SNC19CE003	AKASH.P.V
4	SNC19CE004	ANANDHU ASHOK KP
5	SNC19CE005	ANANJANA.C
6	SNC19CE006	ANJALI M P
7	SNC19CE007	ANJANA.C
8	SNC19CE008	ASHAYA RAMESH
9	SNC19CE009	ASWITHA GANGADHARAN
10	SNC19CE010	ATHIRA ARUN K
11	SNC19CE011	AYSHATH SAIFA
12	SNC19CE012	KRISHNA PRASAD S L
13	SNC19CE013	MUHAMMED HANNAN
14	SNC19CE014	MUHAMMED RUFAID M
15	SNC19CE015	NIKHIL SAI.K
16	SNC19CE016	PRANAV A.K
17	SNC19CE017	PRAYAG PRABHAKARAN
18	SNC19CE018	SACHIN SURENDRAN.M
19	SNC19CE019	SHAMSHAD P.V
20	SNC19CE020	SILNA.M
21	LSNC19CE021	SREEHARI K K





SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

**CET404 COMPREHENSIVE VIVA VOCE CUMULATIVE  
ATTENDANCE**

SL NO.	REG NO	NAME	ATTENDANCE (%)	ATTENDANCE (Marks)
1	SNC19CE001	AADITHYA KRISHNAN.C	87	9
2	SNC19CE002	ABHIRAMY RAJ	90	10
3	SNC19CE003	AKASH.P.V	87	9
4	SNC19CE004	ANANDHU ASHOK KP	83	8
5	SNC19CE005	ANANJANA.C	93	10
6	SNC19CE006	ANJALI MP	87	9
7	SNC19CE007	ANJANA.C	87	9
8	SNC19CE008	ASHAYA RAMESH	93	10
9	SNC19CE009	ASWITHA GANGADHARAN	87	9
10	SNC19CE010	ATHIRA ARUN K	87	9
11	SNC19CE011	AYSHATH SAIFA	77	7
12	SNC19CE012	KRISHNA PRASAD S L	83	8
13	SNC19CE013	MUHAMMED HANNAN	77	7
13	SNC19CE014	MUHAMMED RUFAD M	67	5
15	SNC19CE015	NIKHIL SAIK	90	10
16	SNC19CE016	PRANAV.A.K	77	7
17	SNC19CE017	PRAYAG PRABHAKARAN	77	7
18	SNC19CE018	SACHIN SURENDRAN.M	77	7
19	SNC19CE019	SHAMSHAD.P.V	77	7
20	SNC19CE020	SILNA.M	83	8
21	LSNC19CE021	SREEHARI K K	87	9

*Handwritten signature*

*Handwritten signature*

Dr. LEEA A. V.  
PRI  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING  
37, PATTANUR



# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

## COURSE TEAM MEETING CHECKLIST

SEMESTER: VIII

DATE OF THE MEETING: 4/2/23

VENUE: CE Dept.

TIME: 10:AM

1. NAME OF THE FACULTY: REVATHI-P
2. DEPARTMENT: CIVIL ENGINEERING
3. SUBJECT CODE AND NAME: CET 404, COMPREHENSIVE COURSE VIVA
4. DETAILS REGARDING THE SUBJECT:

WHETHER HANDLING SUBJECT FOR THE FIRST TIME? IF NOT MENTION THE COUNT EXCLUDING THIS TIME	YES
TARGET PASS PERCENTAGE	100%
NATURE OF THE SUBJECT	EASY / MODERATE / TOUGH
CPS	COMPLETED / NOT COMPLETED
ATTENDANCE REGISTER	COMPLETED / NOT COMPLETED
ASSESSMENT PLAN	FILED / NOT FILED
ACADEMIC CALENDAR	FILED / NOT FILED
QP & SCHEME OF FIRST ASSIGNMENT	AVAILABLE / NOT AVAILABLE
QP & SCHEME OF SERIES TEST 1	AVAILABLE / NOT AVAILABLE
FEEDBACK OF THE TUTOR REGARDING THE CLASS	—
ACTION PLAN BY THE FACULTY TO ACHIEVE TARGET PASS PERCENTAGE	—
ANY OTHER REMARKS FROM THE FACULTY	—

*Revathi P*  
FACULTY

*L. P. 4/2/23*  
COURSE CHAIRMAN

*M. S. 4/2/23*  
V.



## INDEX FOR COMPREHENSIVE COURSE VIVA

SL.NO.	PARTICULARS
1	DEPARTMENT VISION AND MISSION
2	SYLLABUS
3	COURSE TEAM MEETING CHECKLIST
4	ATTENDANCE RECORD
5	STUDENT NAMELIST
6	PEER EVALUATION
7	EVALUATION SHEETS
8	CUMMULATIVE ATTENDANCE
9	KTU INTERNALS & ATTENDENCE

*Maya*

*Leena*

Dr. L. S. A. V.  
Principal  
Sree Narayana Guru College of  
Engineering & Technology,  
Kannur



11. 11. 1971

12. 11. 1971

13. 11. 1971

14. 11. 1971

## ANNEXURE 1

FORM P05/01

## PEER SUPPORT FOR LEARNING &amp; TEACHING THROUGH OBSERVATION

## PART 1: PRE-OBSERVATION MEETING

The faculty being observed should complete this form in preparation for a short meeting with their peer observation group / observer prior to the session to be observed.

## Peer Observation Group:

1. Name & Department *Ms. Sharmya Sukumaran, CE*

2. Name & Department *Ms. Revathi P., CE*

## Details of Teaching / Learning Session to be observed:

Observed: *Revathi P.*

Observer: *Sharmya Sukumaran*

Day/ Date / Time: *22/5/23, 10 AM*

Group / Location: *SE CE / classroom*

Type of Session / Duration: *VIVA, 1hr*

No of Students: *21*

Topic / Title of Session: *ENVIRONMENTAL ENGINEERING*

What are the objectives for the session (both for you and for the students)?

*objective type questions based on environmental engineering*

Signature of policy approving authority

CHAIRMAN

Date of approval: *22/5/23*

*Sharmya*  
*22/5/23*

*Revathi*

What would you like feedback on? (e.g. use of visual aids / the white board, your voice, interaction with the students, pace, use of examples, use of new techniques etc.)

- interaction with students.

Are there any factors which the observer needs to be aware of? (e.g. problems relating to the group or individual students, you are trying out something new etc.)

- NIL

Signature of policy approving authority	CHAIRMAN	Date of approval: 22/5/23
---	----------	---------------------------

*[Signature]*  
22/5/23

*[Signature]*

*[Signature]*



## INDEX

Sl. No.	PARTICULARS
1	DEPARTMENT VISION AND MISSION
2	SYLLABUS
3	CPS
4	STUDENTS NAME LIST
5	ATTENDANCE RECORD
6	TUTORIAL / ASSIGNMENT QUESTION PAPER AND SCHEME
7	SERIES QUESTION PAPER AND SCHEME
8	COURSE TEAM MEETING FORM
9	CUMULATIVE ATTENDANCE
10	INTERNALS STATEMENT
11	KTU INTERNALS STATEMENT
12	UNIVERSITY QUESTION PAPER AND VALUATION SCHEME
13	TUTORIAL/ASSIGNMENTS SAMPLES
14	SERIES TEST SAMPLES
15	REMEDIAL SAMPLES
16	CONTENT BEYOND SYLLABUS – PLAN, EXECUTION AND ASSESSMENT
17	GAPS IN THE SYLLABUS- PLAN, EXECUTION AND ASSESSMENT
18	COURSE MATERIALS
19	CO-PO ATTAINMENT



**APJ Abdul Kalam Technological University**  
**CET Campus, Thiruvananthapuram**  
**Kerala -695016**  
**India**

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

Students Examination Eligibility Details

**Academic Year : 2022 - 2023**

**Degree Type : Regular**

**Program :  
B.Tech(Full Time)**

**Branch : ELECTRONICS AND COMMUNICATION  
ENGINEERING**

**Semester : S8**

**Course Name : COMPREHENSIVE VIVA VOCE-  
ECT404**

**Batch : 1**

**Eligibility For : Pursuing Students**

**Period of Registration : NA**

Student Name	Attendance %, Internal Marks/50	Availed Leaves	Disc. Action	Eligible for Written Exam	Status:	In- eligibility Type
ARJUN ASHOK K Register No : SNC19EC001	Attendance : 100.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by college	
JITHIN SASIDHARAN N V Register No : SNC19EC002	Attendance : 100.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by college	
KEERTHANA C V Register No : SNC19EC003	Attendance : 100.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by college	
MARIYAMBI Register No : SNC19EC004	Attendance : 100.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by college	

## ECT 404 COMPREHENSIVE COURSE VIVA

1. How can you differentiate signal and wave?

Signal is ~~a~~ ~~p~~ an impulse which consist of information.

wave is a ~~repetative~~ signal

2. What is the difference between deterministic and random signals?

deterministic - If there is certainty with respect to its value at any instant of time.

Random :- If there is uncertainty with respect to its value at any instant of time.

3. What are even and odd signals?

Even signal - symmetric around vertical axis eg:- cosine wave.

odd signal - ~~antisymmetric~~ around the vertical axis eg:- sine wave.

4. What is the difference between power signal and energy signal in terms of energy and power?

Power signal - A signal whose amplitude is constant over a infinite duration.

Energy signal - A signal is said to be an energy signal if its total energy is finite.

5. What is the significance of unit ramp function?

It is a standard signal at  $t=0$  and increases linearly with time.



6. What are the applications of initial and final value theorems?

initial value theorem — connects frequency domain statements to time behaviour as approaches to zero.

Final value theorem — It is used to find the final value of a function.

7. What is the significance of region of convergence (ROC) of Z transform?

ROC can be used to determine, causality and stability of the system.

8. What is the relationship between z-transform and DTFT?

when  $r=1$ , DTFT = Z transform.

9. What is the difference between DTFT and DFT?

DTFT : discrete time fourier transform.

DFT — Discrete fourier transform.

10. Define invertible system?

A system is called invertible if it produces distinct o/p signals for distinct input signals.

11. What is the difference between convolution and correlation?

convolution:- combining 2 signals to form another signal.

correlation:- It is a form of correlation but with functional inverse.

12. What are the applications of convolution?

→ probability

→ Statistics

→ signal & image processing.

13. What is autocorrelation?

Correlation of a signal with delayed copy of itself.

14. What is the importance of unit impulse function?

The response of a system to any arbitrary i/p can be calculated from the system impulse response using a convolution integral.

15. What are mutually orthogonal functions?

~~The~~ Two vectors are said to be orthogonal if the dot product is zero.

Mutually orthogonal means every pair of vectors are orthogonal.

16. What are the advantages of digital filter over analog filters?

digital filters do not drift from temperature or humidity or require precision components.

17. Define FIR system.

Finite ~~complex~~ impulse response.

18. Define IIR system.

Infinite impulse response.

19. Give one example of FIR and IIR filters?

FIR -

IIR - Butterworth filter

20. Define overlap add and save method



## ECT 404 COMPREHENSIVE COURSE VIVA

### 1. What is Modulation? What happens in over modulation?

It is a process of varying one or more properties of a periodic waveform called the signal with a separate signal, called the modulating signal, that typically contains information to be transmitted. The process is done by the modulated carrier and distributes the received modulating.

### 2. What do you mean by FM and classify FM?

Angle modulation is which the frequency of sinusoidal carrier wave deviates from a center frequency by an amount proportional to the instantaneous value of the message signal. It is classified into two types: Frequency Modulation (FM) and Phase Modulation (PM). In FM, the carrier frequency is about the same as the signal frequency as an analog. If the change in the carrier frequency is much higher than the signal frequency.

### 3. State the advantages of superheterodyning?

- \* Super sensitivity
- \* Frequency Stability
- \* Selectivity.

### 4. What is Amplitude Modulation?

Amplitude Modulation is a technique used in electronic communications, most commonly for transmitting message with a radio wave. The wave is varied in proportion to that of the message signal, such as an audio signal.

### 5. What is an Analog Signal?

Is a continuous signal representing some other quantity.

A voltage, current or physical quantity that continuously and infinitely varies in accordance with some time-varying parameters.

6. What is aperiodic Signal and periodic Signal?

A signal that does not repeat itself after specific interval of time.

one that repeats the sequence of values exactly after a fixed length of time.

7. Enlist some advantages of Modulation?

- \* Antenna size gets reduced.
- \* no signal mixing occurs.
- \* communication range increases.
- \* multiplexing of signals occur.

8. What are different types of Modulation?

Analog modulation

Digital modulation.

pulse modulation.

spread spectrum method.

9. Explain Square Law Modulator?

one that produces an output voltage or current that is proportional to the square of its input voltage or current.



10. What is a precision rectifier?

Configuration obtained with an operational amplifier in order to have a circuit behave like an ideal diode or rectifier.

11. What is a multivibrator?

An electronic circuit that generates square, rectangular, pulse, waveform, also called multivibrator, oscillator or function generator. Is basically a 2 amplifier circuit connected with regenerative feedback.

12. What is a Schmitt trigger?

Is a comparator circuit with hysteresis implemented by applying +ve feedback to the non-inverting input of a comparator or differential amplifier. Active circuit which convert an analog signal to digital o/p signal.



**13. What are active filters?**

Is a type of analog circuit implementing an electronic filter using active components. Typically an amplifier

**14. what is sampling?**

Selecting the reduction of a continuous time signal to discrete time signal.

**15. What is Sampling? Explain Sampling Theorem?**

The reduction of a continuous time signal to discrete time signal.

A signal has to be sampled at least with twice the frequency of the original signal.

## ECT 404 COMPREHENSIVE COURSE VIVA

1. How can you differentiate signal and wave?

A wave is a solution of a differential wave equation. Basically sinusoidal solutions.

A signal is a network used to convey any wave all used to transfer signals.

2. What is the difference between deterministic and random signals?

Signals which can be defined exactly by mathematical formula are known as deterministic signals. There is consistency with respect to its value at any instant of time. Non-deterministic signals are random in nature hence they are called random signals.

3. What are even and odd signals?

Related to its time-reversed counterparts.  $x(t) = x(-t)$   
A signal is odd if  $x(t) = -x(-t)$

4. What is the difference between power signal and energy signal in terms of energy and power?

Power signal.

- \* Finite power
- \* Infinite energy
- \* Periodic signal are power signal.

Energy signal

- \* Finite energy
- \* Zero power
- \* Non-periodic signals are energy signals.

5. What is the significance of unit ramp function?

Usual real function whose graph called ramp. is defined as a single-valued function of one or more independent variables which contains some information.

6. What are the applications of initial and final value theorems?

main applications is electronic device or circuit.  
used to find the steady or transient state  
of a system.

7. What is the significance of region of convergence (ROC) of Z transform?

orig. disc in the  $z$ -plane / surface of the  
origin.

8. What is the relationship between  $z$ -transform and DTFT?

DTFT if  $\omega=1$ , this discrete time base transform  
is same as  $z$  transform.

9. What is the difference between DTFT and DFT?

partial version of the DTFT.

10. Define invertible system?

It produces distinct output signals also for  
distinct input signals.



11. What is the difference between convolution and correlation?

convolution is the calculation of the area under the product of 2 signals. in LTI system.

correlation is a measurement of similarity b/w two signals.

12. What are the applications of convolution?

probability, statistics, signal processing

13. What is autocorrelation?

Serial correlation is the discrete time case. measures the relationship of the observations between the different points in time.

14. What is the importance of unit impulse function?

The response of a system to any arbitrary input can be calculated from the system impulse response using convolution integral.

15. What are mutually orthogonal functions?

Two vectors are mutually independent if their dot product is zero.

16. What are the advantages of digital filter over analog filters?

only arithmetic operations add, subtract and multipliers. digital filters do not drift with temperature or humidity or require precision components.

17. Define FIR system.

a nonrecursive filter is that the output from the current & previous inputs.

18. Define IIR system.

many linear time-invariant systems that are distinguished by having an impulse response.

19. Give one example of FIR and IIR filters?

digital filters.

20. Define overlap add and save method

overlap-save procedure cuts the signal up into equal length segments with some overlap.   
 overlap-add breaks a long sequence, into signals of shorter lengths and calculates the convolution of each block separately.



ECT404	COMPREHENSIVE COURSE VIVA	CATEGORY	L	T	P	CREDIT
		PCC	1	0	0	1

**Preamble:** The objective of this Course viva is to ensure the basic knowledge of each student in the most fundamental core courses in the curriculum. The viva voce shall be conducted based on the core subjects studied from third to eighth semester. This course helps the learner to become competent in placement tests and other competitive examinations.

#### Guidelines

1. The course should be mapped with a faculty and classes shall be arranged for practicing questions based on the core courses listed in the curriculum.
2. The viva voce will be conducted by the same three member committee assigned for final project phase II evaluation. It comprises of Project coordinator, expert from Industry/research Institute and a senior faculty from a sister department.
3. The pass minimum for this course is 25.
4. The mark will be treated as internal and should be uploaded along with internal marks of other courses.
5. Comprehensive Viva should be conducted along with final project evaluation by the three member committee.

#### Mark Distribution

Total marks: 50, only CIE, minimum required to pass : 25 Marks





# **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

## **VISION**

- To be a center of excellence in Electronics and Communication Engineering and to create engineers who can address global challenges.

## **MISSION**

- To provide students with high quality technical education, and to develop their professional and entrepreneurial skills in Electronics and Communication Engineering.
- To enable students for developing different skills, leading to benchmarking and innovations.
- To inculcate in students a high degree of social consciousness and sense of human values.

*Handwritten signature*  
HOD ECE

**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

**Subject :**

4	4	4	4	5	5
15	15	7	7	3	3
1	2	1	2	1	2
x	x	x	x	x	y
x	x	x	x	x	y
x	x	x	x	x	x
x	x	x	x	x	y
x	x	x	x	x	x

### AWARDING OF MARKS

Signature of Staff Member

Module Co-ordinator

HOD





**SREE NARAYANA GURU COLLEGE OF ENGINEERING AND TECHNOLOGY, PAYYANUR**

**Promoted by Sree Bhakthi Samvardhini Yogam**

**(Affiliated to KTU, Recognised by AICTE)**

**Cumulative attendance of 2019-2023 EC S8**

**SUBJECT : ECT404:COMPREHENSIVE COURSE VIVA**

**TOTAL HOURS:16**

REGISTER NO.	STUDENT NAME	HOUR PRESENT	HOUR ABSENT	PERCENTAGE
SNC19EC001	ARJUN ASHOK K	16	0	100
SNC19EC002	JITHIN SASIDHARAN N V	16	0	100
SNC19EC003	KEERTHANA C V	16	0	100
SNC19EC004	MARIYAMBI	16	0	100
SNC19EC005	SANISHMA SACHITHANAND	16	0	100

  
**COURSE INSTRUCTOR**

  
**HOD**

26/5/23



# SREE NARAYANA GURU COLLEGE OF ENGINEERING AND TECHNOLOGY, PAYYANUR

## COURSE TEAM MEETING CHECKLIST

SEMESTER: B

DATE OF THE MEETING: 3/2/23

VENUE: Meeting Hall

TIME: 2.00 pm

1. NAME OF THE FACULTY: Meera.
2. DEPARTMENT: ECE
3. SUBJECT CODE AND NAME: ECT404 Comprehensive Course Viva.
4. DETAILS REGARDING THE SUBJECT:

WHETHER HANDLING SUBJECT FOR THE FIRST TIME? IF NOT MENTION THE COUNT EXCLUDING THIS TIME	<u>Yes</u>
TARGET PASS PERCENTAGE	<u>100%</u>
NATURE OF THE SUBJECT	<u>EASY / MODERATE / TOUGH</u>
CPS	<u>COMPLETED / NOT COMPLETED (NA)</u>
ATTENDANCE REGISTER	<u>COMPLETED / NOT COMPLETED</u>
ASSESSMENT PLAN	<u>FILED / NOT FILED</u>
ACADEMIC CALENDAR	<u>FILED / NOT FILED</u>
QP & SCHEME OF FIRST ASSIGNMENT	<u>AVAILABLE / NOT AVAILABLE</u>
QP & SCHEME OF SERIES TEST 1	<u>AVAILABLE / NOT AVAILABLE</u>
FEEDBACK OF THE TUTOR REGARDING THE CLASS	<u>Good</u>
ACTION PLAN BY THE FACULTY TO ACHIEVE TARGET PASS PERCENTAGE	<u>conducting more Viva</u>
ANY OTHER REMARKS FROM THE FACULTY	<u>-</u>

FACULTY

COURSE CHAIRMAN

HOD



**APJ Abdul Kalam Technological University**  
**CET Campus, Thiruvananthapuram**  
**Kerala -695016**  
**India**

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

Students Examination Eligibility Details

**Academic Year : 2022 - 2023**

**Degree Type : Regular**

**Program :  
B.Tech(Full Time)**

**Branch : CIVIL ENGINEERING**

**Semester : S6**

**Course Name : COMPREHENSIVE COURSE  
WORK-CET308**

**Batch : 1**

**Eligibility For : Pursuing Students**

**Period of Registration : NA**

Student Name	Attendance %, Internal Marks	Availed Leaves	Disc. Action	Eligible for Written Exam	Status:	In- eligibility Type
ABHIJITHA K Register No : SNC20CE001	Attendance : 96.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
AKSHAYA PV Register No : SNC20CE002	Attendance : 96.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
ALEN ALEX Register No : SNC20CE003	Attendance : 92.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
AMAYA T Register No : SNC20CE004	Attendance : 92.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	

**Dr. LEENA A. V.**  
**PRINCIPAL**  
**SREE NARAYANA GURU COLLEGE OF**  
**ENGINEERING & TECHNOLOGY, PAYANUR**  
**KANNUR**



ANUVINDA P Register No : SNC20CE006	Attendance : 92.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
APARNA P Register No : SNC20CE007	Attendance : 92.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
ARJUN KM Register No : SNC20CE008	Attendance : 75.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
FATHIMATHUL MARJAN KP Register No : SNC20CE009	Attendance : 83.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
FATHIMATH ZUHRA Register No : SNC20CE010	Attendance : 83.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
FIZA FARHEEN Register No : SNC20CE011	Attendance : 75.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
KEERTHANA SURENDRAN Register No : SNC20CE012	Attendance : 75.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
MOOHAMMED EBRAHIM Register No : SNC20CE013	Attendance : 75.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
RAJATH MANOHARAN Register No : SNC20CE014	Attendance : 96.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
SAJJAD ZAINUDHEEN Register No : SNC20CE015	Attendance : 83.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	



Dr. LEENA A. V.  
PRINCIPAL

SHAHANA SHERIN Register No : SNC20CE016	Attendance : 83.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
SREELAKSHMI K Register No : SNC20CE017	Attendance : 96.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
SREEVISHNU K Register No : SNC20CE018	Attendance : 96.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
VAISHNAVI N K Register No : SNC20CE019	Attendance : 88.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
VYSHNA K Register No : SNC20CE020	Attendance : 92.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
ANUPRIYA K Register No : LSNC20CE021	Attendance : 92.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	



Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

## PEER EVALUATION FORM

### FORM 1

**[TO BE FILLED BY THE OBSERVER AND THE OBSERVEE AFTER DISCUSSION]**

#### PEER SUPPORT FOR LEARNING & TEACHING THROUGH OBSERVATION

##### **PART 1: PRE-OBSERVATION MEETING**

The faculty being observed should complete this form in preparation for a short meeting with their peer observation group / observer prior to the session to be observed.

##### **Peer Observation Group:**

1. Name & Department ..... Revathi - P, CE .....

2. Name & Department ..... Dr. Susan Abraham, CE .....

##### **Details of Teaching / Learning Session to be observed:**

Observed: Revathi - P .....

Observer: Dr. Susan Abraham .....

Day / Date / Time: 5/6/23, 3: AM .....

Group / Location: 56 CE classroom .....

Type of Session / Duration: Mcq session / 1hr .....

No of Students: 20 .....

Topic / Title of Session: Mcq session on Geotechnical engineering .....

**What are the objectives for the session (both for you and for the students)?**

Mcq session conducted on geotechnical engineering

Susan  
5/6/23

OBSERVER

Maya  
5/6/23  
HOD, CE

Dr. P. V. S. N. V.  
Sree Narayana Guru College  
of Engineering and Technology  
Kollam



What would you like feedback on? (e.g. use of visual aids / the white board, your voice, interaction with the students, pace, use of examples, use of new techniques etc.)

- use of Visual Aids.
- voice
- interaction with students.

Are there any factors which the observer needs to be aware of? (e.g. problems relating to the group or individual students, you are trying out something new etc.)

NIL

Srinivasan  
5/6/23

OBSERVER

May 19  
5/6/23 [HOD, ce]

DR. LEEHAN, A. V.  
PROF. IN CHARGE  
SCHOOL OF DISTANCE EDUCATION  
ENGINEERING & TECHNOLOGY, KANNUR  
KANNUR

Name: Aparna.....

Roll No:- 07.....



**SREE NARAYANA GURU COLLEGE OF ENGINEERING**  
**& TECHNOLOGY**

Internal Test	1	Academic Year/Semester	2022-23 / S6
Subject name with code	CET308 CCW	Branch	CG
Date of Exam	15/2/23	Duration	1 hr
Starting time	1 PM	Max. Marks	45

1. Which of the following statements regarding the cube strength of concrete are correct?

- (i) Strength increases with decrease in cube size  
(ii) Strength decreases with increase in slenderness ratio Time: 60 min. (iii) Strength increases with increase in slenderness ratio  
(iv) Strength decreases with decreases in cube size  
(A) (i) and (ii) are correct (B) (i), (ii), (iii) are correct  
(C) (i) and (iii) are correct (D) All the above

2. Which of the following statements regarding properties of concrete are correct?

- (p) Modulus of elasticity of M25 grade of concrete is 25000 MPa.  
(q) Approximate value of shrinkage strain of concrete is 0.0003  
(r) pH value of water used in concrete construction should not be less than 6.  
(A) p and q are correct (B) p and r are correct (C) q and r are correct  
(D) all the above are correct

3. The long term modulus of elasticity of M25 grade concrete with q value at 7 days to be 2.2 is

- (A) 25000 MPa (B) 7812.5 MPa

Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR

(C) 3500 MPa

☒ (D) None

4. Consider the following statements regarding the air entrained concrete? (1) Increased resistance to freezing and thawing

(2) Improvement in workability.

(3) Increase in strength.

(4) Permits reduction in water content of these,

(A) 1, 2, 4 are correct

(B) 2, 3, 4 are correct

(C) 1, 3, 4 are correct

☒ (D) All the above are correct

5. Which of the following statements regarding admixtures are correct? (A) Retards the setting of cement (B) Accelerates the setting of cement (C) Improves the workability of concrete ☒ (D) All the above

6. Consider the following statements:

I. The compressive strength of concrete decreases with increase in water cement ratio of the concrete mix.

II. Water is added to the concrete mix for hydration of cement and workability.

III. Creep and shrinkage of concrete are independent of the water cement ratio in the concrete mix.

The true statements are

☒ (A) I and III

(B) I, II, III

(C) II and III

☒ (D) I and II

7. Consider the following statements:

I. Modulus of elasticity of concrete increases with increase in compressive strength of concrete

II. Brittleness of concrete increases with decrease in compressive strength of concrete.

III. Shear strength of concrete increases with increase in compressive strength of concrete.



The true statements are

- (A) I and III      (B) I, II, III  
(C) II and III      (D) I and II

8. Consider the following statements:

- (p) Nominal mix proportions for M20 grade concrete is 1 : 1.5 : 3  
(q) Weight batching is preferred compared to nominal (volume) batching  
(r) Maximum cement content as per IS456-2000 is 450 kg/m<sup>3</sup>

- (A) p, q are correct      (B) p, r are correct  
(C) q, r are correct      (D) p, q and r are correct

9. Which of the following statements given below are correct.

- (p) Nominal cover to reinforcement is based on serviceability or durability requirements  
(q) Factors affecting the durability of concrete are w/c and maximum cement content  
(r) Minimum cement content is not based on exposure conditions.

- (A) p, q, r are correct      (B) p and q are correct  
(C) p and r are correct      (D) only p is correct

10. Consider the following statements regarding the addition of pozzolanas to cement causes

- (p) Increase in strength (q) Less heat of hydration (r) Decrease in workability

The true statements are

- (A) p, q, r are correct      (C) p and r are correct  
(B) p and q are correct      (D) q only is correct

11. The composition of air entrained concrete is given below:

Water : 180 kg/m<sup>3</sup>

Ordinary Portland cement: 360 kg/m<sup>3</sup>

Sand : 601 kg/m<sup>3</sup> Coarse aggregate: 1160 kg/m<sup>3</sup>

  
DR. LEEBA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PATTANUR  
KANNUR

Assume the specific gravity of OPC, sand and coarse aggregate to be 3.10, 2.65 and 2.74 respectively, the air content in liters/m<sup>3</sup> is \_\_\_\_\_

- (A) 53 liters/m<sup>3</sup>
- (B) 50 liters/m<sup>3</sup>
- (C) 45 liters/m<sup>3</sup>
- ☒ (D) None

12. Consider the following statements

- (p) Nominal maximum size of coarse aggregate to be used in R.C.C is 20 mm
  - (q) As per IS456-2000; fine sand to be used in R.C.C should confirm to zone II and medium sand.
  - (r) Minimum grade of concrete to be used in R.C.C is M30
- The true statements are
- ☒ (A) p and q are true
  - (B) p and r are true
  - (C) p, q and r are true
  - (D) q and r are true


13. Which of the following statements given below are correct?

- (p) In mild environment, surface crack width should not exceed 0.3 mm as per IS456-2000.
  - (q) Crack width increases with increase in stress in reinforcement bar.
  - (r) Concrete and steel exhibit high strength after being subjected to high temperature.
- (A) p and r are correct
  - (B) p, q and r are correct
  - (C) p and q are correct
  - ☒ (D) None

14. The ratio of the volume of air voids to the volume of voids, is called

- A. void ratio
- ☒ B. air content
- C. degree of saturation
- D. Porosity

15. The specific gravity of sandy soils is

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

A. 1.2

B. 1.8

C. 2.2

D. 2.7

16. According to Indian standards, the dispersing solution used in pipette method, for the determination of size of particle consists of

7 g sodium carbonate, 43 g sodium

7 g sodium carbonate, 33 g sodium

A. hexameta-phosphate and 1 litre  
distilled water

B. hexameta-phosphate and 1 litre  
distilled water

7 g sodium carbonate, 23 g sodium

C. hexameta-phosphate and 1 litre  
distilled water

D. any one of the above

17. The water content in a soil at which just shear strength develops is called

A. liquid limit

B. plastic limit

C. elastic limit

D. shrinkage limit

18. Which of the following gives the correct decreasing order of the densities of a soil sample?

A. Saturated, submerged, wet, dry

B. Saturated, wet, submerged, dry

C. Saturated, wet, dry, submerged

D. Wet, saturated, submerged, dry

19. The ratio of the unconfined compressive strength of undisturbed soil to the unconfined compressive strength of soil in a remoulded state, is called

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR



A. sensitivity

B. thixotropy

C. relative density

D. bulk density

20. A body floating in a liquid is said to be in neutral equilibrium, if its metacentre

A. coincides with its centre of gravity

B. lies above its centre of gravity

C. lies below its centre of gravity

D. lies between the centre of buoyancy  
and centre of gravity

21. A flow through an expanding tube at constant rate is called

A. steady uniform flow

B. steady non-uniform flow

C. unsteady uniform flow

D. unsteady non-uniform flow

22. The total energy of a liquid particle in motion is equal to

A. pressure energy + kinetic energy +  
potential energy

B. pressure energy - (kinetic energy +  
potential energy)

C. potential energy - (pressure energy +  
kinetic energy)

D. kinetic energy - (pressure energy +  
potential energy)

23. The discharge over a rectangular notch is

A. inversely proportional to  $H^{3/2}$

B. directly proportional to  $H^{3/2}$

C. inversely proportional to  $H^{5/2}$

D. directly proportional to  $H^{5/2}$

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR

as

- A. real fluid                      B. ideal fluid  
C. newtonian fluid                      D. non-newtonian fluid

29. Whenever some external system of forces acts on a body, it undergoes some deformation. As the body undergoes some deformation, it sets up some resistance to the deformation. This resistance per unit area to deformation, is called

- A. strain                      B. stress  
C. pressure                      D. modulus of elasticity

30. A beam extending beyond the supports is called

- A. simply supported beam                      B. fixed beam  
C. overhanging beam                      D. cantilever beam

31. A concentrated load is one which

- A. acts at a point on a beam                      B. spreads non-uniformly over the whole length of a beam  
C. spreads uniformly over the whole length of a beam                      D. varies uniformly over the whole length of a beam

32. The section modulus (Z) of a beam is given by

  
DR. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR

24. The sheet of water flowing over a notch or a weir is known as

A. sill or crest

B. nappe or vein

C. orifice

D. none of these

25. The total energy line lies over the hydraulic gradient line by an amount equal to the

A. pressure head

B. velocity head

C. pressure head + velocity head

D. pressure head - velocity head

26. Select the wrong statement

A. An equivalent pipe is treated as an ordinary pipe for all calculations

B. The length of an equivalent pipe is equal to that of a compound pipe

C. The discharge through an equivalent pipe is equal to that of a compound pipe

D. The diameter of an equivalent pipe is equal to that of a compound pipe

27. When a cylindrical vessel, containing some liquid, is rotated about its vertical axis, the liquid surface is depressed down at the axis of its rotation and rises up near the walls of the vessel on all sides. This type of flow is known as

A. steady flow

B. turbulent flow

C. vortex flow

D. uniform flow

28. fluid whose viscosity does not change with the rate of deformation or shear strain is known as

*Dr. Leena A. V.*  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR



A.  $I/y$

B.  $I.y$

C.  $y/I$

D.  $M/I$

33. beam of T-section is subjected to a shear force of  $F$ . The maximum shear force will occur at the

A. top of the section

B. bottom of the section

C. neutral axis of the section

D. junction of web and flange

34. A rectangular beam of length  $l$  supported at its two ends carries a central point load  $W$ . The maximum deflection occurs

A. at the ends

B. at  $l/3$  from both ends

C. at the centre

D. none of these

35. The load required to produce a unit deflection in a spring is called

A. flexural rigidity

B. torsional rigidity


C. spring stiffness

D. Young's modulus

36. The Rankine's theory for active earth pressure is based on the assumption that

A. the retained material is homogeneous and cohesionless

B. the frictional resistance between the retaining wall and the retained

  
DR. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR

material is neglected

the failure of the retained material

- C. takes place along a plane called rupture plane      D. all of the above

37. If percentage reduction in area of a certain specimen made of material 'A' under tensile test is 60% and the percentage reduction in area of a specimen with same dimensions made of material 'B' is 40%, then

- A. the material A is more ductile than material B      B. the material B is more ductile than material A
- C. the ductility of material A and B is equal      D. the material A is brittle and material B is ductile

38. Factor of safety is defined as the ratio of

- A. ultimate stress to working stress      B. working stress to ultimate stress
- C. breaking stress to ultimate stress      D. ultimate stress to breaking stress

39. The failure of foundation of a building is due to

- A. withdrawal of subsoil moisture      B. unequal settlement of soil
- C. lateral escape of the supporting material      D. all of these

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR

40. The bearing capacity of soils can be improved by

- A. increasing the depth of footing      B. draining the sub-soil water  
C. ramming the granular material like  
crushed stone in the soil      D. all of the above

41. brick masonry, for good bonding

- A. all bricks need not be uniform in size      B. bats must be used in alternate courses  
only  
C. vertical joints in alternate courses  
should fall in plumb      D. cement mortar, used must have surkhi  
as additive

42. The size of a step commonly adopted for residential buildings is

- A. 250 mm x 160 mm      B. 270 mm x 150 mm  
C. 300 mm x 130 mm      D. 350 mm x 100 mm

43. A weir, generally, used as a spillway of a dam is

- A. narrow crested weir      B. broad crested weir  
C. Ogee weir      D. submerged weir

44. The hydraulic mean depth for a circular pipe of diameter (d) is

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR



A.  $d/6$

B.  $d/4$

~~C.~~  $d/2$

D.  $d$

45. The coefficient of venturiflume, generally lies between

A. 0.3 to 0.45

B. 0.50 to 0.75

~~C.~~ 0.75 to 0.95

D. 0.95 to 1.0

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



**Name:** Abhyudha. K

**Roll No:- ..!**



**SREE NARAYANA GURU COLLEGE OF ENGINEERING**  
**& TECHNOLOGY**

Internal Test	2	Academic Year/Semester	2022-23 / S6
Subject name with code	CET308 CCW	Branch	CE
Date of Exam	29/03/23	Duration	1 hr
Starting time	9:00 am	Max. Marks	20

Chemical weathering of soil is caused due to

- A. oxidation  
B. hydration  
C. carbonation and leaching  
D. ☒ all of these

The property of a soil which is of great importance in finding settlement of structures, is

- ✓ A. permeability
- B. shear strength
- C. consolidation
- D. compressibility

The ratio of the volume of air voids to the volume of voids, is called

- A. void ratio  
B. ☒ air content  
C. degree of saturation  
D. Porosity

The ratio of the unit weight of soil solids to that of water is called

- A. void ratio  
B. porosity  
C. specific gravity  
D. degree of saturation

  
DR. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAPPANUR  
KANNUR

[illegible][illegible]

A. 7 g sodium carbonate, 43 g sodium hexameta-phosphate and 1 litre distilled water

B. 7 g sodium carbonate, 33 g sodium hexameta-phosphate and 1 litre distilled water

C. 7 g sodium carbonate, 23 g sodium hexameta-phosphate and 1 litre distilled water

D. any one of the above

A. temperature only      ☒ B. meniscus only  
C. dispersing agent only      D. all of these

A. 0 and 0.5

B. 0 and 1

C. 0.5 and 1

D. 1 and 0.5

A. uniform soil                      B. poor soil

141



☒ C. well graded soil

D. coarse soil

According to Indian standards, in a 2 mm sieve

A. there are two holes

B. each sieve is circular and its diameter is 2 mm

☒ C. each hole is a square and its side is 2 mm

D. there are two holes per cm length of the mesh

The water content in a soil at which just shear strength develops is called

A. liquid limit

B. plastic limit

☒ C. elastic limit

D. shrinkage limit

The ratio of the unconfined compressive strength of undisturbed soil to the unconfined compressive strength of soil in a remoulded state, is called

☒ A. sensitivity

B. thixotropy

C. relative density

D. bulk density

The liquid limit minus plastic limit is termed as

A. flow index

☒ B. plasticity index

C. shrinkage index

D. liquidity index

The water content of soils can be accurately determined by

A. sand bath method

B. calcium carbide method

☒ C. over drying method

D. Pycnometer method

Which of the following gives the correct decreasing order of the densities of a soil sample?

A. Saturated, submerged, wet, dry

B. Saturated, wet, submerged, dry

C. Saturated, wet, dry, submerged

☒ D. Wet, saturated, submerged, dry

For a given soil mass, the void ratio is 0.60, water content is 18% and specific gravity of the soil particles is 2.6. The degree of saturation of the soil is

☒ A. 30%

B. 50%

C. 78%

D. 82.50%

The relation between the air content ( $a_c$ ) and the degree of saturation ( $s$ ) is

A.  $a_c = s$

B.  $a_c = 1 - s$

☒ C.  $a_c = 1 + s$

D.  $a_c = 1/s$

The minimum size of grains of silts is about

A. 0.0002 mm

☒ B. 0.002 mm

C. 0.02 mm

D. 0.2 mm

Chemical weathering of soil is caused due to

A. oxidation

B. hydration

C. carbonation and leaching

☒ D. all of these

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

## DEPARTMENT OF CIVIL ENGINEERING

### STUDENTS LIST S6 CE

SL.NO	REGISTER NUMBER	NAME OF STUDENT
1	SNC20CE001	ABHIJITHA K
2	SNC20CE002	AKSHAYA PV
3	SNC20CE003	ALEN ALEX
4	SNC20CE004	AMAYA T
5	SNC20CE006	ANUVINDA P
6	SNC20CE007	APARNA P
7	SNC20CE008	ARJUN KM
8	SNC20CE009	FATHIMATHUL MARJAN KP
9	SNC20CE010	FATHIMATH ZUHRA
10	SNC20CE011	FIZA FARHEEN
11	SNC20CE012	KEERTHANA SURENDRAN
12	SNC20CE013	MOOHAMMED EBRAHIM
13	SNC20CE014	RAJATH MANOHARAN
14	SNC20CE015	SAJJAD ZAINUDHEEN
15	SNC20CE016	SHAHANA SHERIN
16	SNC20CE017	SREELAKSHMI K
17	SNC20CE018	SREEVISHNU K
18	SNC20CE019	VAISHNAVI N K
19	SNC20CE020	VYSHNA K
20	LSNC20CE021	ANUPRIYA K

  
Dr. LEENA A.V.  
Sree Narayana Guru College of Engineering & Technology  
KANNUR



CET308	COMPREHENSIVE COURSE WORK	CATEGORY	L	T	P	CREDIT	Year of Introduction
		PCC	1	0	0	1	2019

**Preamble:** The course is designed to ensure that the student have firmly grasped the foundational knowledge in Civil Engineering familiar enough with the technological concepts. It provides an opportunity for the students to demonstrate their knowledge in various Civil Engineering subjects.

**Pre-requisite:** Nil

**Course outcomes:** After the course, the student will able to:

CO1	Learn to prepare for a competitive examination
CO2	Comprehend the questions in Civil Engineering field and answer them with confidence
CO3	Communicate effectively with faculty in scholarly environments
CO4	Analyze the comprehensive knowledge gained in basic courses in the field of Civil Engineering

CET 308 Comprehensive Course Work		P O	P O	P O	P O	P O	P O	P O	P O	P O	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3
	CO1	3	1	1			2							1	1	
	CO2	3	1				2				3					
	CO3	3	1			1	2				3				1	
	CO4	3	3			1	2									

#### Assessment pattern

Bloom's Category	End Semester Examination (Marks)
Remember	25
Understand	15
Apply	5
Analyze	5
Evaluate	
Create	

  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY, PAYANUR  
 KANNUR

**End Semester Examination Pattern:**

A written examination will be conducted by the University at the end of the sixth semester. The written examination will be of objective type similar to the GATE examination. Syllabus for the comprehensive examination is based on following five Civil Engineering core courses.

CET 201- Mechanics of Solids

CET 203- Fluid Mechanics and Hydraulics

CET 205- Surveying & Geomatics

CET 204- Geotechnical Engineering I

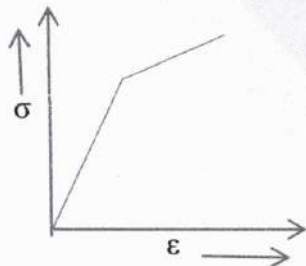
CET 309- Construction Technology and Management

The written test will be of 50 marks with 50 multiple choice questions (10 questions from each module) with 4 choices of 1 mark each covering all the five core courses. There will be no negative marking. The pass minimum for this course is 25. The course should be mapped with a faculty and classes shall be arranged for practising questions based on the core courses listed above.

Written examination	:	50marks
<b>Total</b>	:	<b>50 marks</b>

**Course Level Assessment and Sample Questions:**

- 1) Poisson's ratio for an incompressible isotropic material is:  
A) 0.25 B) 0.5 C) Zero D) Indeterminate
- 2) The following stress-strain curve is obtained for a material. It indicates



- A) Rigid body behaviour
- B) Perfectly plastic behaviour

*Leena*

Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR



- C) Elastic-linear strain hardening behaviour  
D) Elastic-plastic behaviour
- 3) A principal plane is one where the shear stress will be:  
A) Maximum B) Minimum C) Zero D) Coverage of principal stress
- 4) In a differential manometer, the flowing fluid is water and the gauge fluid is mercury. If the manometer reading is 100mm, the differential head in meters is:  
A) 13.6 B) 1.36 C) 1.47 D) 1.26
- 5) A rectangular open channel carries a flow of  $2\text{m}^3/\text{sec}/\text{m}$ , what is the value of minimum specific energy?  
A) 0.74m B) 1.11m C) 1.48m D) 1.85m
- 6) A pipe has diameter 0.4m, length 0.1km and coefficient of friction 0.005. What is the length of an equivalent pipe which has diameter 0.2m and coefficient of friction 0.008?  
A) 195m B) 19.5m C) 1.95m D) 1950m
- 7) The true bearing of a line is  $40^\circ 30'$ . Declination is  $3^\circ \text{W}$ . The magnetic bearing of line is:  
A)  $43^\circ 30'$  B)  $37^\circ 30'$  C)  $36^\circ 30'$  D)  $44^\circ 30'$
- 8) Points C and D are 1530m apart across a wide river. The following reciprocal levels are taken with one level.

Level at	Reading on	
	C	D
C	3.810 m	2.165 m
D	2.355 m	0.910 m

The true difference in elevation between C and D is:

- A) 1.645 m B) 1.545 m C) 1.745 m D) 1.345 m
- 9) Fore bearing of a line is  $540^\circ$ . Declination is  $2^\circ \text{W}$ . True bearing of line is:  
A)  $222^\circ$  B)  $218^\circ$  C)  $S 42^\circ \text{E}$  D)  $S 38^\circ \text{E}$
- 10) The dry density of a soil is  $1.5 \text{ g/cc}$ . If the saturation water content were 50%, then its saturated density and submersed density would respectively be,  
A)  $1.5 \text{ g/cc}$  and  $1.0 \text{ g/cc}$  B)  $2.0 \text{ g/cc}$  and  $1.0 \text{ g/cc}$  C)  $2.25 \text{ g/cc}$  and  $0.25 \text{ g/cc}$   
D)  $2.50 \text{ g/cc}$  and  $1.50 \text{ g/cc}$

Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



- 11) A clay sample has a void ratio of 0.50 in dry state and if the specific gravity of solids is 2.70, its shrinkage limit will be  
 A) 12%      B) 13.5%      C) 18.5%      D) 22%
- 12) A non-homogenous soil deposit consists of a silt layer sandwiched between a fine-sand layer at top and a clay layer below. Permeability of the silt layer is 10 times the permeability of the clay layer and one-tenth of the permeability of the sand layer. Thickness of the silt layer is 2 times the thickness of the sand layer and two-third of the thickness of the clay layer. The ratio of equivalent horizontal and equivalent vertical permeability of the deposit is \_\_\_\_\_.  
 A) 10.967    B) 10.968      C) 10.969      D) None of these
- 13) Which cement contains high percentage of  $C_3S$  and less percentage of  $C_2S$ ?  
 A) Rapid Hardening Cement      B) Ordinary Portland Cement      C) Quick Setting Cement      D) Low Heat Cement
- 14) Workability of concrete is measured by \_\_\_\_\_  
 A) Vicat apparatus test    B) Slump test    C) Minimum void method    D) Talbot Richard test
- 15) The shortest possible time in which an activity can be achieved under ideal circumstances is known as \_\_\_\_\_  
 A) Pessimistic time estimate      B) Optimistic time estimate    C) Expected time estimate    D) None of these

**Course Code: CET 308**

### **Comprehensive Course Work**

#### **MODULE 1**

Concept of stress and strain, Hooke's law, Stress-strain diagram of mild steel; Axially loaded bars. Temperature stress in composite bars, Poisson's ratio, Elastic constants and the relationship between them. Beams, Concept of bending moment and shear force, Shear force and bending moment diagrams of cantilever beams, simply supported beams and overhanging beams for different type of loads. Theory of simple bending; Shear stress in beams. Principal stresses and principal planes in 2D problems, maximum shear stress; Mohr's circle.

#### **MODULE 2**

Fluid properties; Fluid statics, measurement of fluid pressure. Buoyancy and Floatation: Buoyant force, Principle of floatation, stability of floating and submerged bodies, metacentre and metacentric height; continuity equation in one, two and three dimensions. Bernoulli's equation and its applications; Pipe flow- computation of major and minor losses in pipes, equivalent pipe.

  
 DR. LEENA A. V.  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY, PAYANUR  
 KANNUR

Open channel flow, velocity distribution in open channels, uniform flow computations, Most economical sections, Specific energy, Critical flow; Hydraulic jump.

### MODULE 3

Introduction to Surveying- Principles, Linear, angular and graphical methods. Bearing of survey lines, Local attraction, Declination; Principles of levelling, Methods of levelling. Theodolite surveying, Measurement of horizontal and vertical angle; Triangulation. Traverse Surveying, Checks in closed traverse; Theory of Errors – Types, theory of least squares, Weighting of observations. Total Station – concept of EDM, principles and working. GPS-Components and principles. Remote Sensing.

### MODULE 4

Definitions and properties of soil, 3 phase system, Index properties of soil, Soil classification, Effective stress, Quick sand condition, Stress distribution, Permeability of soil, Darcy's law, Factors affecting permeability, Laboratory tests, Consolidation, Normally consolidated, over consolidated and under consolidated soils, Time factor, Coefficient of consolidation, Compaction Tests – OMC and MDD, shear strength of soil, Triaxial compression test, Unconfined compression test, Direct shear test and Vane shear test

### MODULE 5

Cement: Manufacturing, chemical composition, Types, Tests, Hydration of cement. Properties of fresh concrete and hardened concrete. Types of stone masonry – composite walls - cavity walls and partition walls - Construction details and features. Finishing works: Plastering, Pointing, Painting – objectives and types. Prefabricated construction – advantages and disadvantages, Prefabricated building components. Causes of failures in RCC and Steel structures. Types of tenders, Types of contracts. Types of Schedules. Network analysis – CPM, PERT – concepts and problems

May 19  
4/2/23  
[HOD, CE]

Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PATTANUR  
KANNUR





## INDEX FOR COMPREHENSIVE COURSE WORK

SL.NO.	PARTICULARS
1	DEPARTMENT VISION AND MISSION
2	SYLLABUS
3	CPS
4	ATTENDANCE RECORD
5	STUDENT NAME LIST
6	COURSE TEAM MEETING CHECKLIST
7	PEER EVALUATION
8	SAMPLE QUESTIONS
9	CUMULATIVE ATTENDENCE
10	KTU ATTEDENCE SATETEMENT

*Mary*

*Leena*

Dr. LEENA A. V.  
P.O. KOROM  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR





**APJ Abdul Kalam Technological University**  
**CET Campus, Thiruvananthapuram**  
**Kerala -695016**  
**India**

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

Students Examination Eligibility Details

**Academic Year : 2022 - 2023**

**Degree Type : Regular**

**Program :  
B.Tech(Full Time)**

**Branch : CIVIL ENGINEERING**

**Semester : S6**

**Course Name : COMPREHENSIVE COURSE  
WORK-CET308**

**Batch : 1**

**Eligibility For : Pursuing Students**

**Period of Registration : NA**

Student Name	Attendance %, Internal Marks	Availed Leaves	Disc. Action	Eligible for Written Exam	Status:	In- eligibility Type
ABHIJITHA K Register No : SNC20CE001	Attendance : 96.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
AKSHAYA PV Register No : SNC20CE002	Attendance : 96.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
ALEN ALEX Register No : SNC20CE003	Attendance : 92.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
AMAYA T Register No : SNC20CE004	Attendance : 92.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	

ANUVINDA P Register No : SNC20CE006	Attendance : 92.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
APARNA P Register No : SNC20CE007	Attendance : 92.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
ARJUN KM Register No : SNC20CE008	Attendance : 75.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
FATHIMATHUL MARJAN KP Register No : SNC20CE009	Attendance : 83.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
FATHIMATH ZUHRA Register No : SNC20CE010	Attendance : 83.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
FIZA FARHEEN Register No : SNC20CE011	Attendance : 75.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
KEERTHANA SURENDRAN Register No : SNC20CE012	Attendance : 75.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
MOOHAMMED EBRAHIM Register No : SNC20CE013	Attendance : 75.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
RAJATH MANOHARAN Register No : SNC20CE014	Attendance : 96.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
SAJJAD ZAINUDHEEN Register No : SNC20CE015	Attendance : 83.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	

SHAHANA SHERIN Register No : SNC20CE016	Attendance : 83.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
SREELAKSHMI K Register No : SNC20CE017	Attendance : 96.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
SREEVISHNU K Register No : SNC20CE018	Attendance : 96.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
VAISHNAVI N K Register No : SNC20CE019	Attendance : 88.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
VYSHNA K Register No : SNC20CE020	Attendance : 92.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	
ANUPRIYA K Register No : LSNC20CE021	Attendance : 92.0 Internal Marks :	Long Leave : Duty Leave :		Yes	Submitted by faculty	



**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR





# **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

## **DEPARTMENT OF CIVIL ENGINEERING**

### **COURSE PLAN SCHEDULE**

Name of the faculty	Ms. REVATHI P
Designation	Assistant Professor
Faculty department name	Civil Engineering
Name of the course with course code	<b>CET 308 Comprehensive Course Work</b>
Department to which this course is offered	Civil Engineering
Semester	VI
Academic Year	2022-23

#### **1. COURSE OVERVIEW**

The course is designed to ensure that the student have firmly grasped the foundational knowledge in Civil Engineering familiar enough with the technological concepts. It provides an opportunity for the students to demonstrate their knowledge in various Civil Engineering subjects.

#### **2. COURSE OBJECTIVE**

1.To practice more with core subjects for cracking Gate, placement test and other competitive examinations

#### **3. PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES**

##### **I. PROGRAM OUTCOMES**

- ENGINEERING KNOWLEDGE
- PROBLEM ANALYSIS
- DESIGN / DEVELOPMENT OF SOLUTION
- CONDUCT INVESTIGATION OF COMPLEX PROBLEMS
- MODERN TOOL USAGE
- THE ENGINEER AND SOCIETY
- ENVIORNMENT AND SUSTAINABILITY
- ETHICS
- INDIVIDUAL AND TEAM WORK
- COMUNICATION
- PROJECT MANAGEMENT AND FINANCE
- LIFE LONG LEARNING

  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

## II. PROGRAM SPECIFIC OUTCOME

- III. **PSO 1** –Demonstrate in-depth knowledge in the analysis, design, experimental research and construction aspects of civil engineering structures
- IV. **PSO 2** –Apply the concept of sustainability in Civil Engineering

## 4. COURSE OUTCOME

- **CO 1** Learn to prepare for a competitive examination
- **CO 2** : Comprehend the questions in Civil Engineering field and answer them with confidence
- **CO 3** Communicate effectively with faculty in scholarly environments
- **CO 4** : Analyze the comprehensive knowledge gained in basic courses in the field of Civil Engineering

## 5. COURSE MAPPING

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
CO1	3	1	1			2							1	1
CO2	3	1				2			3					
CO3	3	1			1	2			3					1
CO4	3	3			1	2								

## 6. SYLLABUS

CET 201- Mechanics of Solids  
CET 203- Fluid Mechanics and Hydraulics  
CET 205- Surveying& Geomatics  
CET 204- Geotechnical Engineering I  
CET 309–Construction Technology and Management

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR

## 7. TEACHING PLAN

SL No:	TOPIC	No of Lectures
<b>1</b>	<b>Mechanics of Solids</b>	
1.1	Mock Test on Module 1 and Module 2	1
1.2	Mock Test on Module 3, Module 4 and Module 5	1
<b>2</b>	<b>Fluid Mechanics and Hydraulics</b>	1
2.1	Mock Test on Module 1, Module 2 and Module 3	1
2.2	Mock Test on Module 4 and Module 5	1
<b>3</b>	<b>Surveying &amp; Geomatics</b>	1
3.1	Mock Test on Module 1 and Module 2	1
3.2	Mock Test on Module 3, Module 4 and Module 5	1
3.3	Feedback and Remedial	1
<b>4</b>	<b>Geotechnical Engineering I</b>	1
4.1	Mock Test on Module 1, Module 2 and Module 3	1
4.2	Mock Test on Module 4 and Module 5	1
<b>5</b>	<b>Construction Technology and Management</b>	1
5.1	Mock Test on Module 1, Module 2 and Module 3	1
5.2	Mock Test on Module 4 and Module 5	1
<b>6</b>	<b>Construction Technology and Management</b>	1
6.1	Mock Test on Module 1, Module 2 and Module 3	1
6.2	Mock Test on Module 4 and Module 5	1
6.3	Feedback and Remedial	1

## 8. Subject History

- ✓ Year of Introduction of the Subject – 2022
- ✓ Faculty Handled Just before this time – *Dr. Susan Abraham*
- ✓ Pass Percentage during last three years – *66.67%*
- ✓ Target Pass Percentage – 85
- ✓ The following is the formula for calculating the target percentage of a subject.

9. Any other important matter to be brought into consideration:

*Leena*

Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR



Manual Prepared by:

**Ms. REVATHI P**

**ASSISTANT PROFESSOR**

**DEPARTMENT OF CE**

Approved by:

Dr. Susan Abraham  
Associate Professor  
Department of CE

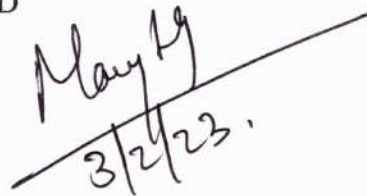
Dated signature of faculty member

  
3/2/23

Dated signature of Module Coordinator

  
3/2/23

Dated signature of HOD

  
May 19  
3/2/23.

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PATTANUR  
KANNUR



# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

## COURSE TEAM MEETING CHECKLIST

SEMESTER: VI

DATE OF THE MEETING: 4/2/23

VENUE: CE Dept

TIME: 10:AM

1. NAME OF THE FACULTY: REVATHI-P
2. DEPARTMENT: CIVIL ENGINEERING
3. SUBJECT CODE AND NAME: CET 308, COMPREHENSIVE COURSE WORK
4. DETAILS REGARDING THE SUBJECT:

WHETHER HANDLING SUBJECT FOR THE FIRST TIME? IF NOT MENTION THE COUNT EXCLUDING THIS TIME	Yes
TARGET PASS PERCENTAGE	
NATURE OF THE SUBJECT	EASY / MODERATE / TOUGH
CPS	COMPLETED / NOT COMPLETED
ATTENDANCE REGISTER	COMPLETED / NOT COMPLETED
ASSESSMENT PLAN	FILED / NOT FILED
ACADEMIC CALENDAR	FILED / NOT FILED
QP & SCHEME OF FIRST ASSIGNMENT	AVAILABLE / NOT AVAILABLE
QP & SCHEME OF SERIES TEST 1	AVAILABLE / NOT AVAILABLE
FEEDBACK OF THE TUTOR REGARDING THE CLASS	-
ACTION PLAN BY THE FACULTY TO ACHIEVE TARGET PASS PERCENTAGE	-
ANY OTHER REMARKS FROM THE FACULTY	-

Revathi  
4/2/23  
FACULTY

Leena  
4/2/23  
COURSE CHAIRMAN

Dr. Leena A.V.  
4/2/23  
HOD

Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY**  
**DEPARTMENT OF CIVIL ENGINEERING**  
**CET308-COMPREHENSIVE COURSE WORK**

**CUMULATIVE ATTENDANCE**

SL NO.	REG NO	NAME	ATTENDANCE (%)	ATTENDANCE (MARKS)
1	SNC20CE001	ABHIJITHA K	95.8	10
2	SNC20CE002	AKSHAYA PV	95.8	10
3	SNC20CE003	ALEN ALEX	91.7	10
4	SNC20CE004	AMAYA T	91.7	10
5	SNC20CE006	ANUVINDA P	91.7	10
6	SNC20CE007	APARNA P	91.7	10
7	SNC20CE008	ARJUN KM	75.0	7
8	SNC20CE009	FATHIMATHUL MARJAN KP	83.3	8
9	SNC20CE010	FATHIMATH ZUHRA	83.3	8
10	SNC20CE011	FIZA FARHEEN	75.0	7
11	SNC20CE012	KEERTHANA SURENDRAN	75.0	7
12	SNC20CE013	MOOHAMMED EBRAHIM	75.0	8
13	SNC20CE014	RAJATH MANOHARAN	95.8	10
13	SNC20CE015	SAJJAD ZAINUDHEEN	83.3	8
15	SNC20CE016	SHAHANA SHERIN	83.3	8
16	SNC20CE017	SREELAKSHMI K	95.8	10
17	SNC20CE018	SREEVISHNU K	95.8	10
18	SNC20CE019	VAISHNAVI N K	87.5	10
19	SNC20CE020	VYSHNA K	91.7	10
20	LSNC20CE021	ANUPRIYA K	91.7	10

*May 19*  
[HOD, CE]

*[Signature]*  
DR. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PATTANUR  
KANNUR



CST308	COMPREHENSIVE COURSE WORK	CATEGORY	L	T	P	CREDIT	YEAR OF INTRODUCTION
		PCC	1	0	0	1	2019

**Preamble:** The objective of this Course work is to ensure the comprehensive knowledge of each student in the most fundamental core courses in the curriculum. Five core courses credited from semesters 3, 4 and 5 are chosen for the detailed study in this course work. This course helps the learner to become competent in cracking GATE, placement tests and other competitive examinations

**Prerequisite:**

1. Data Structures
2. Operating Systems
3. Computer Organization And Architecture
4. Database Management Systems
5. Formal Languages And Automata Theory

**Course Outcomes:** After the completion of the course the student will be able to

CO1 :	Comprehend the concepts and applications of data structures (Cognitive Knowledge Level: <b>Understand</b> )
CO2 :	Comprehend the concepts, functions and algorithms in Operating System (Cognitive Knowledge Level: <b>Understand</b> ))
CO3 :	Comprehend the organization and architecture of computer systems (Cognitive Knowledge Level: <b>Understand</b> )
CO4 :	Comprehend the fundamental principles of database design and manipulation (Cognitive Knowledge Level: <b>Understand</b> )
CO5 :	Comprehend the concepts in formal languages and automata theory Cognitive Knowledge Level: <b>Understand</b> )

Dr. L. S. A. V.  
SCHOOL OF DISTANCE EDUCATION  
JSSR  
JSSR  
JSSR

*[Handwritten Signature]*

### Mapping of course outcomes with program outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	☑	☑										☑
CO2	☑	☑										☑
CO3	☑	☑										☑
CO4	☑	☑										☑
CO5	☑	☑										☑

### Assessment Pattern

Bloom's Category	End Semester Examination
Remember	10
Understand	20
Apply	20
Analyse	
Evaluate	
Create	

### Mark distribution

Total Marks	CIE	ESE	ESE Duration
50	0	50	1 hour

**End Semester Examination Pattern:** Objective Questions with multiple choice, a maximum of four options. Question paper includes fifty questions of one mark each, distributed equally from all the five identified courses.

4.3	Feedback and Remedial class	
<b>5</b>	<b>FORMAL LANGUAGES AND AUTOMATA THEORY</b>	
5.1	Mock Test on Module 1, Module 2 and Module 3	1 hour
5.2	Mock Test on Module 4 and Module 5	1 hour
5.3	Feedback and Remedial class	1 hour

### Model Question Paper

**QP CODE:**

**Reg No:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**PAGES : 9**

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

**SIXTH SEMESTER B.TECH DEGREE EXAMINATION, MONTH & YEAR**

**Course Code: CST308**

**Course Name: Comprehensive Course Work**

**Max. Marks: 50**

**Duration: 1 Hour**

**Objective type questions with multiple choices. Mark one correct answer for each question.  
Each Question Carries 1 Mark**

- Consider the following sequence of operations on an empty stack.  
push(22); push(43); pop(); push(55); push(12); s=pop();  
Consider the following sequence of operations on an empty queue.  
enqueue(32); enqueue(27); dequeue(); enqueue(38); enqueue(12); q=dequeue();  
The value of s+q is \_\_\_\_\_  
(A) 44                      (B) 54                      (C) 39                      (D) 70
- A B-tree of order (degree)5 and of height 3 will have a minimum of \_\_\_\_ keys.  
A. 624  
B. 249  
C. 124  
D. 250



9. Which tree traversal performed on a binary search tree, results in ascending order listing of the keys?
- Pre-order
  - In-order
  - Post-order
  - Level-order
10. You are given pointers to first and last nodes of a singly linked list, which of the following operations are dependent on the length of the linked list?
- Delete the first element
  - Insert a new element as a first element
  - Add a new element at the end of the list
  - Delete the last element of the list
11. Suppose a disk has 400 cylinders, numbered from 0 to 399. At some time the disk arm is at cylinder 58, and there is a queue of disk access requests for cylinder 66, 349, 201, 110, 38, 84, 226, 70, 86. If Shortest-Seek Time First (SSTF) is being used for scheduling the disk access, the request for cylinder 86 is serviced after servicing \_\_\_\_\_ number of requests.
- 1
  - 2
  - 3
  - 4
12. If frame size is 4KB then a paging system with page table entry of 2 bytes can address \_\_\_\_\_ bytes of physical memory.
- $2^{12}$
  - $2^{16}$
  - $2^{18}$
  - $2^{28}$
13. Calculate the internal fragmentation if page size is 4KB and process size is 103KB.
- 3KB
  - 4KB
  - 1KB
  - 2KB
14. Which of the following scheduling policy is likely to improve interactiveness?
- FCFS
  - Round Robin
  - Shortest Process Next
  - Priority Based Scheduling
15. Consider the following program
- Semaphore X=1, Y=0
- ```

Void A ( )
{
    While (1)
    {
        P(X);
        Print '1';
        V(Y);
    }
}

Void B ( )
{
    While (1)
    {
        P(Y);
        P(X);
        Print '0';
    }
}

```

Which of the characteristics above are used in the design of a RISC processor?

- (A) I only      (B) I and II only      (C) I and III only      (D) I, II and III

22. A 64-bit processor can support a maximum memory of 8 GB, where the memory is word-addressable (one word is of 64 bits). The size of the address bus of the processor is atleast \_\_\_\_\_ bits.  
(A) 30      (B) 31      (C) 32      (D) None
23. The stage delays in a 4-stage pipeline are 900, 450, 400 and 350 picoseconds. The first stage (with delay 900 picoseconds) is replaced with a functionally equivalent design involving two stages with respective delays 600 and 550 picoseconds. The throughput increase of the pipeline is \_\_\_\_\_ percent.  
(A) 38      (B) 30      (C) 58      (D) 50
24. Consider a direct mapped cache of size 256 Kilo words with block size 512 words. There are 6 bits in the tag. The number of bits in block (index) and word (offset) fields of physical address are is:  
(A) block (index) field = 6 bits, word (offset) field = 9 bits  
(B) block (index) field = 7 bits, word (offset) field = 8 bits  
(C) block (index) field = 9 bits, word (offset) field = 9 bits  
(D) block (index) field = 8 bits, word (offset) field = 8 bits
25. The memory unit of a computer has 1 Giga words of 64 bits each. The computer has instruction format, with 4 fields: an opcode field; a mode field to specify one of 12 addressing modes; a register address field to specify one of 48 registers; and a memory address field. If an instruction is 64 bits long, how large is the opcode field?  
(A) 34 bits      (B) 24 bits      (C) 20 bits      (D) 14 bits
26. A computer has 64-bit instructions and 28-bit address. Suppose there are 252 two-address instructions. How many 1-address instructions can be formulated?  
(A)  $2^{24}$       (B)  $2^{26}$       (C)  $2^{28}$       (D)  $2^{30}$
27. Determine the number of clock cycles required to process 200 tasks in a six-segment pipeline. (Assume there were no stalls), each segment takes 1 cycle.  
(A) 1200 cycles      (B) 206 cycles      (C) 207 cycles      (D) 205 cycles
28. Match the following Lists:
- |                          |                       |
|--------------------------|-----------------------|
| P.DMA                    | 1. Priority Interrupt |
| Q. Processor status Word | 2. I/O Transfer       |
| R. Daisy chaining        | 3. CPU                |

35. Consider the following relation instance, where "A" is primary Key.

| A1 | A2 | A3 | A4   |
|----|----|----|------|
| 1  | 1  | 1  | Null |
| 5  | 2  | 5  | 1    |
| 9  | 5  | 13 | 5    |
| 13 | 13 | 9  | 15   |

Which one of the following can be a foreign key that refers to the same relation?

- (A) A2 (B) A3 (C) A4 (D) ALL

36. A relation R(ABC) is having the tuples(1,2,1),(1,2,2),(1,3,1) and (2,3,2). Which of the following functional dependencies holds well?

- (A)  $A \rightarrow BC$  (B)  $AC \rightarrow B$  (C)  $AB \rightarrow C$  (D)  $BC \rightarrow A$

37. Consider a relation R with attributes A, B, C, D and E and functional dependencies  $A \rightarrow BC$ ,  $BC \rightarrow E$ ,  $E \rightarrow DA$ . What is the highest normal form that the relation satisfies?

- (A) BCNF (B) 3 NF (C) 2 NF (D) 1 NF

38. For the given schedule S, find out the conflict equivalent schedule.

S : r1(x); r2(Z); r3(X); r1(Z); r2(Y); r3(Y); W1(X); W2(Z); W3(Y); W2(Y)

- (A)  $T1 \rightarrow T2 \rightarrow T3$  (B)  $T2 \rightarrow T1 \rightarrow T3$   
(C)  $T3 \rightarrow T1 \rightarrow T2$  (D) Not conflict serializable

39. Specialization is \_\_\_\_\_ process.

- (A) top-down (B) bottom up  
(C) Both (A) and (B) (D) none of these

40. If  $D_1, D_2, \dots, D_n$  are domains in a relational model, then the relation is a table, which is a subset of

- (A)  $D_1 + D_2 + \dots + D_n$  (B)  $D_1 \times D_2 \times \dots \times D_n$   
(C)  $D_1 \cup D_2 \cup \dots \cup D_n$  (D)  $D_1 - D_2 - \dots - D_n$

41. Which of the following strings is in the language defined by the grammar:

$S \rightarrow aX$

$X \rightarrow aX|bX|b$

- (A) aaaba (B) babab (C) aaaaa (D) ababb

42. Consider the regular expression  $(x+y)^*xyx(x+y)^*$  where  $\Sigma = (x,y)$ . If L is the language represented by this regular expression, then what will be the minimum number of states in a DFA recognizing L?

- (A) 2 (B) 3 (C) 4 (D) 5



Turing machine.

(D) All the above

50. Regular expression  $a^+b$  denotes the set :

(A)  $\{a\}$

(B)  $\{\text{Epsilon}, a, b\}$

(C)  $\{a, b\}$

(D) None of these

| QNo | Ans.<br>Key | QNo | Ans.<br>Key | QNo | Ans.<br>Key | QNo | Ans.<br>Key | QNo | Ans.<br>Key |
|-----|-------------|-----|-------------|-----|-------------|-----|-------------|-----|-------------|
| 1   | (C)         | 11  | (C)         | 21  | (C)         | 31  | (C)         | 41  | (D)         |
| 2   | (B)         | 12  | (D)         | 22  | (A)         | 32  | (D)         | 42  | (C)         |
| 3   | (A)         | 13  | (C)         | 23  | (D)         | 33  | (A)         | 43  | (B)         |
| 4   | (C)         | 14  | (B)         | 24  | (C)         | 34  | (B)         | 44  | (B)         |
| 5   | (D)         | 15  | (D)         | 25  | (B)         | 35  | (B)         | 45  | (D)         |
| 6   | (D)         | 16  | (B)         | 26  | (D)         | 36  | (D)         | 46  | (A)         |
| 7   | (A)         | 17  | (B)         | 27  | (D)         | 37  | (A)         | 47  | (C)         |
| 8   | (D)         | 18  | (C)         | 28  | (B)         | 38  | (D)         | 48  | (D)         |
| 9   | (B)         | 19  | (A)         | 29  | (C)         | 39  | (A)         | 49  | (B)         |
| 10  | (D)         | 20  | (B)         | 30  | (D)         | 40  | (B)         | 50  | (C)         |

*Sundar*



# **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

## **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

### **COURSE PLAN SCHEDULE**

|                                            |                                          |
|--------------------------------------------|------------------------------------------|
| Name of the faculty                        | Veena KK                                 |
| Designation                                | Assistant Professor                      |
| Faculty department name                    | Computer Science and Engineering         |
| Name of the course with course code        | <b>CST 308 Comprehensive Course Work</b> |
| Department to which this course is offered | Computer Science and Engineering         |
| Semester                                   | VI                                       |
| Academic Year                              | 2022-23                                  |

#### **1. COURSE OVERVIEW**

The objective of this Course work is to ensure the comprehensive knowledge of each student in the most fundamental core courses in the curriculum. Six core courses credited from Semesters 3, 4 and 5 are chosen for the detailed study in this course work. This course helps the learner to become competent in cracking GATE, placement tests and other competitive examinations.

#### **2. COURSE OBJECTIVE**

To practice more with core subjects for cracking Gate, placement test and other competitive examinations

#### **3. PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES**

##### **I. PROGRAM OUTCOMES**

- ENGINEERING KNOWLEDGE
- PROBLEM ANALYSIS
- DESIGN / DEVELOPMENT OF SOLUTION
- CONDUCT INVESTIGATION OF COMPLEX PROBLEMS
- MODERN TOOL USAGE
- THE ENGINEER AND SOCIETY
- ENVIRONMENT AND SUSTAINABILITY
- ETHICS
- INDIVIDUAL AND TEAM WORK

- COMUNICATION
- PROJECT MANAGEMENT AND FINANCE
- LIFE LONG LEARNING

## II. PROGRAM SPECIFIC OUTCOME

- **PSO 1** - The ability to identify, analyze and design solutions for complex engineering problems in multidisciplinary areas by understanding the core principles and concepts of computer science and thereby engage in national grand challenges.
- **PSO 2** - The ability to acquire programming efficiency by designing algorithms and applying standard practices in software project development to deliver quality software products meeting the demands of the industry.

### 4. COURSE OUTCOME

- **CO 1** Comprehend the concepts of discrete mathematical structures (Cognitive Knowledge Level: Understand)
- **CO 2** : Comprehend the concepts and applications of data structures (Cognitive Knowledge Level: Understand)
- **CO 3** : Comprehend the concepts, functions and algorithms in Operating System (Cognitive Knowledge Level: Understand)
- **CO 4** : Comprehend the organization and architecture of computer systems (Cognitive Knowledge Level: Understand).
- **CO 5** : Comprehend the concepts in formal languages and automata theory (Cognitive Knowledge Level: Understand).

### 5. COURSE MAPPING

|     | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 |
|-----|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| CO1 | H    | H    | H    |      | M    |      |      | M    |      | H     |       | H     |       | M     |
| CO2 | H    | M    | M    |      | M    |      |      | M    |      | L     |       | H     |       |       |
| CO3 | H    | H    | M    | L    | M    |      |      | M    |      | M     |       | H     |       |       |
| CO4 | H    | M    | M    | L    | M    |      |      | M    |      | M     |       | H     |       |       |
| CO5 | H    | M    | L    |      | M    |      |      | M    |      | M     |       | M     |       |       |
| CO6 | H    | M    | M    | L    | M    | M    |      | M    | L    | L     | M     | M     |       |       |

Hi: High      M: Medium      L: Low



## 6. SYLLABUS

Full Syllabus of all six selected Courses.

1. Data Structures
2. Operating Systems
3. Computer Organization And Architecture
4. Database Management Systems
5. Formal Languages And Automata Theory

## 7. TEACHING PLAN

| SL No:   | TOPIC                                         | No of Lectures | Planned Date | Actual Date |
|----------|-----------------------------------------------|----------------|--------------|-------------|
| <b>1</b> | <b>DATA STRUCTURES</b>                        | 1              |              |             |
| 1.1      | Mock Test on Module 1, Module 2 and Module 3  | 1              | 14-02-2023   | 25-2-23     |
| 1.2      | Mock Test on Module 4 and Module 5            | 1              | 21-02-2023   | 4-3-23      |
| <b>2</b> | <b>OPERATING SYSTEMS</b>                      | 1              |              |             |
| 2.1      | Mock Test on Module 1 and Module 2            | 1              | 28-02-2023   | 26-3-23     |
| 2.2      | Mock Test on Module 3, Module 4 and Module 5  | 1              | 14-03-2023   | 26-3-23     |
| 2.3      | Feedback and Remedial                         | 1              | 21-03-2023   | 4-4-23      |
| <b>3</b> | <b>COMPUTER ORGANIZATION AND ARCHITECTURE</b> | 1              |              |             |
| 3.1      | Mock Test on Module 1, Module 2 and Module 3  | 1              | 28-03-2023   | 4-4-23      |
| 3.2      | Mock Test on Module 4 and Module 5            | 1              | 04-04-2023   | 11-4-23     |
| <b>4</b> | <b>DATABASE MANAGEMENT SYSTEMS</b>            | 1              |              |             |
| 4.1      | Mock Test on Module 1, Module 2 and Module 3  | 1              | 04-04-2023   | 11-4-23     |
| 4.2      | Mock Test on Module 4 and Module 5            | 1              | 04-04-2023   | 25-4-23     |
| <b>5</b> | <b>FORMAL LANGUAGES AND AUTOMATA THEORY</b>   | 1              |              |             |
| 5.1      | Mock Test on Module 1, Module 2 and Module 3  | 1              | 11-04-2023   | 25-4-23     |
| 5.2      | Mock Test on Module 4 and Module 5            | 1              | 18-04-2023   | 25-4-23     |
| 5.3      | Feedback and Remedial                         | 1              | 25-04-2023   | 25-4-23     |

**8. Subject History**

- ✓ Year Of Introduction of the lab – 2019
- ✓ Faculty Handled Just before this time – Ms. Thulasibai.A
- ✓ Pass Percentage during last three years –
- ✓ Target Pass Percentage – 85

9. Any other important matter to be brought into consideration:

Manual Prepared by:

**VEENA KK**

**ASSISTANT PROFESSOR**

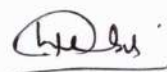
**DEPARTMENT OF CSE**

Approved by: *THULASIBAI-A.*  
ASSISTANT PROFESSOR.  
CSE.


Dated signature of faculty member

*Veena.KK* 

Dated signature of Module Coordinator

*Thulasi* 

Dated signature of HOD

*Sunder V* 

*Dr. LEENA A. V.*  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PANNUR  
KANJIR  




MOCK TEST 1

**Topics: Data Structure, Database Management System, Operating system**

**Time: 30 minutes**

**Marks: 30 marks**

**Name:**

**Register No:**

- 1) \_\_\_\_ is not a component of data structure?  
a) Operations      b) Storage structures      c) Algorithms      d) None of above
- 2) The time complexity of heap sort is?  
a)  $O(n)$       b)  $O(\log n)$       c)  $O(n^2)$       d)  $O(n \log n)$
- 3) The operation of processing each element in the list is known as?  
a) Sorting      b) Merging      c) Inserting      d) Traversal
- 4) The number of edges in a complete graph of  $n$  vertices is?  
a)  $n(n+1)/2$       b)  $n(n-1)/2$       c)  $n^2/2$       d)  $n/2$
- 5) The complexity of sorting algorithm measures the \_\_\_\_ as a function of the number  $n$  of items to be sorted?  
a) Average time      b) Running time      c) Average-case complexity      d) case-complexity
- 6) What is the maximum number of swaps that can be performed in selection sort algorithm?  
a)  $n-1$       b)  $n$       c) 1      d)  $n-2$
- 7) In a binary tree a sequence of consecutive edges is called?  
a) Rotate      b) Connecting lines      c) Two-way      d) Path
- 8) The terminal node in a binary tree is called?  
a) Root      b) Leaf      c) Child      d) Branch
- 9) Linked representation of binary tree needs \_\_\_\_ parallel array?  
a) 4      b) 2      c) 3      d) 5
- 10) The inorder traversal of tree will yield a sorted listing of elements of tree in?  
a) Primary tree      b) Binary search tree      c) Merging      d) AVL trees
- 11) Select the definition of the correct key which is used to represent between 2 tables?  
a) Candidate key      b) Foreign key      c) Primary key      d) Super key
- 12) Select the correct advantages of view?  
a) Derived columns      b) Data security      c) Hiding of complex queries      d) All of the above
- 13) Which of the following is the oldest database model?  
a) Hierarchical      b) Object oriented      c) Deductive      d) Relational
- 14) Which type of data can be stored in the database?  
a) Image oriented data      c) Data in the form of audio or video  
b) Text, files containing data      d) All of the above.

Dr. S. V. S. N. V.  
Principal  
Sree Narayana Guru College of Engineering & Technology  
Kannur

*[Signature]*



15) The values appearing in given attributes of any tuple in the referencing relation must likewise occur in specified attributes of at least one tuple in the referenced relation, according to \_\_\_\_\_ integrity constraint

- a) Referential      b) Primary      c) Referencing      d) Specific

16) The DBMS acts as an interface between \_\_\_\_\_ and \_\_\_\_\_ of an enterprise-class system.

- a) Data and the DBMS      c) Database application and the database  
b) Application and SQL      d) The user and the software

17) Which of the following is the best way to represent the attributes in a large db?

- a) Dot representation      b) Concatenation      c) Relational      d) All of the mentioned

18) \_\_\_\_\_ command is used in SQL to issue multiple CREATE TABLE, CREATE VIEW and GRANT statements in a single transaction.

- a) CREATE CLUSTER      b) CREATE PACKAGE      c) CREATE SCHEMA      d) All of the mentioned

19) Which of the following is the subset of SQL commands used to manipulate Oracle Structures, including tables?

- a) Data Described Language      c) Data Manipulation Language  
b) Data Retrieval Language      d) Data Definition Language

20) After groups have been established, SQL applies predicates in the \_\_\_\_\_ clause, allowing aggregate functions to be used.

- a) Where      b) Having      c) Group by      d) With

21) What is an operating system?

- a) interface between the hardware and application programs  
b) collection of programs that manages hardware resources  
c) system service provider to the application programs  
d) all of the mentioned

22) To access the services of the operating system, the interface is provided by the?

- a) Library      b) System calls      c) Assembly instructions      d) API

23) When a process is in a "Blocked" state waiting for some I/O service. When the service is completed, it goes to the \_\_\_\_\_

- a) Terminated state      b) Suspended state      c) Running state      d) Ready state

24) The FCFS algorithm is particularly troublesome for \_\_\_\_\_

- a) operating systems      c) time sharing systems  
b) multiprocessor systems      d) multiprogramming systems

25) A deadlock avoidance algorithm dynamically examines the \_\_\_\_\_ to ensure that a circular wait condition can never exist.

- a) operating system      c) system storage state  
b) resources      d) resource allocation state

26) Network operating system runs on \_\_\_\_\_

- a) every system in the network      c) both server and every system in the network  
b) server      d) none of the mentioned

27) The \_\_\_\_\_ program initializes all aspects of the system, from CPU registers to device controllers and the contents of main memory, and then starts the operating system.

- a) bootstrap      c) bootloader  
b) main      d) rom

28) For real time operating systems, interrupt latency should be \_\_\_\_\_

- a) zero      c) maximum  
b) minimal      d) dependent on the scheduling

29) The \_\_\_\_\_ presents a uniform device-access interface to the I/O subsystem, much as system calls provide a standard interface between the application and the operating system.

- a) Device drivers      c) Devices  
b) I/O systems      d) Buses

30) In Unix, which system call creates the new process?

- a) create      c) new  
b) fork      d) none of the mentioned



# SREE NARAYANA GURU COLLEGE OF ENGINEERING &

## TECHNOLOGY

|                        |                                   |                        |             |
|------------------------|-----------------------------------|------------------------|-------------|
| Model Exam             | 2                                 | Academic Year/Semester | 2022-23/ S6 |
| Subject name with code | CST-308 COMPREHENSIVE COURSE WORK | Branch                 | CSE         |
| Date of Exam           | 11/04/2023                        | Duration               | 30 min      |
| Starting time          | 10:30 AM                          | Max. Marks             | 30          |

1. Given the language  $L = \{ab, aa, baa\}$ , which of the following strings are in  $L^*$

- 1) abaabaaabaa
- 2) aaaabaaaa
- 3) baaaaabaaaab
- 4) baaaabaa

- A) 1, 2 and 3
- B) 2, 3 and 4
- C) 1, 2 and 4
- D) 1, 3 and 4

2. Which one of the following language over the alphabet  $\{0, 1\}$  is described by the regular expression:  $(0+1)^*0(0+1)^*0(0+1)^*$

- A The set of all strings containing the substring 00
- B The set of all string containing at most two 0's
- C The set of all string containing at least two 0's
- D The set of all strings that begin and end with either 0 or 1

3. Let S and T be language over  $\{a, b\}$  represented by the regular expression  $(a+b)^*$  and  $(a+b)^*$  respectively. which of the following is true

- a)  $S \subset T$  (S is subset of T)
- b)  $T \subset S$  (T is subset of S)
- c)  $S = T$
- d)  $S \cap T = \emptyset$

4. Let  $L = \{w \in (0+1)^* | w \text{ has even number of 1s, ie } L \text{ is the set of all bit string with even number of 1's.}\}$  which one of the regular expression below represents L?

- A-  $(0^*10^*1)^*$
- B-  $0^*(10^*10^*)^*$
- C-  $0^*(10^*1)^*0^*$
- D-  $0^*1(10^*1)^*10^*$

5 Which of the following denotes Chomskian hierarchy?

- (A) REG ? CFL ? CSL ? type0
- (B) CFL ? REG ? type0 ? CSL
- (C) CSL ? type0 ? REG ? CFL
- (D) CSL ? CFL ? REG ? type0

6 Consider a language L for which there exists a Turing machine TM T that accepts every word in L and

Handwritten signature and stamp of Sree Narayana Guru College of Engineering & Technology, Pattanam.

(D) Recursively enumerable

7. A language is represented by a regular expression  $(a)^*(a + ba)$ . Which of the following string does not belong to the regular set represented by the above expression?

- (A) aaa
- (B) aba
- (C) ababa
- (D) aa

8. Regular expression are a) Type 0 language b) Type 1 language c) Type 2 language d) Type 3 language

9. How many strings of length less than 4 contains the language described by the regular expression  $(x+y)^*y(a+ab)^*$ ?

- a) 7 b) 10 c) 12 d) 11

10. If  $\Sigma = \{0,1\}$ , then  $\Phi^*$  will result to:

- A)  $\epsilon$  B)  $\Phi$  C)  $\Sigma$  D) None of the mentioned

11. Which among the following is equivalent to the given regular expression  $01^*+1$

- 1)  $(01)^*+1$
- 2)  $0((1)^*+1)$
- 3)  $(0(1)^*)+1$
- 4)  $((0^*1)1^*)^*$

12. Which of the following regular expression corresponds to the language of all strings over the alphabet  $\{a, b\}$  that contains exactly two a's

- (i) aa (ii)  $ab^*a$  (iii)  $b^*ab^*a$

- (a) (i) and (ii) only
- (b) (ii) and (iii) only
- (c) (i) and (ii) only
- (d) None of these

13. Which of the following regular expression corresponds to the language of all strings over the alphabet  $\{a, b\}$  that do not end with  $ab$ ?

- (a)  $(a + b)^*(aa + ba + bb)$
- (b)  $(a + b)^*(aa + ba + bb) + a + b + \epsilon$
- (c)  $b^*ab^*a$
- (d)  $b^*aa b^*$

14. What is regular expression corresponding to the language of strings of even lengths over the alphabet of  $\{a, b\}$ ?

- (a)  $(aa + bb + ba + ab)^*$
- (b)  $(aa + bb)$
- (c)  $(ab + bb + ba)^*$
- (d)  $a^*b^*a^*b^*$

15. How many minimum number of states are required in the DFA (over the alphabet  $\{a, b\}$ ) accepting all the strings with the number of a's divisible by 4 and number of b's divisible by 5?



Name: .....

Roll No: .....



**SREE NARAYANA GURU COLLEGE OF ENGINEERING &**  
**TECHNOLOGY**

|                               |                                          |                               |                    |
|-------------------------------|------------------------------------------|-------------------------------|--------------------|
| <i>Model Exam</i>             | <b>3</b>                                 | <i>Academic Year/Semester</i> | <b>2022-23/ S6</b> |
| <i>Subject name with code</i> | <b>CST-308 COMPREHENSIVE COURSE WORK</b> | <i>Branch</i>                 | <b>CSE</b>         |
| <i>Date of Exam</i>           | <b>25/04/2023</b>                        | <i>Duration</i>               | <b>30 min</b>      |
| <i>Starting time</i>          | <b>1:00pm</b>                            | <i>Max. Marks</i>             | <b>30</b>          |

- 1) Cache memory works on the principle of
  - A. Locality of data
  - B. Locality of memory
  - C. Locality of reference
  - D. Locality of reference & memory
- 2) The circuit converting binary data in to decimal is
  - A. Encoder
  - B. Multiplexer
  - C. Decoder
  - D. Code converter
- 3) The address in the main memory is known as -
  - A. Logical address
  - B. Physical address
  - C. Memory address
  - D. None of the above
- 4) Which of the following is a combinational logic circuit which sends data from a single source to two or more separate destinations?
  - A. Multiplexer
  - B. Demultiplexer
  - C. Encoder
  - D. Decoder
- 5) Which of the following is a group of bits that tells the computer to perform a particular operation?
  - a. Accumulator
  - b. Register
  - c. Instruction code
  - d. None of the above
- 6) The status bit is also called as-
  - a. Unsigned bit
  - b. Signed bit
  - c. Flag bit
  - d. None of the above

Dr. LECTURER A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PANNANUR

7) Which of the following topology is used in Ethernet?

- a. Ring topology
- b. Bus topology
- c. Mesh topology
- d. Star topology

8) Who developed the basic architecture of computer?

- A. Blaise Pascal
- B. Charles Babbage
- C. John Von Neumann
- D. None of the above

9) Which of the following is not considered as a peripheral device?

- A. CPU
- B. Keyboard
- C. Monitor
- D. All of the above

10) With the reference to computer memory, which of the following is not a address binding type?

- A. Load time
- B. Memory time
- C. Compile time
- D. Execution time

11) The addressing mode used in an instruction of the form ADD XY, is

- A. Absolute
- B. Indirect
- C. Index
- D. None of these

12) Which of the following is not a weighted code?

- A. Decimal Number system
- B. Excess 3-cod
- C. Binary number System
- D. None of these

13) Content of the program counter is added to the address part of the instruction in order to obtain the effective address is called.

- A. relative address mode
- B. index addressing mode
- C. register mode
- D. implied mode

14) The operation executed on data stored in registers is called

- A. Macro-operation
- B. Micro-operation
- C. Bit-operation
- D. Byte-operation

15) The BSA instruction is

- (A) Branch and store accumulator
- (B) Branch and save return address
- (C) Branch and shift address
- (D) Branch and show accumulator

**SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE**

**CST 308 COMPREHENSIVE COURSE WORK**

**MOCK TEST 1**

**Topics: Data Structure, Database management system, Operating system**

**Time: 30 minutes**

**Marks: 30 marks**

**Name:** Hamna Sherin

**Register No:** SNC20CS024

1) \_\_\_\_\_ is not a component of data structure?

- a) Operations    b) Storage structures    c) Algorithms    d) None of above

2) The time complexity of heap sort is?

- a)  $O(n)$     b)  $O(\log n)$     c)  $O(n^2)$     d)  $O(n \log n)$

3) The operation of processing each element in the list is known as?

- a) Sorting    b) Merging    c) Inserting    d) Traversal

4) The number of edges in a complete graph of  $n$  vertices is?

- a)  $n(n+1)/2$     b)  $n(n-1)/2$     c)  $n^2/2$     d)  $n/2$

5) The complexity of sorting algorithm measures the \_\_\_\_\_ as a function of the number  $n$  of items to be sorted?

- a) Average time    b) Running time    c) Average-case complexity    d) case-complexity

6) What is the maximum number of swaps that can be performed in selection sort algorithm?

- a)  $n-1$     b)  $n$     c) 1    d)  $n-2$

7) In a binary tree a sequence of consecutive edges is called?

- a) Rotate    b) Connecting lines    c) Two-way    d) Path

8) The terminal node in a binary tree is called?

- a) Root    b) Leaf    c) Child    d) Branch

9) Linked representation of binary tree needs \_\_\_\_\_ parallel array?

- a) 4    b) 2    c) 3    d) 5

10) The inorder traversal of tree will yield a sorted listing of elements of tree in?

- a) Primary tree    b) Binary search tree    c) Merging    d) AVL trees

11) Select the definition of the correct key which is used to represent between 2 tables?

- a) Candidate key    b) Foreign key    c) Primary key    d) Super key

12) Select the correct advantages of view?

- a) Derived columns    b) Data security    c) Hiding of complex queries    d) All of the above

13) Which of the following is the oldest database model?

- a) Hierarchical    b) Object oriented    c) Deductive    d) Relational

14) Which type of data can be stored in the database?

- a) Image oriented data    c) Data in the form of audio or video  
b) Text, files containing data    d) All of the above.

15) The values appearing in given attributes of any tuple in the referencing relation must likewise occur in specified attributes of at least one tuple in the referenced relation, according to \_\_\_\_\_ integrity constraint

- a) Referential    b) Primary    c) Referencing    d) Specific

16) The DBMS acts as an interface between \_\_\_\_\_ and \_\_\_\_\_ of an enterprise-class system.

- a) Data and the DBMS    c) Database application and the database  
b) Application and SQL    d) The user and the software

17) Which of the following is the best way to represent the attributes in a large db?

- a) Dot representation    b) Concatenation    c) Relational    d) All of the mentioned

17  
30

Dr. LEENA A. V.  
Principal  
Sree Narayana Guru College of Engineering & Technology  
Kollam

Sundhar



18) \_\_\_\_ command is used in SQL to issue multiple CREATE TABLE, CREATE VIEW and GRANT statements in a single transaction.

- ☒ a) CREATE CLUSTER    ☒ b) CREATE PACKAGE    ☒ c) CREATE SCHEMA    ☒ d) All of the mentioned

19) Which of the following is the subset of SQL commands used to manipulate Oracle Structures, including tables?

- ☒ a) Data Described Language    ☒ c) Data Manipulation Language  
☒ b) Data Retrieval Language    ☒ d) Data Definition Language

20) After groups have been established, SQL applies predicates in the \_\_\_\_ clause, allowing aggregate functions to be used.

- ☒ a) Where    ☒ b) Having    ☒ c) Group by    ☒ d) With

21) What is an operating system?

- ☒ a) interface between the hardware and application programs  
☒ b) collection of programs that manages hardware resources  
☒ c) system service provider to the application programs  
☒ d) all of the mentioned

22) To access the services of the operating system, the interface is provided by the?

- ☒ a) Library    ☒ b) System calls    ☒ c) Assembly instructions    ☒ d) API

23) When a process is in a "Blocked" state waiting for some I/O service. When the service is completed, it goes to the \_\_\_\_

- ☒ a) Terminated state    ☒ b) Suspended state    ☒ c) Running state    ☒ d) Ready state

24) The FCFS algorithm is particularly troublesome for \_\_\_\_

- ☒ a) operating systems    ☒ c) time sharing systems  
☒ b) multiprocessor systems    ☒ d) multiprogramming systems

25) A deadlock avoidance algorithm dynamically examines the \_\_\_\_ to ensure that a circular wait condition can never exist.

- ☒ a) operating system    ☒ c) system storage state  
☒ b) resources    ☒ d) resource allocation state

26) Network operating system runs on \_\_\_\_

- ☒ a) every system in the network    ☒ c) both server and every system in the network  
☒ b) server    ☒ d) none of the mentioned

27) The \_\_\_\_ program initializes all aspects of the system, from CPU registers to device controllers and the contents of main memory, and then starts the operating system.

- ☒ a) bootstrap    ☒ c) bootloader  
☒ b) main    ☒ d) rom

28) For real time operating systems, interrupt latency should be \_\_\_\_

- ☒ a) zero    ☒ c) maximum  
☒ b) minimal    ☒ d) dependent on the scheduling

29) The \_\_\_\_ presents a uniform device-access interface to the I/O subsystem, much as system calls provide a standard interface between the application and the operating system.

- ☒ a) Device drivers    ☒ c) Devices  
☒ b) I/O systems    ☒ d) Buses

30) In Unix, which system call creates the new process?

- ☒ a) create    ☒ c) new  
☒ b) fork    ☒ d) none of the mentioned

# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

## DEPARTMENT OF COMPUTER SCIENCE

### CST 308 COMPREHENSIVE COURSE WORK

#### MOCK TEST 1

Topics: Data Structure, Database management system, Operating system

Time: 30 minutes

Marks: 30 marks

Name: PARTHIP. K. ANISH

Register No: SNC20CS035

- 1)      is not a component of data structure?  
a) Operations    b) Storage structures    c) Algorithms    d) None of above
- 2) The time complexity of heap sort is?  
a)  $O(n)$     b)  $O(\log n)$     c)  $O(n^2)$     d)  $O(n \log n)$
- 3) The operation of processing each element in the list is known as?  
a) Sorting    b) Merging    c) Inserting    d) Traversal
- 4) The number of edges in a complete graph of  $n$  vertices is?  
a)  $n(n+1)/2$     b)  $n(n-1)/2$     c)  $n^2/2$     d)  $n/2$
- 5) The complexity of sorting algorithm measures the      as a function of the number  $n$  of items to be sorted?  
a) Average time    b) Running time    c) Average-case complexity    d) case-complexity
- 6) What is the maximum number of swaps that can be performed in selection sort algorithm?  
a)  $n-1$     b)  $n$     c) 1    d)  $n-2$
- 7) In a binary tree a sequence of consecutive edges is called?  
a) Rotate    b) Connecting lines    c) Two-way    d) Path
- 8) The terminal node in a binary tree is called?  
a) Root    b) Leaf.    c) Child    d) Branch
- 9) Linked representation of binary tree needs      parallel array?  
a) 4    b) 2    c) 3    d) 5
- 10) The inorder traversal of tree will yield a sorted listing of elements of tree in?  
a) Primary tree    b) Binary search tree    c) Merging    d) AVL trees
- 11) Select the definition of the correct key which is used to represent between 2 tables?  
a) Candidate key    b) Foreign key    c) Primary key    d) Super key
- 12) Select the correct advantages of view?  
a) Derived columns    b) Data security    c) Hiding of complex queries    d) All of the above
- 13) Which of the following is the oldest database model?  
a) Hierarchical    b) Object oriented    c) Deductive    d) Relational
- 14) Which type of data can be stored in the database?  
a) Image oriented data    c) Data in the form of audio or video  
b) Text, files containing data    d) All of the above.
- 15) The values appearing in given attributes of any tuple in the referencing relation must likewise occur in specified attributes of at least one tuple in the referenced relation, according to      integrity constraint  
a) Referential    b) Primary    c) Referencing    d) Specific
- 16) The DBMS acts as an interface between      and      of an enterprise-class system.  
a) Data and the DBMS    c) Database application and the database  
b) Application and SQL    d) The user and the software
- 17) Which of the following is the best way to represent the attributes in a large db?  
a) Dot representation    b) Concatenation    c) Relational    d) All of the mentioned

17  
30

Dr. J. V. S. A. V.  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
K. J. Somaiya Institute of  
Management Studies & Research

*[Signature]*

- 18) ☒ \_\_\_\_ command is used in SQL to issue multiple CREATE TABLE, CREATE VIEW and GRANT statements in a single transaction.
- a) CREATE CLUSTER   b) CREATE PACKAGE   ☒ c) CREATE SCHEMA   d) All of the mentioned
- 19) ☒ Which of the following is the subset of SQL commands used to manipulate Oracle Structures, including tables?
- a) Data Described Language   ☒ c) Data Manipulation Language  
b) Data Retrieval Language   d) Data Definition Language
- 20) ☒ After groups have been established, SQL applies predicates in the \_\_\_\_ clause, allowing aggregate functions to be used.
- a) Where   ☒ b) Having   c) Group by   d) With
- 21) ☒ What is an operating system?
- a) interface between the hardware and application programs  
b) collection of programs that manages hardware resources  
c) system service provider to the application programs  
d) all of the mentioned
- 22) ☒ To access the services of the operating system, the interface is provided by the?
- a) Library   b) System calls   c) Assembly instructions   ☒ d) API
- 23) ☒ When a process is in a "Blocked" state waiting for some I/O service. When the service is completed, it goes to the \_\_\_\_
- a) Terminated state   b) Suspended state   c) Running state   ☒ d) Ready state
- 24) ☒ The FCFS algorithm is particularly troublesome for \_\_\_\_
- a) operating systems   c) time sharing systems  
☒ b) multiprocessor systems   ☒ d) multiprogramming systems
- 25) ☒ A deadlock avoidance algorithm dynamically examines the \_\_\_\_ to ensure that a circular wait condition can never exist.
- a) operating system   c) system storage state  
☒ b) resources   d) resource allocation state
- 26) ☒ Network operating system runs on \_\_\_\_
- a) every system in the network   c) both server and every system in the network  
☒ b) server   d) none of the mentioned
- 27) ☒ The \_\_\_\_ program initializes all aspects of the system, from CPU registers to device controllers and the contents of main memory, and then starts the operating system.
- ☒ a) bootstrap   c) bootloader  
b) main   d) rom
- 28) ☒ For real time operating systems, interrupt latency should be \_\_\_\_
- ☒ a) zero   c) maximum  
b) minimal   d) dependent on the scheduling
- 29) ☒ The \_\_\_\_ presents a uniform device-access interface to the I/O subsystem, much as system calls provide a standard interface between the application and the operating system.
- ☒ a) Device drivers   c) Devices  
b) I/O systems   d) Buses
- 30) ☒ In Unix, which system call creates the new process?
- a) create   ☒ c) new  
☒ b) fork   d) none of the mentioned



**SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY**

SNC20CS025

**DEPARTMENT OF COMPUTER SCIENCE  
CST 308 COMPREHENSIVE COURSE WORK  
MOCK TEST 1**

**Topics: Data Structure, Database management system, Operating system**

Time: 30 minutes

Marks: 30 marks

Name:

Register No:

1)      is not a component of data structure?

- a) Operations ✓    b) Storage structures    c) Algorithms    d) None of above

2) The time complexity of heap sort is?

- a)  $O(n)$     b)  $O(\log n)$     c)  $O(n^2)$  ✓    d)  $O(n \log n)$

3) The operation of processing each element in the list is known as?

- a) Sorting    b) Merging    c) Inserting    d) Traversal ✓

4) The number of edges in a complete graph of  $n$  vertices is?

- a)  $n(n+1)/2$     b)  $n(n-1)/2$  ✓    c)  $n^2/2$     d)  $n/2$

5) The complexity of sorting algorithm measures the      as a function of the number  $n$  of items to be sorted?

- a) Average time    b) Running time    c) Average-case complexity    d) case-complexity

6) What is the maximum number of swaps that can be performed in selection sort algorithm?

- a)  $n-1$     b)  $n$     c) 1    d)  $n-2$  ✓

7) In a binary tree a sequence of consecutive edges is called?

- a) Rotate    b) Connecting lines    c) Two-way    d) Path ✓

8) The terminal node in a binary tree is called?

- a) Root    b) Leaf ✓    c) Child    d) Branch

9) Linked representation of binary tree needs      parallel array?

- a) 4    b) 2    c) 3 ✓    d) 5

10) The inorder traversal of tree will yield a sorted listing of elements of tree in?

- a) Primary tree    b) Binary search tree ✓    c) Merging    d) AVL trees

11) Select the definition of the correct key which is used to represent between 2 tables?

- a) Candidate key    b) Foreign key    c) Primary key    d) Super key ✓

12) Select the correct advantages of view?

- a) Derived columns    b) Data security    c) Hiding of complex queries    d) All of the above ✓

13) Which of the following is the oldest database model?

- a) Hierarchical    b) Object oriented    c) Deductive    d) Relational ✓

14) Which type of data can be stored in the database?

- a) Image oriented data    c) Data in the form of audio or video  
b) Text, files containing data    d) All of the above. ✓

15) The values appearing in given attributes of any tuple in the referencing relation must likewise occur in specified attributes of at least one tuple in the referenced relation, according to      integrity constraint

- a) Referential ✓    b) Primary    c) Referencing    d) Specific

16) The DBMS acts as an interface between      and      of an enterprise-class system.

- a) Data and the DBMS    c) Database application and the database  
b) Application and SQL    d) The user and the software ✓

17) Which of the following is the best way to represent the attributes in a large db?

- a) Dot representation    b) Concatenation    c) Relational ✓    d) All of the mentioned

18  
-----  
30

Dr. C. V. A. V.  
Sree Narayana Guru College of Engineering & Technology  
SNC20CS025  
Hema Murali K

✓ 18) \_\_\_\_ command is used in SQL to issue multiple CREATE TABLE, CREATE VIEW and GRANT statements in a single transaction.

- a) CREATE CLUSTER   b) CREATE PACKAGE   c) CREATE SCHEMA   d) All of the mentioned

19) Which of the following is the subset of SQL commands used to manipulate Oracle Structures, including tables?

- X a) Data Described Language   c) Data Manipulation Language  
b) Data Retrieval Language   d) Data Definition Language

20) After groups have been established, SQL applies predicates in the \_\_\_\_ clause, allowing aggregate functions to be used.

- X a) Where   b) Having   c) Group by   d) With

21) What is an operating system?

- ✓ a) interface between the hardware and application programs  
b) collection of programs that manages hardware resources  
c) system service provider to the application programs  
d) all of the mentioned

22) To access the services of the operating system, the interface is provided by the?

- X a) Library   b) System calls   c) Assembly instructions   d) API

23) When a process is in a "Blocked" state waiting for some I/O service. When the service is completed, it goes to the \_\_\_\_

- ✓ a) Terminated state   b) Suspended state   c) Running state   d) Ready state

24) The FCFS algorithm is particularly troublesome for \_\_\_\_

- X a) operating systems   c) time sharing systems  
b) multiprocessor systems   d) multiprogramming systems

25) A deadlock avoidance algorithm dynamically examines the \_\_\_\_ to ensure that a circular wait condition can never exist.

- ✓ a) operating system   c) system storage state  
b) resources   d) resource allocation state

26) Network operating system runs on \_\_\_\_

- X a) every system in the network   c) both server and every system in the network  
b) server   d) none of the mentioned

27) The \_\_\_\_ program initializes all aspects of the system, from CPU registers to device controllers and the contents of main memory, and then starts the operating system.

- ✓ a) bootstrap   c) bootloader  
b) main   d) rom

28) For real time operating systems, interrupt latency should be \_\_\_\_

- ✓ a) zero   c) maximum  
b) minimal   d) dependent on the scheduling

29) The \_\_\_\_ presents a uniform device-access interface to the I/O subsystem, much as system calls provide a standard interface between the application and the operating system.

- ✓ a) Device drivers   c) Devices  
b) I/O systems   d) Buses

30) In Unix, which system call creates the new process?

- ✓ a) create   c) new  
b) fork   d) none of the mentioned



**SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE**

**CST 308 COMPREHENSIVE COURSE WORK**

**MOCK TEST 1**

**Topics: Data Structure, Database management system, Operating system**

**Time: 30 minutes**

**Marks: 30 marks**

**Name:** Muhammed Ansar Safer

**Register No:** SNC2024032

1)      is not a component of data structure?

- a) Operations      b) Storage structures      c) Algorithms      d) None of above

2) The time complexity of heap sort is?

- a)  $O(n)$       b)  $O(\log n)$       c)  $O(n^2)$       d)  $O(n \log n)$

3) The operation of processing each element in the list is known as?

- a) Sorting      b) Merging      c) Inserting      d) Traversal

4) The number of edges in a complete graph of  $n$  vertices is?

- a)  $n(n+1)/2$       b)  $n(n-1)/2$       c)  $n^2/2$       d)  $n/2$

5) The complexity of sorting algorithm measures the      as a function of the number  $n$  of items to be sorted?

- a) Average time      b) Running time      c) Average-case complexity      d) case-complexity

6) What is the maximum number of swaps that can be performed in selection sort algorithm?

- a)  $n-1$       b)  $n$       c) 1      d)  $n-2$

7) In a binary tree a sequence of consecutive edges is called?

- a) Rotate      b) Connecting lines      c) Two-way      d) Path

8) The terminal node in a binary tree is called?

- a) Root      b) Leaf      c) Child      d) Branch

9) Linked representation of binary tree needs      parallel array?

- a) 4      b) 2      c) 3      d) 5

10) The inorder traversal of tree will yield a sorted listing of elements of tree in?

- a) Primary tree      b) Binary search tree      c) Merging      d) AVL trees

11) Select the definition of the correct key which is used to represent between 2 tables?

- a) Candidate key      b) Foreign key      c) Primary key      d) Super key

12) Select the correct advantages of view?

- a) Derived columns      b) Data security      c) Hiding of complex queries      d) All of the above

13) Which of the following is the oldest database model?

- a) Hierarchical      b) Object oriented      c) Deductive      d) Relational

14) Which type of data can be stored in the database?

- a) Image oriented data      c) Data in the form of audio or video  
b) Text, files containing data      d) All of the above.

15) The values appearing in given attributes of any tuple in the referencing relation must likewise occur in specified attributes of at least one tuple in the referenced relation, according to      integrity constraint

- a) Referential      b) Primary      c) Referencing      d) Specific

16) The DBMS acts as an interface between      and      of an enterprise-class system.

- a) Data and the DBMS      c) Database application and the database  
b) Application and SQL      d) The user and the software

17) Which of the following is the best way to represent the attributes in a large db?

- a) Dot representation      b) Concatenation      c) Relational      d) All of the mentioned

14  
30

*Sundith*  
*Dr. S. V. A. V.*  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PATTANUR  
KANNUR



18) \_\_\_\_ command is used in SQL to issue multiple CREATE TABLE, CREATE VIEW and GRANT statements in a single transaction.

- ☒ a) CREATE CLUSTER    ☒ b) CREATE PACKAGE    ☒ c) CREATE SCHEMA    ☒ d) All of the mentioned

19) Which of the following is the subset of SQL commands used to manipulate Oracle Structures, including tables?

- ☒ a) Data Described Language    ☒ c) Data Manipulation Language  
☒ b) Data Retrieval Language    ☒ d) Data Definition Language

20) After groups have been established, SQL applies predicates in the \_\_\_\_\_ clause, allowing aggregate functions to be used.

- ☒ a) Where    ☒ b) Having    ☒ c) Group by    ☒ d) With

21) What is an operating system?

- ☒ a) interface between the hardware and application programs  
☒ b) collection of programs that manages hardware resources  
☒ c) system service provider to the application programs  
☒ d) all of the mentioned

22) To access the services of the operating system, the interface is provided by the?

- ☒ a) Library    ☒ b) System calls    ☒ c) Assembly instructions    ☒ d) API

23) When a process is in a "Blocked" state waiting for some I/O service. When the service is completed, it goes to the \_\_\_\_\_

- ☒ a) Terminated state    ☒ b) Suspended state    ☒ c) Running state    ☒ d) Ready state

24) The FCFS algorithm is particularly troublesome for \_\_\_\_\_

- ☒ a) operating systems    ☒ c) time sharing systems  
☒ b) multiprocessor systems    ☒ d) multiprogramming systems

25) A deadlock avoidance algorithm dynamically examines the \_\_\_\_\_ to ensure that a circular wait condition can never exist.

- ☒ a) operating system    ☒ c) system storage state  
☒ b) resources    ☒ d) resource allocation state

26) Network operating system runs on \_\_\_\_\_

- ☒ a) every system in the network    ☒ c) both server and every system in the network  
☒ b) server    ☒ d) none of the mentioned

27) The \_\_\_\_\_ program initializes all aspects of the system, from CPU registers to device controllers and the contents of main memory, and then starts the operating system.

- ☒ a) bootstrap    ☒ c) bootloader  
☒ b) main    ☒ d) rom

28) For real time operating systems, interrupt latency should be \_\_\_\_\_

- ☒ a) zero    ☒ c) maximum  
☒ b) minimal    ☒ d) dependent on the scheduling

29) The \_\_\_\_\_ presents a uniform device-access interface to the I/O subsystem, much as system calls provide a standard interface between the application and the operating system.

- ☒ a) Device drivers    ☒ c) Devices  
☒ b) I/O systems    ☒ d) Buses

30) In Unix, which system call creates the new process?

- ☒ a) create    ☒ c) new  
☒ b) fork    ☒ d) none of the mentioned

Name: AMAL MRoll No: 9

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

|                        |                                   |                        |             |
|------------------------|-----------------------------------|------------------------|-------------|
| Model Exam             | 2                                 | Academic Year/Semester | 2022-23/ S6 |
| Subject name with code | CST-308 COMPREHENSIVE COURSE WORK | Branch                 | CSE         |
| Date of Exam           | 11/04/2023                        | Duration               | 30 min      |
| Starting time          | 10:30 AM                          | Max. Marks             | 30          |

1. Given the language  $L = \{ab, aa, baa\}$ , which of the following strings are in  $L^*$

- 1) abaabaaabaa
- 2) aaaabaaaa
- 3) baaaaabaaaab
- 4) baaaabaa

- A) 1, 2 and 3
- B) 2, 3 and 4
- ☒ C) 1, 2 and 4
- D) 1, 3 and 4

7  
15

2. Which one of the following language over the alphabet  $\{0,1\}$  is described by the regular expression:  $(0+1)^*0(0+1)^*0(0+1)^*$ ?

- ☒ A The set of all strings containing the substring 00
- B The set of all string containing at most two 0's
- ☒ C The set of all string containing at least two 0's
- D The set of all strings that begin and end with either 0 or 1

3. Let S and T be language over  $\{a,b\}$  represented by the regular expression  $(a+b^*)^*$  and  $(a+b)^*$  respectively. which of the following is true

- a)  $S \subset T$  (S is subset of T)
- ☒ b)  $T \subset S$  (T is subset of S)
- c)  $S = T$
- d)  $S \cap T = \emptyset$

4. Let  $L = \{w \in (0+1)^* | w \text{ has even number of 1s, ie } L \text{ is the set of all bit string with even number of 1's.}\}$  which one of the regular expression below represents L?

- ☒ A-  $(0^*10^*1)^*$
- B-  $0^*(10^*10^*)^*$
- C-  $0^*(10^*1^*)^*0^*$
- D-  $0^*1(10^*1)^*10^*$

5 Which of the following denotes Chomskian hierarchy?

- ☒ (A) REG ? CFL ? CSL ? type0
- (B) CFL ? REG ? type0 ? CSL
- (C) CSL ? type0 ? REG ? CFL
- (D) CSL ? CFL ? REG ? type0

6. Consider a language L for which there exists a Turing machine TM, T, that accepts every word in L and either rejects or loops for every word not in L. The language L is

- ☒ (A) NP hard
- (B) NP complete
- (C) Recursive

Sree Narayana Guru College of Engineering and Technology, Payanur

*Signature*

~~(D)~~ Recursively enumerable

7. A language is represented by a regular expression  $(a)^*(a + ba)$ . Which of the following string does not belong to the regular set represented by the above expression?

- (A) aaa
- (B) aba
- ~~(C) ababa~~
- (D) aa

8. Regular expression are a) Type 0 language b) Type 1 language c) Type 2 language ~~d) Type 3 language~~

9. How many strings of length less than 4 contains the language described by the regular expression  $(x+y)^*y(a+ab)^*$ ?

- ~~a) 7~~ b) 10 c) 12 d) 11

10. If  $\Sigma = \{0,1\}$ , then  $\Phi^*$  will result to:

- ~~A)  $\epsilon$~~  B)  $\Phi$  C)  $\Sigma$  D) None of the mentioned

11. Which among the following is equivalent to the given regular expression  $01^*+1$

- 1)  $(01)^*+1$
- 2)  $0((1)^*+1)$
- ~~3)  $(0(1)^*)+1$~~
- 4)  $((0^*1)1^*)^*$

12. Which of the following regular expression corresponds to the language of all strings over the alphabet  $\{a, b\}$  that contains exactly two a's

- (i) aa (ii)  $ab^*a$  (iii)  $b^*ab^*a$

- ~~(a) (i) and (ii) only~~
- ~~(b) (ii) and (iii) only~~
- ~~(c) (i) and (ii) only~~
- ~~(d) None of these~~

13. Which of the following regular expression corresponds to the language of all strings over the alphabet  $\{a, b\}$  that do not end with ab?

- ~~(a)  $(a + b)^*(aa + ba + bb)$~~
- ~~(b)  $(a + b)^*(aa + ba + bb) + a + b + \epsilon$~~
- ~~(c)  $b^*ab^*a$~~
- (d)  $b^*aab^*$

14. What is regular expression corresponding to the language of strings of even lengths over the alphabet of  $\{a, b\}$ ?

- (a)  $(aa + bb + ba + ab)^*$
- ~~(b)  $(aa + bb)$~~
- ~~(c)  $(ab + bb + ba)^*$~~
- (d)  $a^*b^*a^*b^*$

15. How many minimum number of states are required in the DFA (over the alphabet  $\{a, b\}$ ) accepting all the strings with the number of a's divisible by 4 and number of b's divisible by 5?

- a) 20
- ~~b) 9~~
- ~~(c) 7~~
- (d) 15



Name: MONO-ZANIL P.V

Roll No: 29



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

|                        |                                   |                        |             |
|------------------------|-----------------------------------|------------------------|-------------|
| Model Exam             | 2                                 | Academic Year/Semester | 2022-23/ S6 |
| Subject name with code | CST-308 COMPREHENSIVE COURSE WORK | Branch                 | CSE         |
| Date of Exam           | 11/04/2023                        | Duration               | 30 min      |
| Starting time          | 10:30 AM                          | Max. Marks             | 30          |

1. Given the language  $L = \{ab, aa, baa\}$ , which of the following strings are in  $L^*$

- 1) abaabaaabaa
- 2) aaaabaaaa
- 3) baaaabaaaab
- 4) baaaabaa

- ☒ A) 1, 2 and 3
- ☐ B) 2, 3 and 4
- ☐ C) 1, 2 and 4
- ☐ D) 1, 3 and 4

5  
15

2. Which one of the following language over the alphabet  $\{0,1\}$  is described by the regular expression:  $(0+1)^*0(0+1)^*0(0+1)^*$

- ☒ A The set of all strings containing the substring 00
- ☐ B The set of all string containing at most two 0's
- ☐ C The set of all string containing at least two 0's
- ☐ D The set of all strings that begin and end with either 0 or 1

3. Let S and T be language over  $\{a,b\}$  represented by the regular expression  $(a+b)^*$  and  $(a+b)^*$  respectively. which of the following is true

- a)  $S \subset T$  (S is subset of T)
- b)  $T \subset S$  (T is subset of S)
- ☒ c)  $S = T$
- d)  $S \cap T = \emptyset$

4. Let  $L = \{w \in (0+1)^* | w \text{ has even number of 1s, ie } L \text{ is the set of all bit string with even number of 1's.}\}$  which one of the regular expression below represents L?

- A-  $(0^*10^*1)^*$
- ☒ B-  $0^*(10^*10^*)^*$
- ☐ C-  $0^*(10^*1^*)^*0^*$
- ☒ D-  $0^*1(10^*1)^*10^*$

5 Which of the following denotes Chomskian hierarchy?

- ☒ (A) REG ? CFL ? CSL ? type0
- ☐ (B) CFL ? REG ? type0 ? CSL
- ☐ (C) CSL ? type0 ? REG ? CFL
- ☐ (D) CSL ? CFL ? REG ? type0

6. Consider a language L for which there exists a Turing machine TM, T, that accepts every word in L and either rejects or loops for every word not in L. The language L is

- ☒ (A) NP hard
- ☐ (B) NP complete
- ☒ (C) Recursive

DR. VEENA A. V.  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, KANNUR

*Sundar*

☒ (D) Recursively enumerable

7. A language is represented by a regular expression  $(a)^*(a + ba)$ . Which of the following string does not belong to the regular set represented by the above expression?

☒ (A) aaa

☐ (B) aba

☒ (C) ababa

☐ (D) aa

☒ 8. Regular expression are a) Type 0 language ☒ b) Type 1 language c) Type 2 language d) Type 3 language

9. How many strings of length less than 4 contains the language described by the regular expression  $(x+y)^*y(a+ab)^*$ ?

☒ a) 7 ☒ b) 10 ☐ c) 12 ☐ d) 11

10. If  $\Sigma = \{0,1\}$ , then  $\Phi^*$  will result to:

☒ A)  $\epsilon$  ☐ B)  $\Phi$  ☐ C)  $\Sigma$  ☐ D) None of the mentioned

11. Which among the following is equivalent to the given regular expression  $01^*+1$

☒ 1)  $(01)^*+1$

☒ 2)  $0((1)^*+1)$

☒ 3)  $(0(1)^*)+1$

☐ 4)  $((0^*1)1^*)^*$

12. Which of the following regular expression corresponds to the language of all strings over the alphabet  $\{a, b\}$  that contains exactly two a's

(i) aa (ii)  $ab^*a$  (iii)  $b^*ab^*a$

☒ (a) (i) and (ii) only

☒ (b) (ii) and (iii) only

☐ (c) (i) and (ii) only

☐ (d) None of these

13. Which of the following regular expression corresponds to the language of all strings over the alphabet  $\{a, b\}$  that do not end with ab?

☒ (a)  $(a + b)^*(aa + ba + bb)$

☒ (b)  $(a + b)^*(aa + ba + bb) + a + b + \epsilon$

☐ (c)  $b^*ab^*a$

☐ (d)  $b^*aa b^*$

14. What is regular expression corresponding to the language of strings of even lengths over the alphabet of  $\{a, b\}$ ?

☒ (a)  $(aa + bb + ba + ab)^*$

☒ (b)  $(aa + bb)$

☐ (c)  $(ab + bb + ba)^*$

☐ (d)  $a^*b^*a^*b^*$

15. How many minimum number of states are required in the DFA (over the alphabet  $\{a, b\}$ ) accepting all the strings with the number of a's divisible by 4 and number of b's divisible by 5?

☒ a) 20

☒ (b) 9

☒ (c) 7

☐ (d) 15



Name: K. Athol

Roll No: 26



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

|                        |                                   |                        |             |
|------------------------|-----------------------------------|------------------------|-------------|
| Model Exam             | 2                                 | Academic Year/Semester | 2022-23/ S6 |
| Subject name with code | CST-308 COMPREHENSIVE COURSE WORK | Branch                 | CSE         |
| Date of Exam           | 11/04/2023                        | Duration               | 30 min      |
| Starting time          | 10:30 AM                          | Max. Marks             | 30          |

1. Given the language  $L = \{ab, aa, baa\}$ , which of the following strings are in  $L^*$

- 1) abaabaaabaa
- 2) ~~aaaabaaaa~~
- 3) ~~baaaaabaaaab~~
- 4) ~~baaaabaa~~

- A) 1, 2 and 3
- B) 2, 3 and 4
- C) ~~1, 2 and 4~~
- D) 1, 3 and 4

8  
15

2. Which one of the following language over the alphabet  $\{0, 1\}$  is described by the regular expression:  $(0+1)^*0(0+1)^*0(0+1)^*$ ?

- ~~A) The set of all strings containing the substring 00~~
- ~~B) The set of all string containing at most two 0's~~
- ~~C) The set of all string containing at least two 0's~~
- D) The set of all strings that begin and end with either 0 or 1

3. Let S and T be language over  $\{a, b\}$  represented by the regular expression  $(a+b^*)^*$  and  $(a+b)^*$  respectively. which of the following is true

- ~~a)  $S \subset T$  (S is subset of T)~~
- ~~b)  $T \subset S$  (T is subset of S)~~
- ~~c)  $S = T$~~
- d)  $S \cap T = \emptyset$

4. Let  $L = \{w \in (0+1)^* | w \text{ has even number of 1s, ie } L \text{ is the set of all bit string with even number of 1's.}\}$  which one of the regular expression below represents L?

- ~~A-  $(0^*10^*)^*$~~
- ~~B-  $0^*(10^*10^*)^*$~~
- ~~C-  $0^*(10^*1^*)^*0^*$~~
- ~~D-  $0^*1(10^*1)^*10^*$~~

5 Which of the following denotes Chomskian hierarchy?

- ~~(A) REG ? CFL ? CSL ? type0~~
- ~~(B) CFL ? REG ? type0 ? CSL~~
- ~~(C) CSL ? type0 ? REG ? CFL~~
- (D) CSL ? CFL ? REG ? type0

6. Consider a language L for which there exists a Turing machine TM, T, that accepts every word in L and either rejects or loops for every word not in L. The language L is

- (A) NP hard
- (B) NP complete
- (C) Recursive

Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING AND TECHNOLOGY, PAYANUR  
KANNUR

*[Signature]*



~~(D)~~ Recursively enumerable

7. A language is represented by a regular expression  $(a)^*(a + ba)$ . Which of the following string does not belong to the regular set represented by the above expression?

- ☒ (A) aaa
- ☐ (B) aba
- ☐ (C) ababa
- ☐ (D) aa

8. Regular expression are a) Type 0 language b) Type 1 language c) Type 2 language ~~d) Type 3 language~~

9. How many strings of length less than 4 contains the language described by the regular expression

- ~~(x+y)\*y(a+ab)\*?~~
- ☒ a) 7
  - ☐ b) 10
  - ☐ c) 12
  - ☐ d) 11

10. If  $\Sigma = \{0,1\}$ , then  $\Phi^*$  will result to:

- ☒ A)  $\epsilon$
- ☐ B)  $\Phi$
- ☐ C)  $\Sigma$
- ☐ D) None of the mentioned

11. Which among the following is equivalent to the given regular expression  $01^*+1$

- ☒ 1)  $(01)^*+1$
- ☐ 2)  $0((1)^*+1)$
- ☐ 3)  $(0(1)^*)+1$
- ☐ 4)  $((0^*1)1^*)^*$

12. Which of the following regular expression corresponds to the language of all strings over the alphabet  $\{a, b\}$  that contains exactly two a's

- (i) aa
- (ii)  $ab^*a$
- (iii)  $b^*ab^*a$

- ☒ (a) (i) and (ii) only
- ☐ (b) (ii) and (iii) only
  - ☐ (c) (i) and (ii) only
  - ☐ (d) None of these

13. Which of the following regular expression corresponds to the language of all strings over the alphabet  $\{a, b\}$  that do not end with ab?

- ☒ (a)  $(a + b)^* (aa + ba + bb)$
- ☐ (b)  $(a + b)^* (aa + ba + bb) + a + b + \epsilon$
- ☐ (c)  $b^*ab^*a$
- ☐ (d)  $b^*aab^*$

14. What is regular expression corresponding to the language of strings of even lengths over the alphabet of  $\{a, b\}$ ?

- ☐ (a)  $(aa + bb + ba + ab)^*$
- ☒ (b)  $(aa + bb)$
- ☐ (c)  $(ab + bb + ba)^*$
- ☐ (d)  $a^*b^*a^*b^*$

15. How many minimum number of states are required in the DFA (over the alphabet  $\{a, b\}$ ) accepting all the strings with the number of a's divisible by 4 and number of b's divisible by 5?

- ☒ a) 20
- ☐ (b) 9
- ☐ (c) 7
- ☐ (d) 15

Name: ...Gokul...D...Roll No: ...21.....**SREE NARAYANA GURU COLLEGE OF ENGINEERING****TECHNOLOGY**

|                        |                                   |                        |             |
|------------------------|-----------------------------------|------------------------|-------------|
| Model Exam             | 2                                 | Academic Year/Semester | 2022-23/ S6 |
| Subject name with code | CST-308 COMPREHENSIVE COURSE WORK | Branch                 | CSE         |
| Date of Exam           | 11/04/2023                        | Duration               | 30 min      |
| Starting time          | 10:30 AM                          | Max. Marks             | 30          |

1. Given the language  $L = \{ab, aa, baa\}$ , which of the following strings are in  $L^*$ 

- 1) abaabaaabaa
- 2) aaaabaaaa
- 3) baaaaabaaaab
- 4) baaaabaa

- ☒ A) 1, 2 and 3  
☐ B) 2, 3 and 4  
☒ C) 1, 2 and 4  
☐ D) 1, 3 and 4

6  
15

2. Which one of the following language over the alphabet  $\{0, 1\}$  is described by the regular expression:  $(0+1)^*0(0+1)^*0(0+1)^*$ 

- ☒ A The set of all strings containing the substring 00  
☐ B The set of all string containing at most two 0's  
☒ C The set of all string containing at least two 0's  
☐ D The set of all strings that begin and end with either 0 or 1

3. Let S and T be language over  $\{a, b\}$  represented by the regular expression  $(a+b)^*$  and  $(a+b)^*$  respectively. which of the following is true

- ☒ a)  $S \subset T$  (S is subset of T)  
☐ b)  $T \subset S$  (T is subset of S)  
☒ c)  $S = T$   
☐ d)  $S \cap T = \emptyset$

4. Let  $L = \{w \in (0+1)^* | w \text{ has even number of 1s, ie } L \text{ is the set of all bit string with even number of 1's.}\}$  which one of the regular expression below represents L?

- ☒ A-  $(0^*10^*1)^*$   
☐ B-  $0^*(10^*10^*)^*$   
☒ C-  $0^*(10^*1^*)^*0^*$   
☐ D-  $0^*1(10^*1)^*10^*$

5 Which of the following denotes Chomskian hierarchy?

- ☒ (A) REG ? CFL ? CSL ? type0  
☐ (B) CFL ? REG ? type0 ? CSL  
☒ (C) CSL ? type0 ? REG ? CFL  
☐ (D) CSL ? CFL ? REG ? type0

6. Consider a language L for which there exists a Turing machine TM, T, that accepts every word in L and either rejects or loops for every word not in L. The language L is

- ☒ (A) NP hard  
☐ (B) NP complete  
☐ (C) Recursive

Dr. LEENA A. V.  
PRINCIPAL,  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR

*Leena*  
*Sundar*



✓(D) Recursively enumerable

7. A language is represented by a regular expression  $(a)^*(a + ba)$ . Which of the following string does not belong to the regular set represented by the above expression?

(A) aaa

✓(B) aba

✓(C) ababa

(D) aa

✓8. Regular expression are a) Type 0 language b) Type 1 language c) Type 2 language d) ✓Type 3 language

9. How many strings of length less than 4 contains the language described by the regular expression

✓ $(x+y)^*y(a+ab)^*$

a) 7 b) ✓10 c) 12 d) 11

10. If  $\Sigma = \{0,1\}$ , then  $\Phi^*$  will result to:

✗ A)  $\epsilon$

✓B)  $\Phi$

C)  $\Sigma$

D) None of the mentioned

11. Which among the following is equivalent to the given regular expression?  $01^*+1$

1)  $(01)^*+1$

✓2)  $0((1)^*+1)$

✓3)  $(0(1)^*)+1$

4)  $((0^*1)1^*)^*$

12. Which of the following regular expression corresponds to the language of all strings over the alphabet  $\{a, b\}$  that contains exactly two a's

(i) aa

(ii)  $ab^*a$

(iii)  $b^*ab^*a$

✓(a) (i) and (ii) only

✗(b) (ii) and (iii) only

(c) (i) and (ii) only

(d) None of these

13. Which of the following regular expression corresponds to the language of all strings over the alphabet  $\{a, b\}$  that do not end with ab?

✓(a)  $(a + b)^*(aa + ba + bb)$

✗(b)  $(a + b)^*(aa + ba + bb) + a + b + \epsilon$

(c)  $b^*ab^*a$

(d)  $b^*aab^*$

14. What is regular expression corresponding to the language of strings of even lengths over the alphabet of  $\{a, b\}$ ?

(a)  $(aa + bb + ba + ab)^*$

✗(b)  $(aa + bb)$

✓(c)  $(ab + bb + ba)^*$

(d)  $a^*b^*a^*b^*$

15. How many minimum number of states are required in the DFA (over the alphabet  $\{a, b\}$ ) accepting all the strings with the number of a's divisible by 4 and number of b's divisible by 5?

✗ a) 20

(b) 9

✓(c) 7

(d) 15



Name: Gopika Pramod Kumar

Roll No: SNCR063022



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

|                        |                                   |                        |             |
|------------------------|-----------------------------------|------------------------|-------------|
| Model Exam             | 3                                 | Academic Year/Semester | 2022-23/ S6 |
| Subject name with code | CST-308 COMPREHENSIVE COURSE WORK | Branch                 | CSE         |
| Date of Exam           | 25/04/2023                        | Duration               | 30 min      |
| Starting time          | 1:00pm                            | Max. Marks             | 30          |

1) Cache memory works on the principle of

- A. Locality of data
- B. Locality of memory
- ☒ C. Locality of reference
- D. Locality of reference & memory

2) The circuit converting binary data in to decimal is

- A. Encoder
- B. Multiplexer
- ☒ C. Decoder
- D. Code converter

3) The address in the main memory is known as -

- A. Logical address
- ☒ B. Physical address
- C. Memory address
- D. None of the above

4) Which of the following is a combinational logic circuit which sends data from a single source to two or more separate destinations?

- A. Multiplexer
- ☒ B. Demultiplexer
- C. Encoder
- D. Decoder

5) Which of the following is a group of bits that tells the computer to perform a particular operation?

- a. Accumulator
- b. Register
- ☒ c. Instruction code
- d. None of the above

6) The status bit is also called as-

- a. Unsigned bit
- b. Signed bit
- ☒ c. Flag bit
- d. None of the above

15  
15

Dr. L. V. S. V.  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY,  
PATTOM, PATTOM, PATTOM

7) Which of the following topology is used in Ethernet?

- a. Ring topology
- ☒ b. Bus topology
- c. Mesh topology
- d. Star topology

8) Who developed the basic architecture of computer?

- A. Blaise Pascal
- B. Charles Babbage
- ☒ C. John Von Neumann
- D. None of the above

9) Which of the following is not considered as a peripheral device?

- ☒ A. CPU
- B. Keyboard
- C. Monitor
- D. All of the above

10) With the reference to computer memory, which of the following is not a address binding type?

- A. Load time
- ☒ B. Memory time
- C. Compile time
- D. Execution time

11) The addressing mode used in an instruction of the form ADD XY, is

- A. Absolute
- B. Indirect
- ☒ C. Index
- D. None of these

12) Which of the following is not a weighted code?

- A. Decimal Number system
- ☒ B. Excess 3-cod
- C. Binary number System
- D. None of these

13) Content of the program counter is added to the address part of the instruction in order to obtain the effective address is called.

- ☒ A. relative address mode
- B. index addressing mode
- C. register mode
- D. implied mode

14) The operation executed on data stored in registers is called

- A. Macro-operation
- ☒ B. Micro-operation
- C. Bit-operation
- D. Byte-operation

15) The BSA instruction is

- (A) Branch and store accumulator
- ☒ (B) Branch and save return address
- (C) Branch and shift address
- (D) Branch and show accumulator

Name: Riya Rajesh

Roll No: 37



**SREE NARAYANA GURU COLLEGE OF ENGINEERING**  
**TECHNOLOGY**

|                        |                                   |                        |             |
|------------------------|-----------------------------------|------------------------|-------------|
| Model Exam             | 3                                 | Academic Year/Semester | 2022-23/ S6 |
| Subject name with code | CST-308 COMPREHENSIVE COURSE WORK | Branch                 | CSE         |
| Date of Exam           | 25/04/2023                        | Duration               | 30 min      |
| Starting time          | 1:00pm                            | Max. Marks             | 30          |

1) Cache memory works on the principle of

- A. Locality of data
- B. Locality of memory
- ☒ C. Locality of reference
- D. Locality of reference & memory

2) The circuit converting binary data in to decimal is

- A. Encoder
- B. Multiplexer
- ☒ C. Decoder
- D. Code converter

3) The address in the main memory is known as -

- A. Logical address
- ☒ B. Physical address
- C. Memory address
- D. None of the above

4) Which of the following is a combinational logic circuit which sends data from a single source to two or more separate destinations?

- A. Multiplexer
- ☒ B. Demultiplexer
- C. Encoder
- D. Decoder

5) Which of the following is a group of bits that tells the computer to perform a particular operation?

- a. Accumulator
- ☒ b. Register
- c. Instruction code
- d. None of the above

6) The status bit is also called as-

- a. Unsigned bit
- ☒ b. Signed bit
- c. Flag bit
- d. None of the above

15  
15

Dr. LITINA A.V.  
Principal  
Sree Narayana Guru College of Engineering and Technology  
Kannur



7) Which of the following topology is used in Ethernet?

- a. Ring topology
- ☒ b. Bus topology
- c. Mesh topology
- d. Star topology

8) Who developed the basic architecture of computer?

- A. Blaise Pascal
- B. Charles Babbage
- ☒ C. John Von Neumann
- D. None of the above

9) Which of the following is not considered as a peripheral device?

- ☒ A. CPU
- B. Keyboard
- ☒ C. Monitor
- D. All of the above

10) With the reference to computer memory, which of the following is not a address binding type?

- A. Load time
- ☒ B. Memory time
- ☒ C. Compile time
- D. Execution time

11) The addressing mode used in an instruction of the form ADD XY, is

- A. Absolute
- B. Indirect
- ☒ C. Index
- D. None of these

12) Which of the following is not a weighted code?

- A. Decimal Number system
- B. Excess 3-cod
- ☒ C. Binary number System
- D. None of these

13) Content of the program counter is added to the address part of the instruction in order to obtain the effective address is called.

- ☒ A. relative address mode
- ☒ B. index addressing mode
- C. register mode
- D. implied mode

14) The operation executed on data stored in registers is called

- A. Macro-operation
- ☒ B. Micro-operation
- C. Bit-operation
- D. Byte-operation

15) The BSA instruction is

- ☒ (A) Branch and store accumulator
- ☒ (B) Branch and save return address
- (C) Branch and shift address
- (D) Branch and show accumulator

Name: Nandana MV

Roll No: 33



**SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY**

|                        |                                   |                        |             |
|------------------------|-----------------------------------|------------------------|-------------|
| Model Exam             | 3                                 | Academic Year/Semester | 2022-23/ S6 |
| Subject name with code | CST-308 COMPREHENSIVE COURSE WORK | Branch                 | CSE         |
| Date of Exam           | 25/04/2023                        | Duration               | 30 min      |
| Starting time          | 1:00pm                            | Max. Marks             | 30          |

1) Cache memory works on the principle of

- A. Locality of data
- B. Locality of memory
- ☒ C. Locality of reference
- D. Locality of reference & memory

2) The circuit converting binary data into decimal is

- A. Encoder
- B. Multiplexer
- ☒ C. Decoder
- D. Code converter

3) The address in the main memory is known as -

- A. Logical address
- ☒ B. Physical address
- C. Memory address
- D. None of the above

4) Which of the following is a combinational logic circuit which sends data from a single source to two or more separate destinations?

- A. Multiplexer
- ☒ B. Demultiplexer
- C. Encoder
- D. Decoder

5) Which of the following is a group of bits that tells the computer to perform a particular operation?

- a. Accumulator
- b. Register
- ☒ c. Instruction code
- d. None of the above

6) The status bit is also called as-

- a. Unsigned bit
- b. Signed bit
- ☒ c. Flag bit
- d. None of the above

14  
15

Dr. L. A. V.  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PATTANAM  
Dr. L. A. V.  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PATTANAM

7) Which of the following topology is used in Ethernet?

- a. Ring topology
- ☒ b. Bus topology
- c. Mesh topology
- d. Star topology

8) Who developed the basic architecture of computer?

- A. Blaise Pascal
- B. Charles Babbage
- ☒ C. John Von Neumann
- D. None of the above

9) Which of the following is not considered as a peripheral device?

- ☒ A. CPU
- B. Keyboard
- C. Monitor
- D. All of the above

10) With the reference to computer memory, which of the following is not a address binding type?

- A. Load time
- B. Memory time
- ☒ C. Compile time
- D. Execution time

11) The addressing mode used in an instruction of the form ADD XY, is

- ☒ A. Absolute
- B. Indirect
- C. Index
- D. None of these

12) Which of the following is not a weighted code?

- A. Decimal Number system
- ☒ B. Excess 3-cod
- C. Binary number System
- D. None of these

13) Content of the program counter is added to the address part of the instruction in order to obtain the effective address is called.

- ☒ A. relative address mode
- B. index addressing mode
- C. register mode
- D. implied mode

14) The operation executed on data stored in registers is called

- A. Macro-operation
- ☒ B. Micro-operation
- C. Bit-operation
- D. Byte-operation

15) The BSA instruction is

- (A) Branch and store accumulator
- ☒ (B) Branch and save return address
- (C) Branch and shift address
- (D) Branch and show accumulator



Name: SNEHA E

Roll No: 40



**SREE NARAYANA GURU COLLEGE OF ENGINEERING &**  
**TECHNOLOGY**

|                        |                                   |                        |             |
|------------------------|-----------------------------------|------------------------|-------------|
| Model Exam             | 3                                 | Academic Year/Semester | 2022-23/ S6 |
| Subject name with code | CST-308 COMPREHENSIVE COURSE WORK | Branch                 | CSE         |
| Date of Exam           | 25/04/2023                        | Duration               | 30 min      |
| Starting time          | 1:00pm                            | Max. Marks             | 30          |

1) Cache memory works on the principle of

- ☒ A. Locality of data
- ☐ B. Locality of memory
- ☒ C. Locality of reference
- ☐ D. Locality of reference & memory

2) The circuit converting binary data in to decimal is

- ☐ A. Encoder
- ☒ B. Multiplexer
- ☒ C. Decoder
- ☐ D. Code converter

3) The address in the main memory is known as -

- ☐ A. Logical address
- ☒ B. Physical address
- ☒ C. Memory address
- ☐ D. None of the above

4) Which of the following is a combinational logic circuit which sends data from a single source to two or more separate destinations?

- ☒ A. Multiplexer
- ☒ B. Demultiplexer
- ☐ C. Encoder
- ☐ D. Decoder

5) Which of the following is a group of bits that tells the computer to perform a particular operation?

- ☐ a. Accumulator
- ☐ b. Register
- ☒ c. Instruction code
- ☐ d. None of the above

6) The status bit is also called as-

- ☐ a. Unsigned bit
- ☐ b. Signed bit
- ☒ c. Flag bit
- ☐ d. None of the above

11  
15

Heena

Sneha

7) Which of the following topology is used in Ethernet?

- a. Ring topology
- ☒ b. Bus topology
- c. Mesh topology
- d. Star topology

8) Who developed the basic architecture of computer?

- A. Blaise Pascal
- B. Charles Babbage
- ☒ C. John Von Neumann
- D. None of the above

9) Which of the following is not considered as a peripheral device?

- ☒ A. CPU
- B. Keyboard
- C. Monitor
- D. All of the above

10) With the reference to computer memory, which of the following is not a address binding type?

- A. Load time
- ☒ B. Memory time
- C. Compile time
- D. Execution time

11) The addressing mode used in an instruction of the form ADD XY, is

- ☒ A. Absolute
- B. Indirect
- C. Index
- D. None of these

12) Which of the following is not a weighted code?

- A. Decimal Number system
- ☒ B. Excess 3-cod
- C. Binary number System
- D. None of these

13) Content of the program counter is added to the address part of the instruction in order to obtain the effective address is called.

- ☒ A. relative address mode
- B. index addressing mode
- C. register mode
- D. implied mode

14) The operation executed on data stored in registers is called

- A. Macro-operation
- ☒ B. Micro-operation
- C. Bit-operation
- D. Byte-operation

15) The BSA instruction is

- (A) Branch and store accumulator
- ☒ (B) Branch and save return address
- (C) Branch and shift address
- (D) Branch and show accumulator



# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

## COURSE TEAM MEETING CHECKLIST

**SEMESTER:** 5G

**DATE OF THE MEETING:**

**VENUE:** CSE smart room

**TIME:**

1. NAME OF THE FACULTY: Veena.K.K
2. DEPARTMENT: CSE
3. SUBJECT CODE AND NAME: CS1308 Comprehensive Course work
4. DETAILS REGARDING THE SUBJECT:

|                                                                                           |                                                                                          |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| WHETHER HANDLING SUBJECT FOR THE FIRST TIME? IF NOT MENTION THE COUNT EXCLUDING THIS TIME | <u>Yes.</u>                                                                              |
| TARGET PASS PERCENTAGE                                                                    | <u>70</u>                                                                                |
| NATURE OF THE SUBJECT                                                                     | <u>EASY / MODERATE / TOUGH</u>                                                           |
| CPS                                                                                       | <u>COMPLETED / NOT COMPLETED</u>                                                         |
| ATTENDANCE REGISTER                                                                       | <u>COMPLETED / NOT COMPLETED</u>                                                         |
| ASSESSMENT PLAN                                                                           | <u>FILED / NOT FILED</u>                                                                 |
| ACADEMIC CALENDAR                                                                         | <u>FILED / NOT FILED</u>                                                                 |
| QP & SCHEME OF FIRST ASSIGNMENT                                                           | <u>AVAILABLE / NOT AVAILABLE</u>                                                         |
| QP & SCHEME OF SERIES TEST 1                                                              | <u>AVAILABLE / NOT AVAILABLE</u>                                                         |
| FEEDBACK OF THE TUTOR REGARDING THE CLASS                                                 | <u>- Students with good memory power<br/>- Most of the students are in average range</u> |
| ACTION PLAN BY THE FACULTY TO ACHIEVE TARGET PASS PERCENTAGE                              | <u>- Moc test are conducted based on each core subject.</u>                              |
| ANY OTHER REMARKS FROM THE FACULTY                                                        |                                                                                          |

Veena.K.K  
FACULTY

[Signature]  
COURSE CHAIRMAN

[Signature]  
HOD

Dr. LEENA A.V.  
Dr. PRINCE P.M.  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PANYAMUR





# **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

## **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

### **VISION OF THE DEPARTMENT**

To be a center of excellence in Computer Science and Engineering to produce competent professionals and entrepreneurs capable of exploring and assimilating latest technological advancements for the betterment of the society.

### **MISSION OF THE DEPARTMENT**

- To facilitate transformative education in computer science and engineering.
- To build competent professionals and entrepreneurs by introducing new technologies.
- To accomplish higher education, induce ethical values and spirit of social commitment.

Dr. L. E. S. A. V.  
PROFESSOR  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PATTAMUR

*[Signature]*



**APJ Abdul Kalam Technological University**  
**CET Campus, Thiruvananthapuram**  
**Kerala -695016**  
**India**

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

Students Examination Eligibility Details

**Academic Year : 2022 - 2023**

**Degree Type : Regular**

**Program :  
B.Tech(Full Time)**

**Branch : COMPUTER SCIENCE AND ENGINEERING**

**Semester : S6**

**Course Name : COMPREHENSIVE COURSE  
WORK-CST308**

**Batch : 1**

**Eligibility For : Pursuing Students**

**Period of Registration : NA**

| Student Name                                      | Attendance<br>%, Internal<br>Marks           | Availed<br>Leaves            | Disc. Action | Eligible<br>for<br>Written<br>Exam | Status:                 | In-<br>eligibility<br>Type |
|---------------------------------------------------|----------------------------------------------|------------------------------|--------------|------------------------------------|-------------------------|----------------------------|
| AARDRA<br>PRASANTH<br>Register No :<br>SNC20CS001 | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |              | Yes                                | Submitted by<br>college |                            |
| AATHISH R<br>Register No :<br>SNC20CS002          | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |              | Yes                                | Submitted by<br>college |                            |
| ABHIJITH A<br>Register No :<br>SNC20CS003         | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |              | Yes                                | Submitted by<br>college |                            |
| ABHINAV A V<br>Register No :<br>SNC20CS004        | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |              | Yes                                | Submitted by<br>college |                            |

Dr. P. A. V.  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 THIRUVANANTHAPURAM

|                                                       |                                              |                              |  |     |                         |  |
|-------------------------------------------------------|----------------------------------------------|------------------------------|--|-----|-------------------------|--|
| ABHIRAM A V<br>Register No :<br>SNC20CS005            | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| ABHIRAM T<br>Register No :<br>SNC20CS006              | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| ABHISHEK K<br>Register No :<br>SNC20CS007             | Attendance :<br>90.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| AKASH<br>SUNILKUMAR<br>Register No :<br>SNC20CS008    | Attendance :<br>80.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| AMAL M<br>Register No :<br>SNC20CS009                 | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| AMAL M V<br>Register No :<br>SNC20CS010               | Attendance :<br>90.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| ANAGHA<br>ANILKUMAR<br>Register No :<br>SNC20CS011    | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| ANAGHA P P<br>Register No :<br>SNC20CS012             | Attendance :<br>80.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| ANANDASREE<br>KRISHNAN<br>Register No :<br>SNC20CS013 | Attendance :<br>90.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| ANIRUDH SHAJI<br>Register No :<br>SNC20CS014          | Attendance :<br>90.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |





|                                                            |                                              |                              |  |     |                         |  |
|------------------------------------------------------------|----------------------------------------------|------------------------------|--|-----|-------------------------|--|
| ANJALI M<br>Register No :<br>SNC20CS015                    | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| ANURAG MT<br>Register No :<br>SNC20CS016                   | Attendance :<br>80.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| ARJUN M<br>Register No :<br>SNC20CS017                     | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| ASWATHI PI<br>Register No :<br>SNC20CS018                  | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| DILNA P<br>Register No :<br>SNC20CS019                     | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| FATHIMATHUL<br>FAMEENABI PV<br>Register No :<br>SNC20CS020 | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| GOKUL A<br>Register No :<br>SNC20CS021                     | Attendance :<br>90.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| GOPIKA PRAMOD<br>KUMAR<br>Register No :<br>SNC20CS022      | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| G P THRISHNA<br>Register No :<br>SNC20CS023                | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| HAMNA SHERIN A<br>Register No :<br>SNC20CS024              | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |





|                                                        |                                              |                              |  |     |                         |  |
|--------------------------------------------------------|----------------------------------------------|------------------------------|--|-----|-------------------------|--|
| HIMA MURALI K<br>Register No :<br>SNC20CS025           | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| K ATHUL<br>Register No :<br>SNC20CS026                 | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| KEERTHANA CV<br>Register No :<br>SNC20CS027            | Attendance :<br>90.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| MOHAMMED RAZI<br>HAMZA<br>Register No :<br>SNC20CS028  | Attendance :<br>90.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| MOHAMMED<br>ZANIL P V<br>Register No :<br>SNC20CS029   | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| MOHAMMED<br>ZAYISH T P<br>Register No :<br>SNC20CS030  | Attendance :<br>90.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| MRUDHUNA<br>MANOJ K<br>Register No :<br>SNC20CS031     | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| MUHAMMED<br>ANSAR SAFER<br>Register No :<br>SNC20CS032 | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| NANDANA M V<br>Register No :<br>SNC20CS033             | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| NILEENA C<br>Register No :<br>SNC20CS034               | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |



|                                                                     |                                              |                              |  |     |                         |  |
|---------------------------------------------------------------------|----------------------------------------------|------------------------------|--|-----|-------------------------|--|
| PARTHIP K ANISH<br>Register No :<br>SNC20CS035                      | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| REHAN P<br>Register No :<br>SNC20CS036                              | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| RIYA RAJESH<br>Register No :<br>SNC20CS037                          | Attendance :<br>90.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| SAFA<br>ACHIRETHARAMM<br>AL KURUKKAN<br>Register No :<br>SNC20CS038 | Attendance :<br>80.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| SANDRA B<br>Register No :<br>SNC20CS039                             | Attendance :<br>80.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| SNEHA E<br>Register No :<br>SNC20CS040                              | Attendance :<br>100.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| SREERAJ S NAIR<br>Register No :<br>SNC20CS041                       | Attendance :<br>90.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |
| VISWAJEETH P<br>Register No :<br>SNC20CS042                         | Attendance :<br>90.0<br>Internal Marks<br>:  | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>college |  |





DEGREE / BRANCH.....B.Tech.....

SEMESTER.....VI.....SUBJECT CODE.....CST304.....

SUBJECT.....Comprehensive Course.....120115.....

CLASSES

COMMENCING DATE 06-02-'23..ENDING DATE.....

ACADEMIC YEAR .....2022-23.....



# **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**P.O. CHALAKKODE - PAYYANUR.**

Approved by AICTE, New Delhi, Affiliated to API Abdul Kalam Technological University, and Managed by Sree Bhakthi Samvardhini Yogam, Talap, Kanner

## **ATTENDANCE AND ASSESSMENT RECORD**

## Mission

To provide technical education  
of the highest quality and standard  
of excellence for  
socio-economic progress  
embedded in clearly articulated values  
and supported by commitments.

## Vision

A knowledge society promoting  
human excellence and  
enlightenment through  
effective education.

**SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY**





# **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**P.O. CHALAKKODE - PAYYANUR.**

Approved by AICTE, New Delhi, Affiliated to APJ Abdul Kalam Technological University, and Managed by Sree Bhakthi Samvardhini Yogam, Talap, Kannur

## **ATTENDANCE AND ASSESSMENT RECORD**

NAME OF STAFF ... Ms. Veena.KK .....

DESIGNATION ... Ass.t. Prof. .....

DEPARTMENT ... CSE .....

| CLASS<br>ROLL<br>NO. | NAME                   | MONTH<br>DATE<br>HOUR | 2  | 3  | 3  | 3  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  |
|----------------------|------------------------|-----------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|
|                      |                        |                       | 25 | 26 | 26 | 26 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
|                      |                        |                       | 5  | 6  | 4  | 5  | 4  | 5  | 4  | 5  | 4  | 5  | 4  | 5  | 4  |
| 1                    | AARDRA PRASANTH (F)    |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 2                    | AATHISH. R             |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 3                    | ABHIJITH. A            |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 4                    | ABHINAV A.V            |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 5                    | ABHIRAM A.V            |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 6                    | ABHIRAM. T             |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 7                    | ABHISHEK. K            |                       | X  | X  | X  | A  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 8                    | AKASH SONILKOMAR       |                       | A  | X  | X  | X  | X  | X  | X  | X  | A  | X  | X  | X  | X  |
| 9                    | AMAL. M                |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 10                   | AMAL. M. V             |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | A  | X  |
| 11                   | ANAMHA ANILKOMAR       |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 12                   | ANAMHA. P. P           |                       | X  | X  | X  | X  | A  | A  | X  | X  | X  | X  | X  | X  | X  |
| 13                   | ANANDASREE KRISHNAN    |                       | A  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 14                   | ANIRUDH SHAJI          |                       | A  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 15                   | ANJALI. M              |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 16                   | ANURAG. M. T           |                       | A  | X  | X  | X  | X  | X  | X  | A  | X  | X  | X  | X  | X  |
| 17                   | ARJON. M               |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 18                   | ASWATHI. P. I          |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 19                   | DILNA. P               |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 20                   | FATHIMATHULFAHEENABI   |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 21                   | GOKUL. A               |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | A  | X  |
| 22                   | GOPIKA PRANOD KUMAR    |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 23                   | G. P. THRISHNA.        |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 24                   | HAMNA SHERIN. A        |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 25                   | HINAHORALI. K          |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 26                   | K. ATHUL               |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | A  | X  |
| 27                   | KEERTHANA. C. V        |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 28                   | MOHAMMED RAZI HANZA    |                       | A  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 29                   | MOHAMMED ZANIL P. V    |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 30                   | MOHAMMED ZAYISH THAYML |                       | A  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 31                   | HRUDHUNA HANOJ. K      |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 32                   | MUHAMMED ANSAR SAFER   |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 33                   | NANDANA. M. V          |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 34                   | NILEENA. C             |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 35                   | PARTHIP. K. ANISH      |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 36                   | REHAN. P               |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 37                   | RIYA RAJESH            |                       | X  | X  | A  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 38                   | SAFA ACHIRETHARAMMAL   |                       | A  | A  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 39                   | SANDRA. B              |                       | X  | X  | A  | A  | X  | X  | X  | X  | X  | X  | X  | X  | X  |
| 40                   | SNEHA. E               |                       | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |



Degree / Branch : B Tech CSE

Subject: ECW

[illegible]



## TOTAL HOURS ENGAGED

## AWARDING OF MARKS

| ROLL NO. | Hours Present | Attended % | Attended Mark | Session Mark | Hours Present | ATTEN DANCE % | ATTEN DANCE MARK | SESS MARK OUT OF | ROLL NO. |
|----------|---------------|------------|---------------|--------------|---------------|---------------|------------------|------------------|----------|
| 1        | 10            | 100%       | 10            |              | 38            | 8             | 60               | 9                |          |
| 2        | 10            | 100        | 10            |              | 39            | 8             | 80               | 9                |          |
| 3        | 10            | 100        | 10            |              | 40            | 10            | 100              | 10               |          |
| 4        | 10            | 100        | 10            |              | 41            | 9             | 90               | 10               |          |
| 5        | 10            | 100        | 10            |              | 42            | 9             | 90               | 10               |          |
| 6        | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 7        | 9             | 90         | 10            |              |               |               |                  |                  |          |
| 8        | 8             | 80         | 9             |              |               |               |                  |                  |          |
| 9        | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 10       | 9             | 90         | 10            |              |               |               |                  |                  |          |
| 11       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 12       | 8             | 80         | 9             |              |               |               |                  |                  |          |
| 13       | 9             | 90         | 10            |              |               |               |                  |                  |          |
| 14       | 9             | 90         | 10            |              |               |               |                  |                  |          |
| 15       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 16       | 8             | 80         | 9             |              |               |               |                  |                  |          |
| 17       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 18       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 19       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 20       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 21       | 9             | 90         | 10            |              |               |               |                  |                  |          |
| 22       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 23       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 24       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 25       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 26       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 27       | 9             | 90         | 10            |              |               |               |                  |                  |          |
| 28       | 9             | 90         | 10            |              |               |               |                  |                  |          |
| 29       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 30       | 9             | 90         | 10            |              |               |               |                  |                  |          |
| 31       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 32       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 33       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 34       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 35       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 36       | 10            | 100        | 10            |              |               |               |                  |                  |          |
| 37       | 9             | 90         | 10            |              |               |               |                  |                  |          |

Signature of Staff Member

Module Co-ordinator

HOD



**SREE NARAYANA GURU COLLEGE OF ENGINEERING TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**NAME LIST - S6 CSE (2020-2024 BATCH)**

| SL.NO: | REGISTER NO | NAME                          |
|--------|-------------|-------------------------------|
| 1      | SNC20CS001  | AARDRA PRASANTH               |
| 2      | SNC20CS002  | AATHISH R                     |
| 3      | SNC20CS003  | ABHIJITH A                    |
| 4      | SNC20CS004  | ABHINAV A V                   |
| 5      | SNC20CS005  | ABHIRAM A V                   |
| 6      | SNC20CS006  | ABHIRAM T                     |
| 7      | SNC20CS007  | ABHISHEK K                    |
| 8      | SNC20CS008  | AKASH SUNILKUMAR              |
| 9      | SNC20CS009  | AMAL M                        |
| 10     | SNC20CS010  | AMAL M.V                      |
| 11     | SNC20CS011  | ANAGHA ANILKUMAR              |
| 12     | SNC20CS012  | ANAGHA P P                    |
| 13     | SNC20CS013  | ANANDASREE KRISHNAN           |
| 14     | SNC20CS014  | ANIRUDH SHAJI                 |
| 15     | SNC20CS015  | ANJALI M                      |
| 16     | SNC20CS016  | ANURAG MT                     |
| 17     | SNC20CS017  | ARJUN M                       |
| 18     | SNC20CS018  | ASWATHI PI                    |
| 19     | SNC20CS019  | DILNA P                       |
| 20     | SNC20CS020  | FATHIMATHUL FAMEENABI P V     |
| 21     | SNC20CS021  | GOKUL A                       |
| 22     | SNC20CS022  | GOPIKA PRAMOD KUMAR           |
| 23     | SNC20CS023  | G P THRISHNA                  |
| 24     | SNC20CS024  | HAMNA SHERIN A                |
| 25     | SNC20CS025  | HIMA MURALI K                 |
| 26     | SNC20CS026  | K ATHUL                       |
| 27     | SNC20CS027  | KEERTHANA CV                  |
| 28     | SNC20CS028  | MOHAMMED RAZI HAMZA           |
| 29     | SNC20CS029  | MOHAMMED ZANIL P V            |
| 30     | SNC20CS030  | MOHAMMED ZAYISH THAYYIL       |
| 31     | SNC20CS031  | MRUDHUNA MANOJ K              |
| 32     | SNC20CS032  | MUHAMMED ANSAR SAFER          |
| 33     | SNC20CS033  | NANDANA M.V                   |
| 34     | SNC20CS034  | NILEENA C                     |
| 35     | SNC20CS035  | PARTHIP K ANISH               |
| 36     | SNC20CS036  | REHAN P                       |
| 37     | SNC20CS037  | RIYA RAJESH                   |
| 38     | SNC20CS038  | SAFA ACHIRETHARAMMAL KURUKKAN |
| 39     | SNC20CS039  | SANDRA B                      |
| 40     | SNC20CS040  | SNEHA E                       |
| 41     | SNC20CS041  | SREERAJ S NAIR                |
| 42     | SNC20CS042  | VISWAJEETH P                  |

*Haritha*

Haritha. M.V  
(Tutor)

*Dr. Leena*

*Sunder*  
Sunder. V  
(HOD)



| ECT308 | COMPREHENSIVE COURSE<br>WORK | CATEGORY | L | T | P | CREDIT |
|--------|------------------------------|----------|---|---|---|--------|
|        |                              | PCC      | 1 | 0 | 0 | 1      |

**Preamble:** The objective of this Course work is to ensure the comprehensive knowledge of each student in the most fundamental Program core courses in the curriculum. Five core courses credited from Semesters 3, 4 and 5 are chosen for the detailed study in this course work. This course has an End Semester Objective Test conducted by the University for 50 marks. One hour is assigned per week for this course for conducting mock tests of objective nature in all the listed five courses.

**Prerequisite:**

1. ECT202 Analog Circuits
2. ECT203 Logic Circuit Design
3. ECT301 Linear Integrated Circuits
4. ECT303 Digital Signal processing
5. ECT305 Analog and Digital communication

**Course Outcomes:** After the completion of the course the student will be able to

|      |                                                                                                              |
|------|--------------------------------------------------------------------------------------------------------------|
| CO 1 | Apply the knowledge of circuit theorems and solid state physics to solve the problems in electronic Circuits |
| CO 2 | Design a logic circuit for a specific application                                                            |
| CO 3 | Design linear IC circuits for linear and non-linear circuit applications.                                    |
| CO 4 | Explain basic signal processing operations and Filter designs                                                |
| CO 5 | Explain existent analog and digital communication systems                                                    |

**Mapping of course outcomes with program outcomes**

|      | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 |
|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|
| CO 1 | 3    | 3    | 1    |      |      |      |      |      |      |       |       | 2     |
| CO 2 | 3    | 3    | 1    |      |      |      |      |      |      |       |       | 2     |
| CO 3 | 3    | 3    | 1    |      |      |      |      |      |      |       |       | 2     |
| CO 4 | 3    | 2    |      |      |      |      |      |      |      |       |       | 2     |
| CO 5 | 3    | 2    | 1    |      |      |      |      |      |      |       |       | 2     |



**Assessment Pattern**

| Bloom's Category | End Semester Examination |
|------------------|--------------------------|
| Remember         | 10                       |
| Understand       | 20                       |
| Apply            | 20                       |
| Analyse          |                          |
| Evaluate         |                          |
| Create           |                          |

**Mark distribution**

| Total Marks | CIE | ESE | ESE Duration |
|-------------|-----|-----|--------------|
| 50          | 0   | 50  | 1 hour       |

**End Semester Examination Pattern:** Objective Questions with multiple choice (Four). Question paper include Fifty Questions of One mark each covering the five identified courses.

**Syllabus****Full Syllabus of all five selected courses****Course Contents and Lecture Schedule**

| No       | Topic                                        | No. of Lectures |
|----------|----------------------------------------------|-----------------|
| <b>1</b> | <b>Analog Circuits</b>                       |                 |
| 1.1      | Mock Test on Module 1 and Module 2           | 1               |
| 1.2      | Mock Test on Module 3, Module 4 and Module 5 | 1               |
| 1.3      | Feedback and Remedial                        | 1               |
| <b>2</b> | <b>Logic Circuit design</b>                  |                 |
| 2.1      | Mock Test on Module 1, Module 2 and Module 3 | 1               |
| 2.2      | Mock Test on Module 4 and Module 5           | 1               |
| 2.3      | Feedback and Remedial                        | 1               |
| <b>3</b> | <b>Linear IC</b>                             |                 |
| 3.1      | Mock Test on Module 1 and Module 2           | 1               |
| 3.2      | Mock Test on Module 3, Module 4 and Module 5 | 1               |
| 3.3      | Feedback and Remedial                        | 1               |
| <b>4</b> | <b>Digital Signal Processing</b>             |                 |
| 4.1      | Mock Test on Module 1, Module 2 and Module 3 | 1               |
| 4.2      | Mock Test on Module 4 and Module 5           | 1               |
| 4.3      | Mock Test on Module 1, Module 2 and Module 3 | 1               |
| <b>5</b> | <b>Analog and Digital Communication</b>      |                 |
| 5.1      | Mock Test on Module 1, Module 2 and Module 3 | 1               |
| 5.2      | Mock Test on Module 4 and Module 5           | 1               |
| 5.3      | Feedback and Remedial                        | 1               |

*Vinay*  
Faculty-in-charge

*Leena*  
HOD  
ECE

*Leena*

Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PANYANUR  
KANPUR

# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND COMMUNICATION *ENGG.*

## ECT 308 COMPREHENSIVE COURSE WORK

### MOCK TEST 1

Topics: Analog circuits module 1, module 2

Time: 15 minutes

Marks: 20 marks

- 1) A Differentiator circuit is mainly
  - a) A High pass filter with low time constant.
  - b) A High pass filter with 0.75 time constant.
  - c) A High pass filter with *small* time constant.
  - d) A High pass filter with 0.50 time constant.
- 2) The transfer function of an low-pass RC network is
  - a)  $RCs/1+RCs$  b)  $1/1+RCs$  c)  $RC/1+RCs$  d)  $s/1+RCs$
- 3) An integrator converts square wave in to -----
  - a) Positive & negative spikes b) ramp signal c) *triangular wave* d) sine wave
- 4) Condition of Integrator
  - a)  $RC \gg T$  b)  $RC = T$  c)  $RC \ll T$
- 5) Frequency response of integrator same as that of
  - a) Amplifier b) *LPF* c) HPF d) BPF
- 6) ----- circuit is used to convert triangular to square
  - a) Differentiator b) *integrator* c) amplifier d) Schmitt trigger
- 7) The output of an RC integrator circuit is taken across
  - a) *Resistor* b) capacitor c) diode d) None of these
- 8) Condition for a good differentiator
  - a)  $RC > .0016T$  b)  *$RC < .0016T$*  c)  $RC > 15T$  d)  $RC = T$
- 9) An integrator is a
  - a) High pass circuit with large time constant b) Low pass circuit with small time constant
  - c) High pass circuit with small time constant d) Low pass circuit with *large* time constant

- 10) Find the cut off frequency for an RC low pass filter of  $R=8.2\Omega$  and  $C=0.0033\mu F$ ?  
 a) 6 KHz b) 5.88KHz c) 4.26KHz d) 7.91 KHz
- 11) Frequency at which gain equal to .707 of maximum value is called  
 a) Cut off frequency b) corner frequency c) pass band frequency d) stop band frequency
- 12) A square wave can be generated from a sinusoidal wave by using  
 a) Positive clipper b) slicer c) double clipper d) Negative clipper
- 13) In a shunt diode clipper, the signal will be transmitted when the diode is \_\_\_\_\_  
 a) OFF b) ON c) any of the state d) None of these
- 14) Transfer characteristics is the graph between  
 a)  $V_{in}$  on x axis  $V_o$  on Y axis b)  $V_{in}$  on y axis  $V_o$  on x axis c)  $V_{in}$  on X axis t on y axis d) None of these
- 15) What type of diode circuit is used to add or restore a dc level to an electrical signal?  
 a) Clamper b) Clipper c) Amplifier d) Integrator
- 16) A clamping circuit is also called  
 a) Limiter b) DC restorer c) Integrator d) Differentiator
- 17) Which biasing scheme is used in RC coupled amplifier  
 a) Emitter bias b) Fixed bias c) Voltage divider bias d) collector to base feedback
- 18) In CE amplifier input and output signal are in  
 a) In phase b) 180 degree out of phase c) 0 degree out of phase d) 90 degree out of phase
- 19) Thermal runaway is due to  
 a) Changes in operating point b) change in biasing c) <sup>increase</sup> decrease in temperature d) All of these
- 20) The main components responsible for fall in gain at high frequency  
 a) Coupling capacitor b) resistors c) bypass capacitor d) Internal capacitors.

\*\*\*\*\*  
 \*\*\*\*\*



**SREE NARAYANA GURU COLLEGE OF ENGINEERING  
AND TECHNOLOGY**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENG.**

**ECT 308 COMPREHENSIVE COURSE WORK**

**MOCK TEST 1**

**Topics: Analog circuits module 1, module 2**

19

**Time: 15 minutes**

**Marks: 20 marks**

- 1) A Differentiator circuit is mainly
  - a) A High pass filter with low time constant.
  - b) A High pass filter with 0.75 time constant.
  - c) A High pass filter with small time constant.
  - d) A High pass filter with 0.50 time constant.
- 2) The transfer function of an low-pass RC network is
  - a)  $RCs/1+RCs$  b)  $1/1+RCs$  c)  $RC/1+RCs$  d)  $s/1+RCs$
- 3) An integrator converts square wave in to -----
  - a) Positive & negative spikes b) ramp signal c) triangular wave d) sine wave
- 4) Condition of Integrator
  - a)  $RC \gg T$  b)  $RC = T$  c)  $RC \ll T$
- 5) Frequency response of integrator same as that of
  - a) Amplifier b) LPF c) HPF d) BPF
- 6) ----- circuit is used to convert triangular to square
  - a) Differentiator b) integrator c) amplifier d) Schmitt trigger
- 7) The output of an RC integrator circuit is taken across
  - a) Resistor b) capacitor c) diode d) None of these
- 8) Condition for a good differentiator
  - a)  $RC > .0016T$  b)  $RC < .0016T$  c)  $RC > 15T$  d)  $RC = T$
- 9) An integrator is a
  - a) High pass circuit with large time constant b) Low pass circuit with small time constant
  - c) High pass circuit with small time constant d) Low pass circuit with large time constant

Dr. M. A. V.  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PATTANUR  
KANNUR

HOD  
ECE

$f = \frac{1}{2\pi RC}$   
 $f = \frac{1}{2 \times 8.2 \times 10^3 \times 0.0033 \times 10^{-6}}$

- 10) Find the cut off frequency for an RC low pass filter of  $R=8.2\Omega$  and  $C=0.0033\mu F$ ?  
 a) 6 KHz ☒ b) 5.88KHz c) 4.26KHz d) 7.91 KHz
- 11) Frequency at which gain equal to .707 of maximum value is called  
☒ a) Cut off frequency b) corner frequency c) pass band frequency d) stop band frequency
- 12) A square wave can be generated from a sinusoidal wave by using  
 a) Positive clipper b) slicer ☒ c) double clipper d) Negative clipper
- 13) In a shunt diode clipper, the signal will be transmitted when the diode is \_\_\_\_\_  
☒ a) OFF b) ON c) any of the state d) None of these
- 14) Transfer characteristics is the graph between  
☒ a)  $V_{in}$  on x axis  $V_o$  on Y axis b)  $V_{in}$  on y axis  $V_o$  on x axis c)  $V_{in}$  on X axis t on y axis d) None of these
- 15) What type of diode circuit is used to add or restore a dc level to an electrical signal?  
☒ a) Clamper b) Clipper c) Amplifier d) Integrator
- 16) A clamping circuit is also called  
 a) Limiter ☒ b) DC restorer c) Integrator d) Differentiator
- 17) Which biasing scheme is used in RC coupled amplifier  
 a) Emitter bias b) Fixed bias ☒ c) Voltage divider bias d) collector to base feedback
- 18) In CE amplifier input and output signal are in  
 a) In phase ☒ b) 180 degree out of phase c) 0 degree out of phase d) 90 degree out of phase
- 19) Thermal runaway is due to  
 a) Changes in operating point b) change in biasing c) decrease in temperature ☒ d) All of these
- 20) The main components responsible for fall in gain at high frequency  
☒ a) Coupling capacitor b) resistors c) bypass capacitor d) Internal capacitors.

\*\*\*\*\*  
 \*\*\*\*\*

**SREE NARAYANA GURU COLLEGE OF ENGINEERING  
& TECHNOLOGY**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGG.**

**ECT 308 COMPREHENSIVE COURSE WORK**

**MOCK TEST 1**

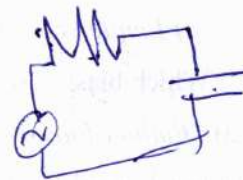
**Topics: Analog circuits module 1, module 2**

13

**Time: 15 minutes**

**Marks: 20 marks**

- 1) A Differentiator circuit is mainly
  - a) A High pass filter with low time constant.
  - ☒ b) A High pass filter with 0.75 time constant.
  - c) A High pass filter with small time constant.
  - d) A High pass filter with 0.50 time constant.
- 2) The transfer function of an low-pass RC network is
  - ☒ a)  $RCs / (1 + RCs)$  b)  $1 / (1 + RCs)$  c)  $RC / (1 + RCs)$  d)  $s / (1 + RCs)$
- 3) An integrator converts square wave in to -----
  - a) Positive & negative spikes b) ramp signal ☒ c) triangular wave d) sine wave
- 4) Condition of Integrator
  - ☒ a)  $RC \gg T$  b)  $RC = T$  c)  $RC \ll T$
- 5) Frequency response of integrator same as that of
  - a) Amplifier b) LPF ☒ c) HPF d) BPF
- 6) ----- circuit is used to convert triangular to square
  - ☒ a) Differentiator b) integrator c) amplifier d) Schmitt trigger
- 7) The output of an RC integrator circuit is taken across
  - a) Resistor ☒ b) capacitor c) diode d) None of these
- 8) Condition for a good differentiator
  - a)  $RC > .0016T$  ☒ b)  $RC < .0016T$  c)  $RC > 15T$  d)  $RC = T$
- 9) An integrator is a
  - a) High pass circuit with large time constant b) Low pass circuit with small time constant
  - c) High pass circuit with small time constant ☒ d) Low pass circuit with large time constant



$$\frac{V_o}{V_{in}} = \frac{1}{1 + RCs}$$



10) Find the cut off frequency for an RC low pass filter of  $R=8.2\Omega$  and  $C=0.0033\mu F$ ?

- a) 6 KHz b) ☒ 5.88KHz c) 4.26KHz d) 7.91 KHz

$$f_c = \frac{1}{2\pi RC}$$
$$= \frac{1}{2\pi \times 8.2 \times 0.0033}$$

11) Frequency at which gain equal to .707 of maximum value is called

- ☒ a) Cut off frequency b) corner frequency c) pass band frequency d) stop band frequency

12) A square wave can be generated from a sinusoidal wave by using

- a) Positive clipper b) slicer ☒ c) double clipper d) Negative clipper

13) In a shunt diode clipper, the signal will be transmitted when the diode is \_\_\_\_\_

- a) OFF ☒ b) ON c) any of the state d) None of these

14) Transfer characteristics is the graph between

- a)  $V_{in}$  on x axis  $V_o$  on Y axis ☒ b)  $V_{in}$  on y axis  $V_o$  on x axis c)  $V_{in}$  on X axis t on y axis d)

None of these

15) What type of diode circuit is used to add or restore a dc level to an electrical signal?

- ☒ a) Clamper b) Clipper c) Amplifier d) Integrator

16) A clamping circuit is also called

- a) Limiter ☒ b) DC restorer c) Integrator d) Differentiator

17) Which biasing scheme is used in RC coupled amplifier

- a) Emitter bias b) Fixed bias ☒ c) Voltage divider bias d) collector to base feedback

18) In CE amplifier input and output signal are in

- a) In phase ☒ b) 180 degree out of phase c) 0 degree out of phase d) 90 degree out of phase

19) Thermal runaway is due to

- ☒ a) Changes in operating point b) change in biasing c) decrease in temperature d) All of these

20) The main components responsible for fall in gain at high frequency

- ☒ a) Coupling capacitor b) resistors c) bypass capacitor d) Internal capacitors.

\*\*\*\*\*

\*\*\*\*\*

# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGG.

ECT 308 COMPREHENSIVE COURSE WORK

MOCK TEST 1

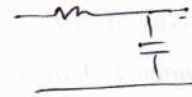
Topics: Analog circuits module 1, module 2

10

Time: 15 minutes

Marks: 20 marks

- 1) A Differentiator circuit is mainly
  - a) A High pass filter with low time constant.
  - b) A High pass filter with 0.75 time constant.
  - ☒ c) A High pass filter with small time constant.
  - d) A High pass filter with 0.50 time constant.
- 2) The transfer function of an low-pass RC network is
  - a)  $RCs/1+RCs$  b)  $1/1+RCs$  c)  $RC/1+RCs$  d)  $s/1+RCs$
- 3) An integrator converts square wave in to -----
  - a) Positive & negative spikes b) ramp signal ☒ c) triangular wave d) sine wave
- 4) Condition of Integrator
  - a)  $RC \gg T$  b)  $RC = T$  ☒ c)  $RC \ll T$
- 5) Frequency response of integrator same as that of
  - a) Amplifier b) LPF c) HPF d) BPF
- 6) ----- circuit is used to convert triangular to square
  - a) Differentiator b) integrator c) amplifier ☒ d) Schmitt trigger
- 7) The output of an RC integrator circuit is taken across
  - a) Resistor ☒ b) capacitor c) diode d) None of these
- 8) Condition for a good differentiator
  - ☒ a)  $RC > .0016T$  ☒ b)  $RC < .0016T$  c)  $RC > 15T$  d)  $RC = T$
- 9) An integrator is a
  - a) High pass circuit with large time constant b) Low pass circuit with small time constant
  - c) High pass circuit with small time constant ☒ d) Low pass circuit with large time constant



- 10) Find the cut off frequency for an RC low pass filter of  $R=8.2\Omega$  and  $C=0.0033\mu F$ ?  
 a) 6 KHz ☒ b) 5.88KHz c) 4.26KHz d) 7.91 KHz
- 11) Frequency at which gain equal to .707 of maximum value is called  
☒ a) Cut off frequency b) corner frequency c) pass band frequency d) stop band frequency
- 12) A square wave can be generated from a sinusoidal wave by using  $f_c = \frac{f}{2}$   
 a) Positive clipper b) slicer ☒ c) double clipper d) Negative clipper
- 13) In a shunt diode clipper, the signal will be transmitted when the diode is \_\_\_\_\_  
 a) OFF ☒ b) ON c) any of the state d) None of these
- 14) Transfer characteristics is the graph between  
 a)  $V_{in}$  on x axis  $V_o$  on Y axis ☒ b)  $V_{in}$  on y axis  $V_o$  on x axis c)  $V_{in}$  on X axis t on y axis d) None of these
- 15) What type of diode circuit is used to add or restore a dc level to an electrical signal?  
 a) Clamper b) Clipper ☒ c) Amplifier d) Integrator
- 16) A clamping circuit is also called  
 a) Limiter ☒ b) DC restorer c) Integrator d) Differentiator
- 17) Which biasing scheme is used in RC coupled amplifier  
☒ a) Emitter bias b) Fixed bias c) Voltage divider bias d) collector to base feedback
- 18) In CE amplifier input and output signal are in  
 a) In phase b) 180 degree out of phase c) 0 degree out of phase d) 90 degree out of phase
- 19) Thermal runaway is due to  
 a) Changes in operating point b) change in biasing c) decrease in temperature ☒ d) All of these
- 20) The main components responsible for fall in gain at high frequency  
☒ a) Coupling capacitor b) resistors c) bypass capacitor d) Internal capacitors.

\*\*\*\*\*  
 \*\*\*\*\*



**SREE NARAYANA GURU COLLEGE OF ENGINEERING**  
**TECHNOLOGY**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION** *ENAC*

**ECT 308 COMPREHENSIVE COURSE WORK**

**MOCK TEST 2**

**Topics: Analog circuits module 3, module 4, module 5**

**Time: 15 minutes**

**Marks: 20 marks**

- 1) The maximum theoretical efficiency of class A amplifier is  
a) 12.5   b) 0   c) 22.5   *d) 75*
- 2) A Hartley oscillator uses  
a) A tapped inductor   b) A tapped transformer   c) A tapped capacitor   d) None
- 3) A Wien bridge oscillator is suitable  
a) radio frequency   b) audio frequency   c) both a and b   d) None
- 4) Condition of Integrator  
a)  $RC \gg T$    b)  $RC = T$    c)  $RC \ll T$    d) none
- 5) In an oscillator, the total phase shift around the loop must be  
a)  $0^\circ$    b)  $180^\circ$    c)  $270^\circ$    d)  $45^\circ$
- 6) The negative feedback amplifier results in  
a) increased voltage gain   b) increased current gain  
c) decreased voltage gain   d) decreased power gain
- 7) The output of an RC integrator circuit is taken across  
a) Resistor   b) capacitor   c) diode   d) None of these
- 8) An oscillator has  
a) positive feedback   b) negative feedback   c) no feedback   d) None of these
- 9) An Schmitt trigger has  
a) positive feedback   b) negative feedback   c) no feedback   d) None of these
- 10) A feedback amplifier has  
a) positive feedback   b) negative feedback   c) no feedback   d) None of these
- 11) Frequency at which gain equal to .707 of maximum value is called  
a) cut off frequency   b) corner frequency   c) pass band frequency   d) stop band frequency

12)  $I_{ds}$  vs  $V_{gs}$  chara of an n-channel enhancement type MOSFET is .....

13) Cascading two amplifiers result in

- a) reduction in overall gain and increase in overall bandwidth
- b) reduction in overall bandwidth and increase in overall gain
- c) increase in both overall bandwidth and overall gain
- d) decrease in both overall bandwidth and overall gain

14) For an n-channel enhancement MOSFET  $V_{th} = 5V$ , what is the condition to turn on the device?

- a)  $V_{gs} > 0V$    b)  $V_{gs} > 5V$    c)  $V_{gs} = 0V$    d)  $V_{gs} < 5V$

15) Highest power gain is for

- a) CE amplifier   b) CC amplifier   c) CB Amplifier   d) All of these

16) Highest voltage gain is for

- a) CE amplifier   b) CC amplifier   c) CB Amplifier   d) All of these

17) Which biasing scheme is used in RC coupled amplifier

- a) Emitter bias   b) Fixed bias   c) Voltage divider bias   d) collector to base feedback

18) In CE amplifier input and output signal are in

- a) In phase   b) 180 degree out of phase   c) 0 degree out of phase   d) 90 degree out of phase

19) Which of the following amplifier circuit has highest input impedance?

- a) circuits using BJT   b) circuits using MOSFET   c) circuits using JFET   d) All of these

20) In a CB amplifier, the maximum efficiency could be

- a) 50%   b) 25%   c) 100%   d) 10%

\*\*\*\*\*

**SREE NARAYANA GURU COLLEGE OF ENGINEERING**  
**TECHNOLOGY**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION** ENG.G.

**ECT 308 COMPREHENSIVE COURSE WORK**

**MOCK TEST 2**

**Topics: Analog circuits module 3, module 4, module 5**

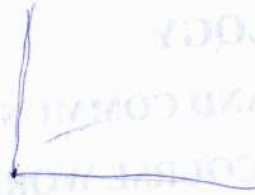
**Time: 15 minutes**

**Marks: 20 marks**

- 1) The maximum theoretical efficiency of class A amplifier is  
a) 12.5 b) 0 c) 22.5 d) 75
- 2) A Hartley oscillator uses  
a) A tapped inductor b) A tapped transformer c) A tapped capacitor d) None
- 3) A Wien bridge oscillator is suitable  
a) radio frequency b) audio frequency c) both a and b d) None
- 4) Condition of Integrator  
a)  $RC \gg T$  b)  $RC = T$  c)  $RC \ll T$  d) none
- 5) In an oscillator, the total phase shift around the loop must be  
a)  $0^\circ$  b)  $180^\circ$  c)  $270^\circ$  d)  $45^\circ$
- 6) The negative feedback amplifier results in  
a) increased voltage gain b) increased current gain  
c) decreased voltage gain d) decreased power gain
- 7) The output of an RC integrator circuit is taken across  
a) Resistor b) capacitor c) diode d) None of these
- 8) An oscillator has  
a) positive feedback b) negative feedback c) no feedback d) None of these
- 9) An Schmitt trigger has  
a) positive feedback b) negative feedback c) no feedback d) None of these
- 10) A feedback amplifier has  
a) positive feedback b) negative feedback c) no feedback d) None of these
- 11) Frequency at which gain equal to .707 of maximum value is called  
a) cut off frequency b) corner frequency c) pass band frequency d) stop band frequency



12)  $I_{ds}$  vs  $V_{gs}$  chara of an n-channel enhancement type MOSFET is .....



13) Cascading two amplifiers result in

- a) reduction in overall gain and increase in overall bandwidth
- ☒ b) reduction in overall bandwidth and increase in overall gain
- c) increase in both overall bandwidth and overall gain
- d) decrease in both overall bandwidth and overall gain

14) For an n-channel enhancement MOSFET  $V_{th} = 5v$ , what is the condition to turn on the device?

- a)  $V_{gs} > 0v$
- b)  $V_{gs} > 5v$
- ☒ c)  $V_{gs} = 0v$
- d)  $V_{gs} < 5v$

15) Highest power gain is for

- ☒ a) CE amplifier
- b) CC amplifier
- c) CB Amplifier
- d) All of these

16) Highest voltage gain is for

- a) CE amplifier
- b) CC amplifier
- ☒ c) CB Amplifier
- d) All of these

17) Which biasing scheme is used in RC coupled amplifier

- a) Emitter bias
- b) Fixed bias
- ☒ c) Voltage divider bias
- d) collector to base feedback

18) In CE amplifier input and output signal are in

- ☒ a) In phase
- b) 180 degree out of phase
- c) 0 degree out of phase
- d) 90 degree out of phase

19) Which of the following amplifier circuit has highest input impedance?

- a) circuits using BJT
- ☒ b) circuits using MOSFET
- c) circuits using JFET
- d) All of these

20) In a CB amplifier, the maximum efficiency could be

- a) 50%
- ☒ b) 25%
- c) 100%
- d) 10%

\*\*\*\*\*

**SREE NARAYANA GURU COLLEGE OF ENGINEERING  
& TECHNOLOGY**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGG.**

**ECT 308 COMPREHENSIVE COURSE WORK**

**MOCK TEST 2**

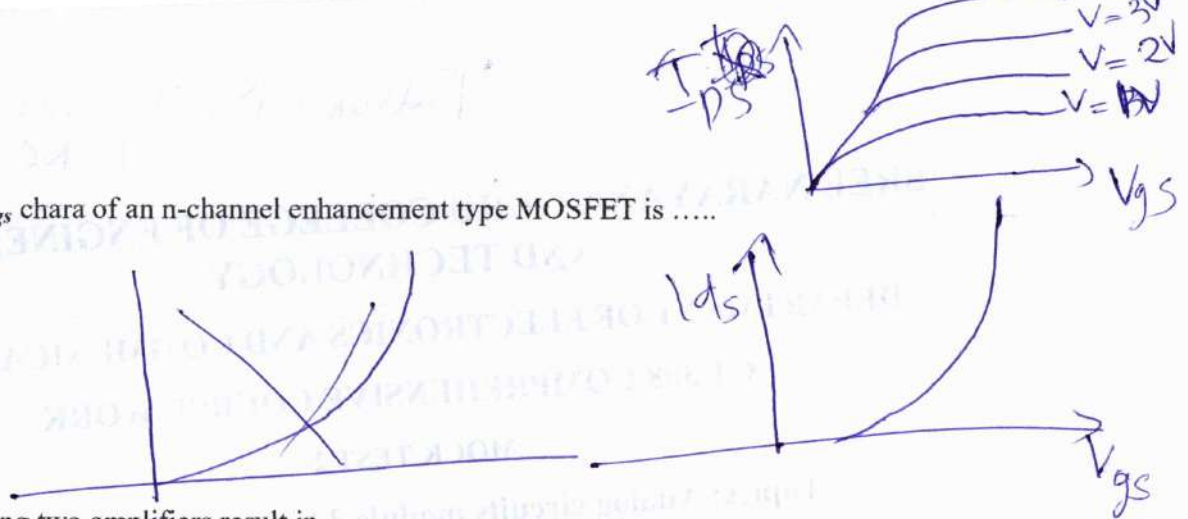
**Topics: Analog circuits module 3, module 4, module 5**

**Time: 15 minutes**

**Marks: 20 marks**

- 1) The maximum theoretical efficiency of class A amplifier is  
☒ a) 12.5    ☐ b) 0    ☐ c) 22.5    ☐ d) 75
- 2) A Hartley oscillator uses  
☒ a) A tapped inductor    ☐ b) A tapped transformer    ☐ c) A tapped capacitor    ☐ d) None
- 3) A Wien bridge oscillator is suitable  
☐ a) radio frequency    ☒ b) audio frequency    ☐ c) both a and b    ☐ d) None
- 4) Condition of Integrator  
☒ a)  $RC \gg T$     ☐ b)  $RC = T$     ☐ c)  $RC \ll T$     ☐ d) none
- 5) In an oscillator, the total phase shift around the loop must be  
☒ a)  $0^\circ$     ☐ b)  $180^\circ$     ☐ c)  $270^\circ$     ☐ d)  $45^\circ$
- 6) The negative feedback amplifier results in  
☐ a) increased voltage gain    ☒ b) increased current gain  
☐ c) decreased voltage gain    ☐ d) decreased power gain
- 7) The output of an RC integrator circuit is taken across  
☐ a) Resistor    ☒ b) capacitor    ☐ c) diode    ☐ d) None of these
- 8) An oscillator has  
☒ a) positive feedback    ☐ b) negative feedback    ☐ c) no feedback    ☐ d) None of these
- 9) An Schmitt trigger has  
☒ a) positive feedback    ☐ b) negative feedback    ☐ c) no feedback    ☐ d) None of these
- 10) A feedback amplifier has  
☐ a) positive feedback    ☒ b) negative feedback    ☐ c) no feedback    ☐ d) None of these
- 11) Frequency at which gain equal to .707 of maximum value is called  
☒ a) cut off frequency    ☐ b) corner frequency    ☐ c) pass band frequency    ☐ d) stop band frequency

12)  $I_{ds}$  vs  $V_{gs}$  chara of an n-channel enhancement type MOSFET is .....



13) Cascading two amplifiers result in

- a) reduction in overall gain and increase in overall bandwidth
- b) reduction in overall bandwidth and increase in overall gain
- ☒ c) increase in both overall bandwidth and overall gain
- d) decrease in both overall bandwidth and overall gain

14) For an n-channel enhancement MOSFET  $V_{th} = 5V$ , what is the condition to turn on the device?

- a)  $V_{gs} > 0V$
- ☒ b)  $V_{gs} > 5V$
- c)  $V_{gs} = 0V$
- d)  $V_{gs} < 5V$

15) Highest power gain is for

- ☒ a) CE amplifier
- b) CC amplifier
- ☒ c) CB Amplifier
- d) All of these

16) Highest voltage gain is for

- a) CE amplifier
- b) CC amplifier
- ☒ c) CB Amplifier
- d) All of these

17) Which biasing scheme is used in RC coupled amplifier

- a) Emitter bias
- b) Fixed bias
- ☒ c) Voltage divider bias
- d) collector to base feedback

18) In CE amplifier input and output signal are in

- a) In phase
- b) 180 degree out of phase
- c) 0 degree out of phase
- ☒ d) 90 degree out of phase

19) Which of the following amplifier circuit has highest input impedance?

- a) circuits using BJT
- ☒ b) circuits using MOSFET
- c) circuits using JFET
- d) All of these

20) In a CB amplifier, the maximum efficiency could be

- ☒ a) 50%
- b) 25%
- c) 100%
- d) 10%

\*\*\*\*\*



**SREE NARAYANA GURU COLLEGE OF ENGINEERING  
TECHNOLOGY**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGG.**

**ECT 308 COMPREHENSIVE COURSE WORK**

**MOCK TEST 2**

**Topics: Analog circuits module 3, module 4, module 5**

**Time: 15 minutes**

**Marks: 20 marks**

- 1) The maximum theoretical efficiency of class A amplifier is  
a) ~~12.5~~ b) 0 c) 22.5 d) 75
- 2) A Hartley oscillator uses  
a) ~~A tapped inductor~~ b) A tapped transformer c) A tapped capacitor d) None
- 3) A Wien bridge oscillator is suitable  
a) radio frequency b) audio frequency c) both ~~a~~ and b d) None
- 4) Condition of Integrator  
a)  $RC \gg T$  b)  $RC = T$  c)  $RC \ll T$  d) none
- 5) In an oscillator, the total phase shift around the loop must be  
a)  ~~$0^\circ$~~  b)  $180^\circ$  c)  $270^\circ$  d)  $45^\circ$
- 6) The negative feedback amplifier results in  
a) increased voltage gain b) increased current gain  
c) ~~decreased voltage gain~~ d) decreased power gain
- 7) The output of an RC integrator circuit is taken across  
a) Resistor b) ~~capacitor~~ c) diode d) None of these
- 8) An oscillator has  
a) ~~positive feedback~~ b) ~~negative feedback~~ c) no feedback d) None of these
- 9) An Schmitt trigger has  
a) ~~positive feedback~~ b) negative feedback c) no feedback d) None of these
- 10) A feedback amplifier has  
a) positive feedback b) negative feedback c) no feedback d) ~~None of these~~
- 11) Frequency at which gain equal to .707 of maximum value is called  
a) ~~cut off frequency~~ b) corner frequency c) pass band frequency d) stop band frequency

12)  $I_{ds}$  vs  $V_{gs}$  chara of an n-channel enhancement type MOSFET is .....

13) Cascading two amplifiers result in

- a) reduction in overall gain and increase in overall bandwidth
- b) reduction in overall bandwidth and increase in overall gain
- c) increase in both overall bandwidth and overall gain
- d) decrease in both overall bandwidth and overall gain

14) For an n-channel enhancement MOSFET  $V_{th} = 5V$ , what is the condition to turn on the device?

- a)  $V_{gs} > 0V$
- b)  $V_{gs} > 5V$
- c)  $V_{gs} = 0V$
- d)  $V_{gs} < 5V$

15) Highest power gain is for

- a) CE amplifier
- b) CC amplifier
- c) CB Amplifier
- d) All of these

16) Highest voltage gain is for

- a) CE amplifier
- b) CC amplifier
- c) CB Amplifier
- d) All of these

17) Which biasing scheme is used in RC coupled amplifier

- a) Emitter bias
- b) Fixed bias
- c) Voltage divider bias
- d) collector to base feedback

18) In CE amplifier input and output signal are in

- a) In phase
- b) 180 degree out of phase
- c) 0 degree out of phase
- d) 90 degree out of phase

19) Which of the following amplifier circuit has highest input impedance?

- a) circuits using BJT
- b) circuits using MOSFET
- c) circuits using JFET
- d) All of these

20) In a CB amplifier, the maximum efficiency could be

- a) 50%
- b) 25%
- c) 100%
- d) 10%

Meghana Gangadharan

\*\*\*\*\*

S6 EC

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

Sixth Semester B.Tech Degree Supplementary Examination May 2023 (2019 Scheme)

**Course Code: ECT308****Course Name: COMPREHENSIVE COURSE WORK**

Max. Marks: 50

Duration: 1 Hour

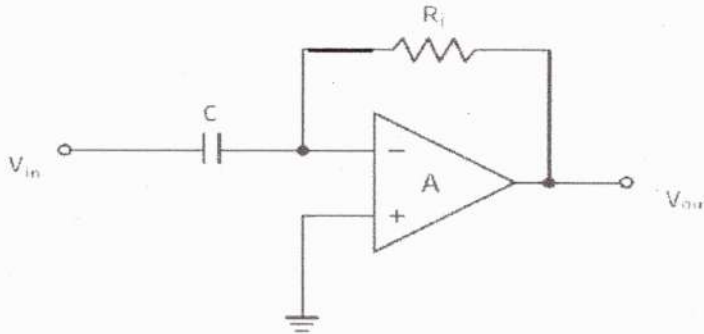
- Instructions:**
- (1) Each question carries one mark. No negative marks for wrong answers
  - (2) Total number of questions: 50
  - (3) All questions are to be answered. Each question will be followed by 4 possible answers of which only ONE is correct.
  - (4) If more than one option is chosen, it will not be considered for valuation.

1. Which of the following power amplifiers has highest efficiency  
a) Class A                      b) Class B                      c) Class AB                      d) Class C
2. A bypass capacitor provides  
a) DC ground                      b) AC ground                      c) Both DC and AC ground                      d) None of these
3. In an oscillator the total phase shift around the loop must be  
a)  $180^\circ$                       b)  $270^\circ$                       c)  $0^\circ$                       d)  $90^\circ$
4. A bridge rectifier circuit using ideal diode has an input voltage of  $20\sin\omega t$ . The average and rms value of output voltage are  
a)  $\frac{40}{\pi}$  V and  $\frac{20}{\sqrt{2}}$  V                      b)  $\frac{20}{\pi}$  V and  $\frac{20}{\sqrt{2}}$  V                      c)  $\frac{40}{\pi}$  V and 10 V                      d)  $\frac{20}{\pi}$  V and 10 V
5. An ideal power supply has  
a) Zero internal resistance                      b) Infinite internal resistance                      c) High output resistance                      d) Both b and c
6. A full wave rectifier circuit using centre tapped transformer, input frequency is 50Hz. The frequency of the output is  
a) 100Hz                      b) 50 Hz                      c) 25Hz                      d) 200Hz
7. A clipper  
a) Adds a dc component to the input signal                      b) Removes signal voltages above or below a specified value                      c) Both a and b                      d) Either a or b
8. Which circuit is called emitter follower?  
a) Common Emitter                      b) Common Collector                      c) Common Base                      d) Both a and b

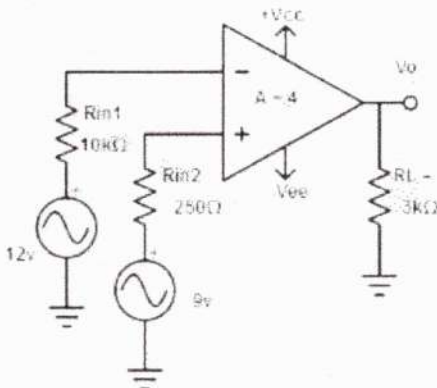


9. For a BJT,  $\alpha$  and  $\beta$  are related as
- a)  $\alpha = \frac{\beta}{1 - \beta}$       b)  $\beta = \frac{1}{1 + \alpha}$       c)  $\beta = \frac{\alpha}{1 + \alpha}$       d)  $\beta = \frac{\alpha}{1 - \alpha}$
10. N-channel FETs are superior to p-channel FETs because
- a) Mobility of electrons is smaller than that of holes      b) Mobility of electrons is greater than that of holes      c) They consume less power      d) They have high switching time
11.  $(E7F6)_{16} = ( \quad )_{10}$
- a) 59382      b) 600000      c) 9362      d) 382
12. Which of these are universal gates?
- a) Only NOR      b) Only NAND      c) Both NOR and NAND      d) NOR, NAND, NOT
13.  $A + A.B$
- a) B      b) A.B      c) A      d) A or B
14.  $(1100110)_2 = ( \quad )_8$
- a) 242      b) 446      c) 146      d) 58
15. A counter has 4 flip flops. It divides the input frequency by
- a) 4      b) 2      c) 8      d) 16
16. Which has the lowest propagation delay?
- a) ECL      b) TTL      c) CMOS      d) PMOS
17. To convert JK flip flop to D flip flop
- a) Connect D to both J and K      b) Connect D to J directly and D to K through inverter      c) Connect D to K directly and D to J through inverter      d) Connect D to K and leave J open
18. A monostable multivibrator has
- a) No stable state      b) One stable state      c) Two stable state      d) None of these
19. Nibble is
- a) A string of 4 bits      b) A string of 8 bits      c) A string of 16 bits      d) A string of 64 bits
20. What is the number of selector lines required in a single input n-output demultiplexer?
- 21 In a linear op-amp circuit
- a) The product of gain and bandwidth is constant      b) Input can be dc only      c) Input can be ac only      d) None of these
- 22 Which of the following circuit is op-amp used in open loop configuration?
- a) comparator      b) Summing amplifier      c) Integrating amplifier      d) Logarithmic amplifier

- 23 The slew rate for an ideal op-amp is  
 a) Very slow                      b) slow                      c) Finite                      d) Infinitely fast
- 24 If input  $V_{in}$  is triangular, the output  $V_{out}$  will be



- a) Square wave                      b) Sine wave                      c) Triangular wave                      d) spikes
- 25 A 741 op-amp has a gain bandwidth product of 1 MHz. A non-inverting amplifier using this op-amp and having a voltage gain of 20dB will exhibit a 3dB bandwidth of  
 a) 50kHz                      a) 100kHz                      a) 1000kHz                      a) 25kHz
- 26 Which of the following electrical characteristics is not exhibited by an ideal op-amp?  
 a) Infinite voltage gain                      a) Infinite bandwidth                      a) Infinite output resistance                      a) Infinite slew rate
- 27 Calculate the output voltage for the given circuit assuming gain of the amplifier,  $A=4$



- a)  $V_o=7V$                       b)  $V_o=5.9V$                       c)  $V_o=12V$                       d)  $V_o=11.4V$
- 28 What happens if any positive input signal is applied to open loop configuration of op-amp  
 a) Output reaches saturation level                      b) Output is a sine wave                      c) No output                      d) None of These
- 29 Why differential amplifiers are preferred for instrumentation and industrial applications  
 a) Input resistance is low                      b) Produce amplified output                      c) Amplify individual input voltage                      d) Reject common mode voltage
- 30 Which is not present in the internal circuit of operational amplifier?  
 a) Differential Amplifier                      b) Level Shifter                      c) Clamper                      d) Output Driver
- 31 The DFT of two sample sequence  $x[n]=\{A, B\}$  is  $X[K]=$

- 32 The computation of 32-point DFT by Radix-2 DIT-FFT involves .....stages of computation.  
 a) 6                                      b) 5                                      c) 3                                      d)  $2^5$
- 33 DFT perform filtering operation in .....  
 a) Time domain                      b) Frequency domain                      c) Both Time & Frequency domain                      d) None of these
- 34 FFT is a faster method of computation, because it exploits the ..... property of the phase factor  $W_N$   
 a) linearity                              b) time reversal                              c) Time invariant                              d) periodicity
- 35 The tolerance in the pass band and stop band are called.....  
 a) Bandwidth                              b) Ripples                              c) Beam width                              d) None of these
- 36 In linear phase filter when the impulse is symmetrical and N is even, the magnitude function is .....  
 a) Anti-symmetric                      b) symmetric                              c) constant                              d) 0
- 37 In FIR filter, .....is a linear function of  $\omega$   
 a) Amplitude                              b) Phase                              c) Frequency                              d) None of these
- 38 In Bilinear Transformation, the .....poles of S-plane are mapped in to the interior of the unit circle in Z-plane  
 a) left half                              b) right half                              c) centre                              d) entire
- 39 For a b-bit number, the quantization step size is  $q=$ .....  
 a)  $2^{-b}$                               b)  $2^b$                               c)  $b+1$                               d)  $2^{-b} + 1$
- 40 The finite word length effects are due to  
 a) quantization of input                      b) quantization of products                      c) quantization of coefficients                      d) all of the above
- 41 For AM receivers, the standard IF frequency is  
 a) 106kHz                              b) 455kHz                              c) 10.7MHz                              d) 1.07MHz
- 42 A 1000kHz carrier is simultaneously amplitude modulated by 300Hz and 2kHz audio signal. Which of the following frequencies will not be present in the output?  
 a) 998kHz                              b) 999.7kHz                              c) 1000.3kHz                              d) 700kHz
- 43 A sinusoidal signal of 2kV peak is amplitude modulated to give 20% modulation. The peak value of each side band is  
 a) 400V                              b) 200V                              c) 100V                              d) 800V
- 44 In frequency modulation broadcast, the maximum deviation is 80 kHz, and the maximum modulating frequency is 20 kHz. In reference to Carson's rule, find the maximum required bandwidth?  
 a) 300kHz                              b) 200kHz                              c) 500kHz                              d) 600kHz



- 45 If the two signals modulate the same carrier with different modulation depths of 0.4 and 0.8. Find the modulation index of the resulting modulation signal?  
a) 0.96                      b) 0.69                      c) 0.89                      d) 0.64
- 46 Without any filtering, a broadcast station at 1800 kHz is heard together with another station at 2800 kHz on a superheterodyne receiver. Find the value of employed IF?  
a) 200Hz                      b) 400Hz                      c) 600Hz                      d) 500Hz
- 47 In a PCM system each quantization level is encoded into 7 bits. The signal-to-quantization noise ratio is equal to  
a) 25.8dB                      b) 34.6dB                      c) 43.9dB                      d) 49.8dB
- 48 Delta modulation suffers from  
a) Slope Overload error                      b) Granular Noise                      c) Both a and b                      d) None of these
- 49 The bandwidth for transmission in pulse code modulation is \_\_\_\_\_  
a) Higher than DPCM                      b) Lower than DPCM                      c) Equal to DPCM                      d) None of these
- 50 For a 10-bit PCM system, the signal-to-quantization noise ratio is 62 dB. if the number of bits is increased by 2, then the signal-to-quantization noise ratio will  
a) Increased by 6dB                      b) Increased by 12dB                      c) Increased by 24dB                      d) Increased by 26dB

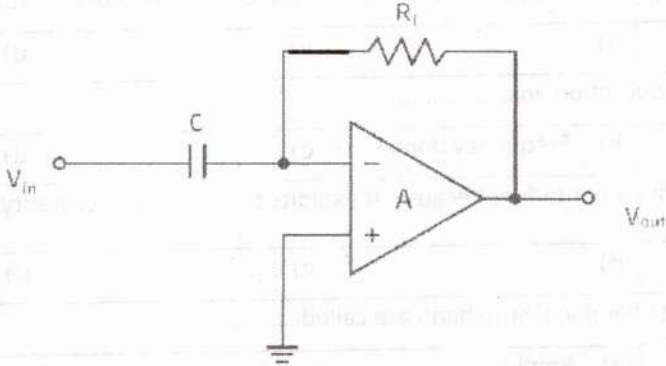
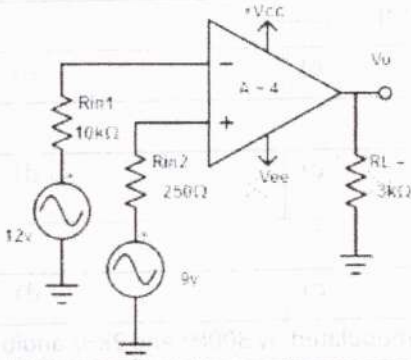
\*\*\*\*\*

|                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                         |                 |    |                       |                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|----|-----------------------|----------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                         | <b>SET X</b>    |    | <b>Total Pages: X</b> |                                                          |
| Reg No.: _____                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                         | Name: _____     |    |                       |                                                          |
| <b>APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY</b><br><b>SIXTH SEMESTER B.TECH DEGREE (S) COMPREHENSIVE EXAMINATION, MAY</b><br><b>2023 (2019 SCHEME)</b>                                                                                                                                                                                                                                |                                                                                                                                         |                 |    |                       |                                                          |
| <b>Course Code: ECT308</b>                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                         |                 |    |                       |                                                          |
| <b>Course name: COMPREHENSIVE EXAM (.....)</b>                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                         |                 |    |                       |                                                          |
| Max. Marks: 50                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                         | Duration: 1Hour |    |                       |                                                          |
| <b>Instructions:</b> (1) Each question carries one mark. No negative marks for wrong answers<br>(2) Total number of questions: 50<br>(3) All questions are to be answered. Each question will be followed by 4 possible answers of which only ONE is correct.<br>(4) If more than one option is chosen, it will not be considered for valuation.<br>(5) Calculators are not permitted |                                                                                                                                         |                 |    |                       |                                                          |
| 1.                                                                                                                                                                                                                                                                                                                                                                                    | Which of the following power amplifiers has highest efficiency                                                                          |                 |    |                       |                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                       | a)                                                                                                                                      | b)              | c) | d)                    | Class C                                                  |
| 2.                                                                                                                                                                                                                                                                                                                                                                                    | A bypass capacitor provides                                                                                                             |                 |    |                       |                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                       | a)                                                                                                                                      | b)              | c) | d)                    | AC ground                                                |
| 3.                                                                                                                                                                                                                                                                                                                                                                                    | In an oscillator the total phase shift around the loop must be                                                                          |                 |    |                       |                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                       | a)                                                                                                                                      | b)              | c) | d)                    | 0°                                                       |
| 4.                                                                                                                                                                                                                                                                                                                                                                                    | A bridge rectifier circuit using ideal diode has an input voltage of $20\sin\omega t$ . The average and rms value of output voltage are |                 |    |                       |                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                       | a)                                                                                                                                      | b)              | c) | d)                    | $\frac{40}{\pi}$ V and $\frac{20}{\sqrt{2}}$ V           |
| 5.                                                                                                                                                                                                                                                                                                                                                                                    | An ideal power supply has                                                                                                               |                 |    |                       |                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                       | a)                                                                                                                                      | b)              | c) | d)                    | Zero internal resistance                                 |
| 6.                                                                                                                                                                                                                                                                                                                                                                                    | A full wave rectifier circuit using centre tapped transformer, input frequency is 50Hz. The frequency of the output is                  |                 |    |                       |                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                       | a)                                                                                                                                      | b)              | c) | d)                    | 100Hz                                                    |
| 7.                                                                                                                                                                                                                                                                                                                                                                                    | A clipper                                                                                                                               |                 |    |                       |                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                       | a)                                                                                                                                      | b)              | c) | d)                    | Removes signal voltages above or below a specified value |
| 8.                                                                                                                                                                                                                                                                                                                                                                                    | Which circuit is called emitter follower?                                                                                               |                 |    |                       |                                                          |

DRAFT SCHEME

|     |                                                                                         |                                               |    |                                                     |    |                   |    |                                     |
|-----|-----------------------------------------------------------------------------------------|-----------------------------------------------|----|-----------------------------------------------------|----|-------------------|----|-------------------------------------|
|     | a)                                                                                      |                                               | b) | Common Collector                                    | c) |                   | d) |                                     |
| 9.  | For a BJT, $\alpha$ and $\beta$ are related as                                          |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      |                                               | b) |                                                     | c) |                   | d) | $\beta = \frac{\alpha}{1 - \alpha}$ |
| 10. | N-channel FETs are superior to p-channel FETs because                                   |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      |                                               | b) | Mobility of electrons is greater than that of holes | c) |                   | d) |                                     |
| 11  | $(E7F6)_{16} = ( \quad )_{10}$                                                          |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      | 59382                                         | b) |                                                     | c) |                   | d) |                                     |
| 12  | Which of these are universal gates?                                                     |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      |                                               | b) |                                                     | c) | Both NOR and NAND | d) |                                     |
| 13  | $A + A.B$                                                                               |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      |                                               | b) |                                                     | c) | A                 | d) |                                     |
| 14  | $(1100110)_2 = ( \quad )_8$                                                             |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      |                                               | b) |                                                     | c) | 146               | d) |                                     |
| 15  | A counter has 4 flip flops. It divides the input frequency by                           |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      |                                               | b) |                                                     | c) |                   | d) | 16                                  |
| 16  | Which has the lowest propagation delay?                                                 |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      | ECL                                           | b) |                                                     | c) |                   | d) |                                     |
| 17  | To convert JK flip flop to D flip flop                                                  |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      |                                               | b) | Connect D to J directly and D to K through inverter | c) |                   | d) |                                     |
| 18  | A monostable multivibrator has                                                          |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      |                                               | b) | One stable state                                    | c) |                   | d) |                                     |
| 19  | Nibble is                                                                               |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      | A string of 4 bits                            | b) |                                                     | c) |                   | d) |                                     |
| 20  | What is the number of selector lines required in a single input n-output demultiplexer? |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      |                                               | b) |                                                     | c) |                   | d) | $\log_2 n$                          |
| 21  | In a linear op-amp circuit                                                              |                                               |    |                                                     |    |                   |    |                                     |
|     | a)                                                                                      | The product of gain and bandwidth is constant | b) |                                                     | c) |                   | d) |                                     |
| 22  | Which of the following circuit is op-amp used in open loop configuration?               |                                               |    |                                                     |    |                   |    |                                     |



|    |                                                                                                                                                                   |                                 |    |        |    |                            |    |                            |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----|--------|----|----------------------------|----|----------------------------|
|    | a)                                                                                                                                                                | comparator                      | b) |        | c) |                            | d) |                            |
| 23 | The slew rate for an ideal op-amp is                                                                                                                              |                                 |    |        |    |                            |    |                            |
|    | a)                                                                                                                                                                |                                 | b) |        | c) |                            | d) | Infinitely fast            |
| 24 | If input $V_{in}$ is triangular, the output $V_{out}$ will be                                                                                                     |                                 |    |        |    |                            |    |                            |
|    |                                                                                  |                                 |    |        |    |                            |    |                            |
|    | a)                                                                                                                                                                | Square wave                     | b) |        | c) |                            | d) |                            |
| 25 | A 741 op-amp has a gain bandwidth product of 1 MHz. A non-inverting amplifier using this op-amp and having a voltage gain of 20dB will exhibit a 3dB bandwidth of |                                 |    |        |    |                            |    |                            |
|    | a)                                                                                                                                                                |                                 | a) | 100kHz | a) |                            | a) |                            |
| 26 | Which of the following electrical characteristics is not exhibited by an ideal op-amp?                                                                            |                                 |    |        |    |                            |    |                            |
|    | a)                                                                                                                                                                |                                 | a) |        | a) | Infinite output resistance | a) |                            |
| 27 | Calculate the output voltage for the given circuit assuming gain of the amplifier, $A=4$                                                                          |                                 |    |        |    |                            |    |                            |
|    |                                                                                |                                 |    |        |    |                            |    |                            |
|    | a)                                                                                                                                                                |                                 | b) |        | c) | $V_o=12V$                  | d) |                            |
| 28 | What happens if any positive input signal is applied to open loop configuration of op-amp                                                                         |                                 |    |        |    |                            |    |                            |
|    | a)                                                                                                                                                                | Output reaches saturation level | b) |        | c) |                            | d) |                            |
| 29 | Why differential amplifiers are preferred for instrumentation and industrial applications                                                                         |                                 |    |        |    |                            |    |                            |
|    | a)                                                                                                                                                                |                                 | b) |        | c) |                            | d) | Reject common mode voltage |

|    |                                                                                                                                                                                         |                     |               |                     |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------|---------------------|
| 30 | Which is not present in the internal circuit of operational amplifier?                                                                                                                  |                     |               |                     |
|    | a)                                                                                                                                                                                      | b)                  | c) Clamper    | d)                  |
| 31 | The DFT of two sample sequence $x[n] = \{A, B\}$ is $X[K] =$                                                                                                                            |                     |               |                     |
|    | a)                                                                                                                                                                                      | b)                  | c) $A+B, A-B$ | d)                  |
| 32 | The computation of 32-point DFT by Radix-2 DIT-FFT involves .....stages of computation.                                                                                                 |                     |               |                     |
|    | a)                                                                                                                                                                                      | b) 5                | c)            | d)                  |
| 33 | DFT perform filtering operation in .....                                                                                                                                                |                     |               |                     |
|    | a)                                                                                                                                                                                      | b) Frequency domain | c)            | d)                  |
| 34 | FFT is a faster method of computation, because it exploits the ..... property of the phase factor $W_N$                                                                                 |                     |               |                     |
|    | a)                                                                                                                                                                                      | b)                  | c)            | d) periodicity      |
| 35 | The tolerance in the pass band and stop band are called.....                                                                                                                            |                     |               |                     |
|    | a)                                                                                                                                                                                      | b) Ripples          | c)            | d)                  |
| 36 | In linear phase filter when the impulse is symmetrical and N is even, the magnitude function is .....                                                                                   |                     |               |                     |
|    | a) Anti-symmetric                                                                                                                                                                       | b)                  | c)            | d)                  |
| 37 | In FIR filter, .....is a linear function of $\omega$                                                                                                                                    |                     |               |                     |
|    | a)                                                                                                                                                                                      | b) Phase            | c)            | d)                  |
| 38 | In Bilinear Transformation, the .....poles of S-plane are mapped in to the interior of the unit circle in Z-plane                                                                       |                     |               |                     |
|    | a) left half                                                                                                                                                                            | b)                  | c)            | d)                  |
| 39 | For a b-bit number, the quantization step size is $q=$ .....                                                                                                                            |                     |               |                     |
|    | a) $2^{-b}$                                                                                                                                                                             | b)                  | c)            | d)                  |
| 40 | The finite word length effects are due to                                                                                                                                               |                     |               |                     |
|    | a)                                                                                                                                                                                      | b)                  | c)            | d) all of the above |
| 41 | For AM receivers, the standard IF frequency is                                                                                                                                          |                     |               |                     |
|    | a)                                                                                                                                                                                      | b) 455kHz           | c)            | d)                  |
| 42 | A 1000kHz carrier is simultaneously amplitude modulated by 300Hz and 2kHz audio signal. Which of the following frequencies will not be present in the output?                           |                     |               |                     |
|    | a)                                                                                                                                                                                      | b)                  | c)            | d) 700kHz           |
| 43 | A sinusoidal signal of 2kV peak is amplitude modulated to give 20% modulation. The peak value of each side band is                                                                      |                     |               |                     |
|    | a)                                                                                                                                                                                      | b) 200V             | c)            | d)                  |
| 44 | In frequency modulation broadcast, the maximum deviation is 80 kHz, and the maximum modulating frequency is 20 kHz. In reference to Carson's rule, find the maximum required bandwidth? |                     |               |                     |

DRAFT SCHEME

|    |                                                                                                                                                                         |                  |    |                   |    |              |    |       |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----|-------------------|----|--------------|----|-------|
|    | a)                                                                                                                                                                      |                  | b) | 200kHz            | c) |              | d) |       |
| 45 | If the two signals modulate the same carrier with different modulation depths of 0.4 and 0.8. Find the modulation index of the resulting modulation signal?             |                  |    |                   |    |              |    |       |
|    | a)                                                                                                                                                                      |                  | b) |                   | c) | 0.89         | d) |       |
| 46 | Without any filtering, a broadcast station at 1800 kHz is heard together with another station at 2800 kHz on a superheterodyne receiver. Find the value of employed IF? |                  |    |                   |    |              |    |       |
|    | a)                                                                                                                                                                      |                  | b) |                   | c) |              | d) | 500Hz |
| 47 | In a PCM system each quantization level is encoded into 7 bits. The signal-to-quantization noise ratio is equal to                                                      |                  |    |                   |    |              |    |       |
|    | a)                                                                                                                                                                      |                  | b) |                   | c) | 43.9dB       | d) |       |
| 48 | Delta modulation suffers from                                                                                                                                           |                  |    |                   |    |              |    |       |
|    | a)                                                                                                                                                                      |                  | b) |                   | c) | Both a and b | d) |       |
| 49 | The bandwidth for transmission in pulse code modulation is _____                                                                                                        |                  |    |                   |    |              |    |       |
|    | a)                                                                                                                                                                      | Higher than DPCM | b) |                   | c) |              | d) |       |
| 50 | For a 10-bit PCM system, the signal-to-quantization noise ratio is 62 dB. if the number of bits is increased by 2, then the signal-to-quantization noise ratio will     |                  |    |                   |    |              |    |       |
|    | a)                                                                                                                                                                      |                  | b) | Increased by 12dB | c) |              | d) |       |



|    |                                                                                                                                                                   |     |     |     |             |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-------------|
| 46 | Two signals modulate the same carrier with different modulation depths of 0.4 and 0.8. Find the modulation index of the resulting modulated signal.               | (a) | (b) | (c) | (d)         |
| 47 | Without affecting a broadcast station at 1800 kHz is heard together with another station at 1800 kHz on a superhetrodyne receiver. Find the value of employed IF. | (a) | (b) | (c) | (d) 200 kHz |
| 48 | In a PCM system each quantization level is encoded with 7 bits. The signal-to-quantization noise ratio is 48 dB.                                                  | (a) | (b) | (c) | (d)         |
| 49 | Data quantization suffers from                                                                                                                                    | (a) | (b) | (c) | (d)         |
| 50 | For a PCM system, the signal-to-quantization noise ratio is 48 dB. If the number of bits is increased by 2, then the signal-to-quantization noise ratio will      | (a) | (b) | (c) | (d)         |
| 51 | Higher than PCM                                                                                                                                                   | (a) | (b) | (c) | (d)         |



**APJ Abdul Kalam Technological University**  
**CET Campus, Thiruvananthapuram**  
**Kerala -695016**  
**India**

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

Students Examination Eligibility Details

**Academic Year : 2022 - 2023**

**Degree Type : Regular**

**Program :  
 B.Tech(Full Time)**

**Branch : ELECTRONICS AND COMMUNICATION  
 ENGINEERING**

**Semester : S6**

**Course Name : COMPREHENSIVE COURSE  
 WORK-ECT308**

**Batch : 1**

**Eligibility For : Pursuing Students**

**Period of Registration : NA**

| Student Name                                        | Attendance<br>%, Internal<br>Marks          | Availed<br>Leaves            | Disc. Action | Eligible<br>for<br>Written<br>Exam | Status:                 | In-<br>eligibility<br>Type |
|-----------------------------------------------------|---------------------------------------------|------------------------------|--------------|------------------------------------|-------------------------|----------------------------|
| DEEPNA CHALIL<br>Register No :<br>SNC20EC002        | Attendance :<br>80.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |              | Yes                                | Submitted by<br>college |                            |
| HANEENA<br>SULTHANA<br>Register No :<br>SNC20EC003  | Attendance :<br>87.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |              | Yes                                | Submitted by<br>college |                            |
| SANJAY<br>SUDHAKARAN<br>Register No :<br>SNC20EC004 | Attendance :<br>80.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |              | Yes                                | Submitted by<br>college |                            |
| SOORAJ SURESH<br>V O<br>Register No :<br>SNC20EC005 | Attendance :<br>80.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |              | Yes                                | Submitted by<br>college |                            |

|                                                        |                                             |                              |     |                         |  |
|--------------------------------------------------------|---------------------------------------------|------------------------------|-----|-------------------------|--|
| THEJASREE TK<br>Register No :<br>SNC20EC006            | Attendance :<br>93.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : | Yes | Submitted by<br>college |  |
| FATHIMA NASLA<br>M.V<br>Register No :<br>LSNC20EC007   | Attendance :<br>80.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : | Yes | Submitted by<br>college |  |
| MEGHANA<br>GANGADHARAN<br>Register No :<br>LSNC20EC008 | Attendance :<br>80.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : | Yes | Submitted by<br>college |  |

*Handwritten signature*

| Sl. No. | Student Name        | Register No. | Attendance | Internal Marks | Long Leave | Duty Leave | Submitted by | College              |
|---------|---------------------|--------------|------------|----------------|------------|------------|--------------|----------------------|
| 1       | THEJASREE TK        | SNC20EC006   | 93.0       |                |            |            | Yes          | Submitted by college |
| 2       | FATHIMA NASLA M.V   | LSNC20EC007  | 80.0       |                |            |            | Yes          | Submitted by college |
| 3       | MEGHANA GANGADHARAN | LSNC20EC008  | 80.0       |                |            |            | Yes          | Submitted by college |

*Handwritten signature*  
HOD  
ECE

*Handwritten signature*

Dr. J. V.  
HEAD OF  
ENGINEERING  
DEPARTMENT,  
PATTANUR



**DEPARTMENT OF ELECTRONICS AND COMMUNICATION**  
**Students Name List\_S6 ECE**

| Roll No. | Register No. | Name of Students    |
|----------|--------------|---------------------|
| 1        | SNC20EC002   | Deepna Chalil       |
| 2        | SNC20EC003   | Haneena Sulthana    |
| 3        | SNC20EC004   | Sanjay Sudhakaran   |
| 4        | SNC20EC005   | Sooraj Suresh V O   |
| 5        | SNC20EC006   | Thejasree T K       |
| 6        | SNC20EC007   | Fathima Nasla M V   |
| 7        | SNC20EC008   | Meghana Gangadharan |

*Vinesh*  
4/2/23

*Leena*  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
**SREE NARAYANA GURU COLLEGE OF**  
**ENGINEERING & TECHNOLOGY, PATTANUR**  
**KANNUR**



# **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

## **VISION**

- To be a center of excellence in Electronics and Communication Engineering and to create engineers who can address global challenges.

## **MISSION**

- To provide students with high quality technical education, and to develop their professional and entrepreneurial skills in Electronics and Communication Engineering.
- To enable students for developing different skills, leading to benchmarking and innovations.
- To inculcate in students a high degree of social consciousness and sense of human values.

*Handwritten signature*  
HOD ECE

**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

| Degree / Branch     |                    | MONTH |   |   |   |   |   |   |   |   |   |  |  | DATE |    | HOUR |   |   |   |   |
|---------------------|--------------------|-------|---|---|---|---|---|---|---|---|---|--|--|------|----|------|---|---|---|---|
| CLASS<br>ROLL<br>NO | NAME               |       |   |   |   |   |   |   |   |   |   |  |  | 22   | 23 |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  | 1    | 2  | 3    | 4 | 5 | 6 | 7 |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
| 1                   | Deepna chalil      | x     | x | x | a | a | a | 3 | x | 4 | x |  |  |      |    |      |   |   |   |   |
| 2                   | Haneena Sultana    | a     | a | x | x | x | x | 4 | x | 5 | x |  |  |      |    |      |   |   |   |   |
| 3                   | Sanjay Sudhakaram  | x     | x | x | x | x | x | 6 | x | 7 | x |  |  |      |    |      |   |   |   |   |
| 4                   | Georaj Suresh. V.D | x     | x | x | a | a | a | 3 | x | 4 | x |  |  |      |    |      |   |   |   |   |
| 5                   | Thejasree T K      | x     | x | x | x | x | x | 6 | x | 7 | x |  |  |      |    |      |   |   |   |   |
| 6                   | Fathima Nasir M V  | x     | x | x | x | x | x | 6 | x | 7 | a |  |  |      |    |      |   |   |   |   |
| 7                   | Meghana Gmgadharan | x     | x | a | a | a | x | 2 | x | 4 | x |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |
|                     |                    |       |   |   |   |   |   |   |   |   |   |  |  |      |    |      |   |   |   |   |

|   |   |   |   |   |    |   |    |    |    |    |  |  |  |  |
|---|---|---|---|---|----|---|----|----|----|----|--|--|--|--|
|   |   | 1 |   |   |    |   |    |    |    | 6  |  |  |  |  |
|   |   | 3 | 4 |   | 12 |   |    |    |    | 5  |  |  |  |  |
| 2 | 1 | 2 | 4 | 5 | 1  | 2 | 14 | 3  | 15 |    |  |  |  |  |
|   | x | 5 | x | x | x  | x | x  | 11 | v  | 12 |  |  |  |  |
|   | x | 7 | x | x | x  | x | x  | 12 | x  | 13 |  |  |  |  |
|   | x | 9 | x | x | x  | x | x  | 13 | x  | 14 |  |  |  |  |
|   | x | 5 | x | x | x  | x | x  | 14 | x  | 15 |  |  |  |  |
|   | x | 7 | x | x | x  | x | x  | 15 | a  | 16 |  |  |  |  |
|   | a | 7 | x | x | x  | x | x  | 16 | a  | 17 |  |  |  |  |
|   | x | 6 | x | x | x  | x | x  | 17 | x  | 18 |  |  |  |  |



15

[illegible]

*Vinod*  
*01/07/23*  
Signature of Staff Member

*Shr*  
Module Co-ordinator

253



**SREE NARAYANA GURU COLLEGE OF ENGINEERING**  
**TECHNOLOGY**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION**  
**ENGINEERING**

**COURSE PLAN SCHEDULE**

|                                            |                           |
|--------------------------------------------|---------------------------|
| Name of the faculty                        | VANIR                     |
| Designation                                | Assistant Professor       |
| Faculty department name                    | ECE                       |
| Name of the course with course code        | ECT308 COMPREHENSIVE VIVA |
| Department to which this course is offered | ECE                       |
| Semester                                   | Sixth                     |
| Academic Year                              | 2022-2023                 |

**1. COURSE OVERVIEW**

The objective of this Course work is to ensure the comprehensive knowledge of each student in the most fundamental Program core courses in the curriculum. Five core courses credited from Semesters 3, 4 and 5 are chosen for the detailed study in this course work. This course has an End Semester Objective Test conducted by the University for 50 marks. One hour is assigned per week for this course for conducting mock tests of objective nature in the entire listed five courses.

**2. COURSE OBJECTIVE**

To practice more with core subjects for cracking Gate, placement test and other competitive examinations.

**3. PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES**

**I. PROGRAM OUTCOMES**

- ENGINEERING KNOWLEDGE
- PROBLEM ANALYSIS
- DESIGN / DEVELOPMENT OF SOLUTION
- CONDUCT INVESTIGATION OF COMPLEX PROBLEMS
- MODERN TOOL USAGE
- THE ENGINEER AND SOCIETY
- ENVIRONMENT AND SUSTAINABILITY
- ETHICS
- INDIVIDUAL AND TEAM WORK
- COMMUNICATION

- PROJECT MANAGEMENT AND FINANCE
- LIFE LONG LEARNING

## II. PROGRAM SPECIFIC OUTCOME

- PSO 1 – TO understand skills of students in designing ,implementing and testing Analog and Digital Electronic Circuits including Microprocessor Systems for Signal Processing ,Communication, Networking, VLSI and Embedded Systems applications
- PSO 2 – Apply their knowledge and skills to conduct experiments and develop applications using electronic design automation tools (EDA).

## 4. COURSE OUTCOME

CO1 Apply the knowledge of circuit theorems and solid state physics to solve the problems in electronic Circuits

CO2 Design a logic circuit for a specific application

CO3 Design linear IC circuits for linear and non-linear circuit applications.

CO4 Explain basic signal processing operations and Filter designs

CO5 Explain existent analog and digital communication systems

## 5. COURSE MAPPING

|     | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 |
|-----|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| CO1 | H    | H    | L    |      |      |      |      |      |      |       |       |       |       | M     |
| CO2 | H    | H    | L    |      |      |      |      |      |      |       |       |       |       | M     |
| CO3 | H    | H    | L    |      |      |      |      |      |      |       |       |       |       | M     |
| CO4 | H    | M    |      |      |      |      |      |      |      |       |       |       |       | M     |
| CO5 | H    | M    | L    |      |      |      |      |      |      |       |       |       |       | M     |

## 6. SYLLABUS

| SL No:   | TOPIC                            | No of Lectures |
|----------|----------------------------------|----------------|
| <b>1</b> | <b>Analog Circuits</b>           |                |
| 1.1      | Mock Test on Module 1 and 2      | 1              |
| 1.2      | Mock Test on Module 3 ,4 and 5   | 1              |
| 1.3      | Feedback and Remedial            |                |
| <b>2</b> | <b>Logic Circuit Design</b>      | 1              |
| 2.1      | Mock Test on Module 1, 2 and 3   | 1              |
| 2.2      | Mock Test on Module 4 and 5      | 1              |
| 2.2      | Feedback and Remedial            | 1              |
| <b>3</b> | <b>Linear IC</b>                 | 1              |
| 3.1      | Mock Test on Module 1 and 2      | 1              |
| 3.2      | Mock Test on Module3, 4 and 5    | 1              |
| 3.3      | Feedback and Remedial            | 1              |
| <b>4</b> | <b>Digital Signal Processing</b> | 1              |
| 4.1      | Mock Test on Module 1 and 2      | 1              |
| 4.2      | Mock Test on Module3, 4 and 5    | 1              |



|          |                                         |   |
|----------|-----------------------------------------|---|
| 4.3      | Feedback and Remedial                   | 1 |
| <b>5</b> | <b>Analog and Digital Communication</b> | 1 |
| 5.1      | Mock Test on Module 1, 2 and 3          | 1 |
| 5.2      | Mock Test on Module 4 and 5             | 1 |
| 5.3      | Feedback and Remedial                   | 1 |

MODE OF DELIVERY: LECTURE / TUTORIAL / ASSIGNMENT / PRACTICAL

7. Grading Methods (put a cross mark 'x' whichever is applicable)

| Module | Series Test | Assignment | Class Test | Quiz | Tutorial |
|--------|-------------|------------|------------|------|----------|
| 1      |             |            | x          |      |          |
| 2      |             |            | x          |      |          |
| 3      |             |            | x          |      |          |
| 4      |             |            | x          |      |          |
| 5      |             |            | x          |      |          |

8. Subject History

- ✓ Year Of Introduction of the subject – 2019
- ✓ Faculty Handled Just before this time – Ms. Meera M
- ✓ Pass Percentage during last three years – 80%
- ✓ Target Pass Percentage – 85%

The following is the formula for calculating the target percentage of a subject.

- $\text{Average} = (x + y + z) / 3$ , where x, y and z is the previous 3 year subject pass percentage.
- $\text{Target Percentage} = \text{Average} + (100 - \text{Average})/5$

Example: for a subject in S8,

- ✓ **X = PASS PERCENTAGE OF THAT SUBJECT FOR 2016-2020 BATCH**
- ✓ **Y = PASS PERCENTAGE OF THAT SUBJECT FOR 2015-2019 BATCH**
- ✓ **Z = 0**
- ✓ **suppose x = 82.54, y = 91.3 then,**
- ✓ **Average =  $[82.54 + 91.3] / 2 = 86.92$**
- ✓ **TARGET PERCENTAGE =  $86.92 + (100 - 86.92) / 5 = 89.53$**

9. Any other important matter to be brought into consideration: Nil

Manual Prepared by : Ms. VANIR  
AP, ECE

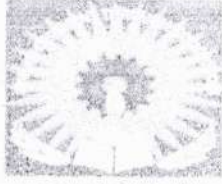
Approved by : Ms. Meera M  
AP, ECE

Dated signature of faculty member : Vnir  
04/02/23

Dated signature of Module Coordinator : Meera  
04/02/2023

Dated signature of HOD : Leena  
4/2/23

Leena  
Dr. LEENA A. V.  
PRINCIPAL,  
SREE NARAYANA GURUKULSREE OF  
ENGINEERING & TECHNOLOGY, PATTANUR  
KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING  
& TECHNOLOGY, KANNUR**

**COURSE TEAM MEETING CHECKLIST**

SEMESTER: S6

DATE OF THE MEETING: 15/12/2023

VENUE: Seminar hall

TIME: 10.00 am

1. NAME OF THE FACULTY: Vani . R
2. DEPARTMENT: ECE
3. SUBJECT CODE AND NAME: ECT308, Comprehensive ~~With~~ Course Work
4. DETAILS REGARDING THE SUBJECT:

|                                                                                           |                            |
|-------------------------------------------------------------------------------------------|----------------------------|
| WHETHER HANDLING SUBJECT FOR THE FIRST TIME? IF NOT MENTION THE COUNT EXCLUDING THIS TIME | <u>Yes</u>                 |
| TARGET PASS PERCENTAGE                                                                    | <u><del>100%</del> 90%</u> |
| NATURE OF THE SUBJECT                                                                     | EASY / MODERATE / TOUGH    |
| CPS                                                                                       | COMPLETED / NOT COMPLETED  |
| ATTENDANCE REGISTER                                                                       | COMPLETED / NOT COMPLETED  |
| ASSESSMENT PLAN                                                                           | FILED / NOT FILED          |
| ACADEMIC CALENDAR                                                                         | FILED / NOT FILED          |
| QP & SCHEME OF FIRST ASSIGNMENT                                                           | AVAILABLE / NOT AVAILABLE  |
| QP & SCHEME OF SERIES TEST I                                                              | AVAILABLE / NOT AVAILABLE  |
| FEEDBACK OF THE TUTOR REGARDING THE CLASS                                                 | <u>Good</u>                |
| ACTION PLAN BY THE FACULTY TO ACHIEVE TARGET PASS PERCENTAGE                              | <u>Mock Test</u>           |
| ANY OTHER REMARKS FROM THE FACULTY                                                        | <u>—</u>                   |

Vani  
15/12/23  
FACULTY

[Signature]  
COURSE CHAIRMAN

[Signature]  
HOD

[Signature]  
DR. L. J. V.  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING AND  
TECHNOLOGY, PAYYANUR  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
CUMULATIVE ATTENDANCE  
ECT308 COMPREHENSIVE WORK**

**Total Hours : 15**

| Sl. No | Register No. | Name                | Hours Present | Attendance (%) |
|--------|--------------|---------------------|---------------|----------------|
| 1      | SNC20EC002   | Deepna Chalil       | 12            | 80             |
| 2      | SNC20EC003   | Haneena Sulthana    | 13            | 87             |
| 3      | SNC20EC004   | Sanjay Sudhakaran   | 12            | 80             |
| 4      | SNC20EC005   | Sooraj Suresh V O   | 12            | 80             |
| 5      | SNC20EC006   | Thejasree T K       | 14            | 93             |
| 6      | SNC20EC007   | Fathima Nasla M V   | 12            | 80             |
| 7      | SNC20EC008   | Meghana Gangadharan | 12            | 80             |

  
**Dr. LEENA A. V.**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR

  
01/07/23

## INDEX

| Sl. No. | PARTICULARS                                             |
|---------|---------------------------------------------------------|
| 1       | DEPARTMENT VISION AND MISSION                           |
| 2       | SYLLABUS                                                |
| 3       | CPS                                                     |
| 4       | ATTENDANCE RECORD                                       |
| 5       | STUDENT BATCH LIST                                      |
| 6       | LIST OF EXPERIMENTS WITH CYCLE                          |
| 7       | RUBRICS FOR EVALUATION                                  |
| 8       | CONTINUOUS INTERNAL EVALUATION SHEET                    |
| 9       | VIVA QUESTIONS FOR EACH EXPERIMENT                      |
| 10      | INTERNAL LAB EXAMINATION SCHEDULE                       |
| 11      | INTERNAL LAB EXAMINATION QUESTION PAPER AND SCHEME      |
| 12      | ATTENDANCE STATEMENT                                    |
| 13      | INTERALS STATEMENT                                      |
| 14      | KTU INTERALS STATEMENT                                  |
| 15      | CONTENT BEYOND SYLLABUS – PLAN, EXECUTION AND ASSESMENT |
| 16      | GAPS IN THE SYLLABUS- PLAN, EXECUTION AND ASSESMENT     |
| 17      | EXTERNAL LAB EXAMINATION SCHEDULE                       |
| 18      | CO-PO ATTAINMENT                                        |
| 19      | LAB MANUAL                                              |
| 20      | RECORD SAMPLE                                           |
| 21      | INTERNAL LAB EXAMINATION SAMPLE                         |



HoD ECE

**Dr. LEENA A. V.**  
**PRINCIPAL**  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY, PAYYANUR  
 KANNUR



## **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY,**

(Affiliated to Kerala Technological University, Approved by AICTE, New Delhi)

### **DEPARTMENT OF MECHANICAL ENGINEERING**

#### **VISION**

- ❖ TO BE A CENTRE OF EXCELLENCE TO DEVELOP PROFICIENT ENGINEERS, WHO ARE INNOVATIVE, ENTREPRENEURIAL AND SUCCESSFUL
- ❖ TO SUPPORT THE EVERCHANGING INDUSTRIAL DEMANDS AND SOCIAL NEEDS

#### **MISSION**

- ❖ TO PROVIDE EXCELLENCE IN ENGINEERING EDUCATION FOR THE DEVELOPMENT OF SOCIETY THROUGH EFFECTIVE TEACHING AND ENCOURAGING INNOVATION
- ❖ TO IMPART QUALITY ENGINEERING EDUCATION FOR THE DEVELOPMENT OF SOCIETY THROUGH EXCELLENCE IN TEACHING AND INNOVATION.
- ❖ TO INCULCATE ATTITUDE, SKILL AND KNOWLEDGE IN STUDENTS
- ❖ TO REACH THEIR HIGHEST POTENTIAL FOR LIFE-LONG LEARNING



## INDEX

| Sl. No. | PARTICULARS                                             |
|---------|---------------------------------------------------------|
| 1       | DEPARTMENT VISION AND MISSION                           |
| 2       | SYLLABUS                                                |
| 3       | CPS                                                     |
| 4       | STUDENTS NAME LIST                                      |
| 5       | ATTENDANCE RECORD                                       |
| 6       | TUTORIAL / ASSIGNMENT QUESTION PAPER AND SCHEME         |
| 7       | SERIES QUESTION PAPER AND SCHEME                        |
| 8       | COURSE TEAM MEETING FORM                                |
| 9       | PEER EVALUATION FORM                                    |
| 10      | CUMULATIVE ATTENDANCE                                   |
| 10      | INTERNALS STATEMENT                                     |
| 11      | KTU INTERNALS STATEMENT                                 |
| 12      | TUTORIAL/ASSIGNMENTS SAMPLES                            |
| 13      | SERIES TEST SAMPLES                                     |
| 14      | REMEDIAL SAMPLES                                        |
| 15      | CONTENT BEYOND SYLLABUS – PLAN, EXECUTION AND ASSESMENT |
| 16      | GAPS IN THE SYLLABUS- PLAN, EXECUTION AND ASSESMENT     |
| 17      | UNIVERSITY QUESTION PAPER AND VALUATION SCHEME          |
| 18      | COURSE MATERIALS                                        |
| 19      | CO-PO,PSO ATTAINMENT                                    |

| MET308 | COMPREHENSIVE COURSE WORK | CATEGORY | L | T | P | CREDIT |
|--------|---------------------------|----------|---|---|---|--------|
|        |                           | PCC      | 1 | 0 | 0 | 1      |

**Preamble:** The course is designed to ensure that the students have firmly grasped the foundational knowledge in Mechanical Engineering familiar enough with the technological concepts. It provides an opportunity for the students to demonstrate their knowledge in various Mechanical Engineering subjects.

**Pre-requisite:** Nil

**Course outcomes:** After the course, the student will able to:

|            |                                                                                                    |
|------------|----------------------------------------------------------------------------------------------------|
| <b>CO1</b> | Learn to prepare for a competitive examination                                                     |
| <b>CO2</b> | Comprehend the questions in Mechanical Engineering field and answer them with confidence           |
| <b>CO3</b> | Communicate effectively with faculty in scholarly environments                                     |
| <b>CO4</b> | Analyze the comprehensive knowledge gained in basic courses in the field of Mechanical Engineering |

**Mapping of course outcomes with program outcomes:**

|             | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 |
|-------------|------|------|------|------|------|------|------|------|------|-------|-------|-------|
| <b>CO 1</b> | 3    | 2    |      |      |      |      |      |      |      |       |       | 2     |
| <b>CO 2</b> | 3    | 2    |      |      |      |      |      |      |      |       |       | 2     |
| <b>CO 3</b> | 3    | 2    |      |      |      |      |      |      |      |       |       | 2     |
| <b>CO 4</b> | 2    | 3    |      |      |      |      |      |      |      |       |       | 2     |

**Assessment pattern**

| Bloom's Category | End Semester Examination (Marks) |
|------------------|----------------------------------|
| Remember         | 25                               |
| Understand       | 15                               |
| Apply            | 5                                |



|          |   |
|----------|---|
| Analyze  | 5 |
| Evaluate |   |
| Create   |   |

**End Semester Examination Pattern:**

A written examination will be conducted by the University at the end of the sixth semester. The written examination will be of objective type similar to the GATE examination. Syllabus for the comprehensive examination is based on following five Mechanical Engineering core courses.

MET203- MECHANICS OF FLUIDS

MET205- METALLURGY AND MATERIAL SCIENCE

MET202- ENGINEERING THERMODYNAMICS

MET204- MANUFACTURING PROCESS

MET301- MECHANICS OF MACHINERY

The written test will be of 50 marks with 50 multiple choice questions (10 questions from each module) with 4 choices of 1 mark each covering all the five core courses. There will be no negative marking. The pass minimum for this course is 25. The course should be mapped with a faculty and classes shall be arranged for practicing questions based on the core courses listed above.

Written examination: 50marks

**Total : 50 marks**

**Course Level Assessment and Sample Questions:**

- The shear stress developed in lubricating oil, of viscosity 9.81 poise, filled between two parallel plates 1cm apart and moving with relative velocity of 2 m/s is
  - 20 N/m<sup>2</sup>
  - 19.62 N/m<sup>2</sup>
  - 29.62 N/m<sup>2</sup>
  - 40 N/m<sup>2</sup>
- For a Newtonian fluid
  - Shear stress is proportional to shear strain
  - Rate of shear stress is proportional to shear strain
  - Shear stress is proportional to rate of shear strain



- (d) Rate of shear stress is proportional to rate of shear strain
3. Atomic packing factor (APF) in the case of copper crystal is  
(a) 0.52  
(b) 0.68  
(c) 0.74  
(d) 1.633
4. What is the approximate strain energy expression for a dislocation of unit length, irrespective of its edge or screw character?  
(a)  $G^2b/2$   
(b)  $Gb^2/2$   
(c)  $G^2b/4$   
(d)  $Gb^2/4$
5. Consider the following statements  
1. Zeroth law of thermodynamics is related to temperature  
2. Entropy is related to first law of thermodynamics  
3. Internal energy of an ideal gas is a function of temperature and pressure  
4. Van der Waals' equation is related to an ideal gas  
Which of the above statements is/are correct?  
(a) 1 only  
(b) 2, 3 and 4  
(c) 1 and 3  
(d) 2 and 4
6. A gas is compressed in a cylinder by a movable piston to a volume one-half of its original volume. During the process, 300 kJ heat left the gas and the internal energy remained same. What is the work done on the gas?  
(a) 100 kNm  
(b) 150 kNm  
(c) 200 kNm  
(d) 300 kNm
7. Which one of the following casting processes is best suited to make bigger size hollow symmetrical pipes?  
(a) Die casting  
(b) Investment casting  
(c) Shell moulding  
(d) Centrifugal casting
8. In gas welding of mild steel using an oxy-acetylene flame, the total amount of acetylene consumed was 10 litre. The oxygen consumption from the cylinder is  
(a) 5 litre  
(b) 10 litre  
(c) 15litre  
(d) 20 litre
9. The number of inversions for a slider crank mechanism is  
(a) 6 (b) 5 (c) 4 (d) 3



10. Total number of instantaneous centers for a mechanism with  $n$  links are

- (a)  $n/2$     (b)  $n$     (c)  $(n-1)/2$     (d)  $(n(n-1))/2$

### Syllabus

#### MODULE 1

Fluids and continuum, Physical properties of fluids, Newton's law of viscosity. Ideal and real fluids, Newtonian and non-Newtonian fluids. Fluid Statics- Pressure-density-height relationship, manometers, pressure on plane and curved surfaces, center of pressure, buoyancy, stability of immersed and floating bodies

Kinematics of fluid flow: Eulerian and Lagrangian approaches, classification of fluid flow, stream lines, path lines, streak lines, stream tubes, , stream function and potential function

Equations of fluid dynamics: Differential equations of mass, energy and momentum (Euler's equation), Bernoulli's equation, Pipe Flow: Viscous flow: shear stress and velocity distribution in a pipe Hagen Poiseuille equation. Darcy-Weisbach equation,

#### MODULE 2

Development of atomic structure - Primary bonds: - characteristics of covalent, ionic and metallic bond - properties based on atomic bonding Crystallography: - SC, BCC, FCC, HCP structures, APF , Miller Indices: - crystal plane and direction - Modes of plastic deformation: - Slip and twinning

Classification of crystal imperfections - forest of dislocation, role of surface defects on crack initiation- Burgers vector -Frank Read source - Correlation of dislocation density with strength and nano concept - high and low angle grain boundaries- driving force for grain growth and applications

Phase diagrams: - need of alloying - classification of alloys - Hume Rothery's rule - equilibrium diagram of common types of binary systems: five types - Coring - lever rule and Gibb's phase rule - Reactions- Detailed discussion on Iron-Carbon equilibrium diagram with micro structure and properties -Heat treatment: - TTT, CCT diagram, applications - Tempering- Hardenability, Jominy end quench test, applications- Surface hardening methods.



**MODULE 3**

Basic Thermodynamic Concepts Macroscopic and Microscopic viewpoints, Concept of Continuum, Thermodynamic System and Control Volume, Surrounding, Boundaries, Types of Systems, Universe, Thermodynamic properties, Process, Cycle, Thermodynamic Equilibrium, Quasi – static Process, State, Point and Path function. Zeroth Law of Thermodynamics, Measurement of Temperature, reference Points, Temperature Scales.

First law of Thermodynamics - First law applied to Non flow and flow Process- SFEE

Second Law of Thermodynamics, Kelvin-Planck and Clausius Statements, Equivalence of two statements Entropy- Entropy changes in various thermodynamic processes, principle of increase of entropy and its applications, Available Energy, Availability and Irreversibility- Second law efficiency.

**MODULE 4**

Casting:-Characteristics of sand - patterns- cores- -chapters- simple problems- solidification of metals and Chvorinov's rule - Elements of gating system- risering -chills

Welding:-welding metallurgy-heat affected zone- grain size and hardness- stress relieving- joint quality -heat treatment of welded joints - weldability - destructive and non destructive tests of welded joints Thermit welding, friction welding - Resistance welding, Arc Welding, Oxyacetyline welding

Rolling:- principles - types of rolls and rolling mills - mechanics of flat rolling-Defects-vibration and chatter - flat rolling -miscellaneous rolling process

Forging: methods analysis, applications, die forging, defects in forging

**MODULE 5**

Introduction to kinematics and mechanisms - various mechanisms, kinematic diagrams, degree of freedom- Grashof's criterion, inversions, coupler curves mechanical advantage, transmission angle. straight line mechanisms exact, approximate. Displacement, velocity analysis- relative motion - relative velocity. Instantaneous centre -Kennedy's theorem.

Acceleration analysis- Relative acceleration - Coriolis acceleration - graphical and analytical methods.

Cams - classification of cam and followers - displacement diagrams, velocity and acceleration analysis of SHM, uniform velocity, uniform acceleration, cycloidal motion

Graphical cam profile synthesis, pressure angle.





# **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

## **DEPARTMENT OF MECHANICAL ENGINEERING**

### **COURSE PLAN SCHEDULE**

|                                            |                                           |
|--------------------------------------------|-------------------------------------------|
| Name of the faculty                        | <b>RAHUL C G</b>                          |
| Designation                                | <b>ASSISTANT PROFESSOR</b>                |
| Faculty department name                    | <b>MECHANICAL ENGINEERING</b>             |
| Name of the course with course code        | <b>MET 308: COMPREHENSIVE COURSE WORK</b> |
| Department to which this course is offered | <b>MECHANICAL ENGINEERING</b>             |
| Semester                                   | <b>SIXTH</b>                              |
| Academic Year                              | <b>2022-2023</b>                          |

#### **1. COURSE OVERVIEW:**

This course provides a chance to students to strengthen foundational knowledge in Mechanical Engineering

#### **2. COURSE OBJECTIVES:**

To ensure that the students have firmly grasped the foundational knowledge in Mechanical Engineering familiar enough with the technological concepts. It provides an opportunity for the students to demonstrate their knowledge in various Mechanical Engineering subjects.

#### **3. PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES**

##### **I. PROGRAM OUTCOMES**

- ENGINEERING KNOWLEDGE
- PROBLEM ANALYSIS
- DESIGN / DEVELOPMENT OF SOLUTION
- CONDUCT INVESTIGATION OF COMPLEX PROBLEMS
- MODERN TOOL USAGE
- THE ENGINEER AND SOCIETY
- ENVIRONMENT AND SUSTAINABILITY
- ETHICS
- INDIVIDUAL AND TEAM WORK
- COMMUNICATION
- PROJECT MANAGEMENT AND FINANCE
- LIFE LONG LEARNING

## II. PROGRAM SPECIFIC OUTCOME

- PSO 1 - Develop and implement new ideas on product design and development with the help of CAD/CAM tools while ensuring best manufacturing practices
- PSO 2 - Able to integrate and apply knowledge in the solution of interdisciplinary engineering problems.

## 4. COURSE OUTCOME

**CO 1:** Learn to prepare for a competitive examination

**CO 2:** Comprehend the questions in Mechanical Engineering field and answer them with confidence

**CO 3:** Communicate effectively with faculty in scholarly environments

**CO 4:** Analyze the comprehensive knowledge gained in basic courses in the field of Mechanical Engineering.

## 5. COURSE MAPPING

|     | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 |
|-----|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| CO1 | H    | M    |      |      |      |      |      |      |      |       |       | M     |       |       |
| CO2 | H    | M    |      |      |      |      |      |      |      |       |       | M     |       |       |
| CO3 | H    | M    |      |      |      |      |      |      |      |       |       | M     |       |       |
| CO4 | M    | H    |      |      |      |      |      |      |      |       |       | M     |       |       |

## 6. SYLLABUS

### MODULE 1

Fluids and continuum, Physical properties of fluids, Newton's law of viscosity. Ideal and real fluids, Newtonian and non-Newtonian fluids. Fluid Statics- Pressure-density-height relationship, manometers, pressure on plane and curved surfaces, center of pressure, buoyancy, stability of immersed and floating bodies Kinematics of fluid flow: Eulerian and Lagrangian approaches, classification of fluid flow, stream lines, path lines, streak lines, stream tubes, , stream function and potential function Equations of fluid dynamics: Differential equations of mass, energy and momentum (Euler's equation), Bernoulli's equation, Pipe Flow: Viscous flow: shear stress and velocity distribution in a pipe Hagen Poiseuille equation. Darcy-Weisbach equation.



## MODULE 2

Development of atomic structure - Primary bonds: - characteristics of covalent, ionic and metallic bond - properties based on atomic bonding Crystallography: - SC, BCC, FCC, HCP structures, APF, Miller Indices: - crystal plane and direction - Modes of plastic deformation: - Slip and twinning Classification of crystal imperfections - forest of dislocation, role of surface defects on crack initiation- Burgers vector -Frank Read source - Correlation of dislocation density with strength and nano concept - high and low angle grain boundaries- driving force for grain growth and applications Phase diagrams: - need of alloying - classification of alloys - Hume Rothery's rule - equilibrium diagram of common types of binary systems: five types - Coring - lever rule and Gibb's phase rule - Reactions- Detailed discussion on Iron-Carbon equilibrium diagram with micro structure and properties -Heat treatment: - TTT, CCT diagram, applications - Tempering- Hardenability, Jominy end quench test, applications- Surface hardening methods.

## MODULE 3

Basic Thermodynamic Concepts Macroscopic and Microscopic viewpoints, Concept of Continuum, Thermodynamic System and Control Volume, Surrounding, Boundaries, Types of Systems, Universe, Thermodynamic properties, Process, Cycle, Thermodynamic Equilibrium, Quasi - static Process, State, Point and Path function. Zeroth Law of Thermodynamics, Measurement of Temperature, reference Points, Temperature Scales. First law of Thermodynamics - First law applied to Non flow and flow Process- SFEE Second Law of Thermodynamics, Kelvin-Planck and Clausius Statements, Equivalence of two statements Entropy- Entropy changes in various thermodynamic processes, principle of increase of entropy and its applications, Available Energy, Availability and Irreversibility- Second law efficiency

## MODULE 4

Casting:-Characteristics of sand - patterns- cores- -chaplets- simple problems- solidification of metals and Chvorinov's rule - Elements of gating system- risering -chills Welding:-welding metallurgy-heat affected zone- grain size and hardness- stress relieving- joint quality -heat treatment of welded joints - weldability - destructive and non destructive tests of welded joints Thermit welding, friction welding - Resistance welding, Arc Welding, Oxyacetyline welding Rolling:- principles - types of rolls and rolling mills - mechanics of flat rolling-Defects-vibration and chatter - flat rolling -miscellaneous rolling process Forging: methods analysis, applications, die forging, defects in forging

## MODULE 5

Introduction to kinematics and mechanisms - various mechanisms, kinematic diagrams, degree of freedom- Grashof's criterion, inversions, coupler curves mechanical advantage, transmission angle. straight line mechanisms exact, approximate. Displacement, velocity analysis- relative motion - relative velocity. Instantaneous centre -Kennedy's theorem. Acceleration analysis- Relative acceleration - Coriolis acceleration - graphical and analytical methods. Cams - classification of cam and followers - displacement diagrams, velocity and acceleration analysis of SHM, uniform velocity, uniform acceleration, cycloidal motion Graphical cam profile synthesis, pressure angle.





## 7. TEACHING PLAN

| MODULE 1 |                                                                                                                                                                                                                                                                                               |     |                  |                      |                      |                       |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------|----------------------|----------------------|-----------------------|
| Sl No    | Topic                                                                                                                                                                                                                                                                                         | Hrs | Mode of Delivery | Planned Date         | Actual Date          | Course Outcome Number |
| 1        | Fluids and continuum, Physical properties of fluids, Newton's law of viscosity. Ideal and real fluids, Newtonian and non-Newtonian fluids. Fluid Statics-Pressure-density-height relationship, manometers, pressure on plane and curved surfaces,                                             | 3   | LECTURE          | 10/02/23<br>14/02/23 | 09/02/23<br>10/02/23 | CO I                  |
| 2        | Center of pressure, buoyancy, stability of immersed and floating bodies Kinematics of fluid flow: Eulerian and Lagrangian approaches, classification of fluid flow, stream lines, path lines, streak lines, stream tubes, stream function and potential function Equations of fluid dynamics: | 3   | LECTURE          | 17/02/23<br>21/02/23 | 21/02/23<br>28/2/23  | CO I                  |
| 3        | Differential equations of mass, energy and momentum (Euler's equation), Bernoulli's equation, Pipe Flow: Viscous flow: shear stress and velocity distribution in a pipe Hagen Poiseuille equation. Darcy-Weisbach equation                                                                    | 3   | LECTURE          | 24/02/23<br>28/02/23 | 8/3/23<br>8/3/23     | CO I                  |
| MODULE 2 |                                                                                                                                                                                                                                                                                               |     |                  |                      |                      |                       |
| 4        | Development of atomic structure - Primary bonds: characteristics of covalent, ionic and metallic bond - properties based on atomic bonding Crystallography: - SC, BCC, FCC, HCP structures, APF, Miller Indices: - crystal plane and direction - Modes of plastic deformation: -              | 3   | LECTURE          | 03/03/23<br>07/03/23 | 31/3/23<br>31/3/23   | CO II                 |
| 5        | Slip and twinning Classification of crystal imperfections - forest of dislocation, Role of surface defects on crack initiation-Burgers vector -Frank Read source - Correlation of dislocation density with strength                                                                           | 3   | LECTURE          | 10/03/23<br>14/03/23 | 4/3/23<br>4/3/23     | CO II                 |



|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |         |                      |                    |                 |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---------|----------------------|--------------------|-----------------|
|                 | and nano concept - high and low angle grain boundaries- driving force for grain growth and applications Phase diagrams: -                                                                                                                                                                                                                                                                                                                |   |         |                      |                    |                 |
| 6               | need of alloying - classification of alloys - Hume Rothery's rule - equilibrium diagram of common types of binary systems: five types - Coring - lever rule and Gibb's phase rule - Reactions- Detailed discussion on Iron-Carbon equilibrium diagram with micro structure and properties -Heat treatment: - TTT, CCT diagram, applications - Tempering- Hardenability, Jominy end quench test, applications- Surface hardening methods. | 3 | LECTURE | 17/03/23<br>21/03/23 | 11/4/23<br>11/4/23 | CO II<br><br>✓  |
| <b>MODULE 3</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |         |                      |                    |                 |
| 7               | Basic Thermodynamic Concepts Macroscopic and Microscopic viewpoints, Concept of Continuum, Thermodynamic System and Control Volume, Surrounding, Boundaries, Types of Systems, Universe, Thermodynamic properties, Process, Cycle, Thermodynamic Equilibrium, Quasi - static Process, State, Point and Path function. Zeroth Law of Thermodynamics, Measurement of Temperature, reference Points, Temperature Scales.                    | 3 | LECTURE | 24/03/23<br>28/03/23 | 18/4/23<br>18/4/23 | CO III          |
| 8               | First law of Thermodynamics - First law applied to Non flow and flow Process- SFEE Second Law of Thermodynamics, Kelvin-Planck and Clausius Statements, Equivalence of two statements Entropy- Entropy changes in various thermodynamic processes, principle of increase of entropy and its applications, Available Energy, Availability and Irreversibility- Second law efficiency                                                      | 3 | LECTURE | 31/03/23<br>04/04/23 | 9/6/23<br>9/6/23   | CO III<br><br>✓ |
| <b>MODULE 4</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |         |                      |                    |                 |
| 9               | Casting:-Characteristics of sand - patterns- cores- chaplets-simple problems- solidification                                                                                                                                                                                                                                                                                                                                             | 3 | LECTURE | 11/04/23<br>18/04/23 | 13/6/23<br>13/6/23 | CO IV           |

|                 |                                                                                                                                                                                                                                                                                                                                                                                                          |   |         |                      |                    |                                                                                               |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---------|----------------------|--------------------|-----------------------------------------------------------------------------------------------|
|                 | of metals and Chvorinov's rule - Elements of gating system- risering -chills Welding:- welding metallurgy-heat affected zone- grain size and hardness- stress relieving- joint quality -heat treatment of welded joints                                                                                                                                                                                  |   |         |                      |                    |                                                                                               |
| 10              | Weldability - destructive and non destructive tests of welded joints Thermit welding, friction welding - Resistance welding, Arc Welding, Oxyacetyline welding Rolling:- principles - types of rolls and rolling mills - mechanics of flat rolling- Defects-vibration and chatter - flat rolling -miscellaneous rolling process Forging: methods analysis, applications, die forging, defects in forging | 3 | LECTURE | 25/04/23<br>02/05/23 | 16/6/23<br>16/6/23 | CO IV<br>  |
| <b>MODULE 5</b> |                                                                                                                                                                                                                                                                                                                                                                                                          |   |         |                      |                    |                                                                                               |
| 11              | Introduction to kinematics and mechanisms - various mechanisms, kinematic diagrams, degree of freedom- Grashof's criterion, inversions, coupler curves mechanical advantage, transmission angle. straight line mechanisms exact, approximate. Displacement, velocity analysis- relative motion - relative velocity. Instantaneous centre -Kennedy's theorem.                                             | 3 | LECTURE | 05/05/23             | 20/6/23            | CO V                                                                                          |
| 12              | Acceleration analysis- Relative acceleration - Coriolis acceleration - graphical and analytical methods. Cams - classification of cam and followers - displacement diagrams, velocity and acceleration analysis of SHM, uniform velocity, uniform acceleration, cycloidal motion Graphical cam profile synthesis, pressure angle.                                                                        | 3 | LECTURE | 09/05/23             | 23/6/23            | CO V<br> |

MODE OF DELIVERY: LECTURE / TUTORIAL / ASSIGNMENT / PRACTICAL



8. Grading Methods

| Module | Series Test | Assignment | Class Test | Quiz | Tutorial |
|--------|-------------|------------|------------|------|----------|
| 1      |             |            | ✓          |      |          |
| 2      |             |            | ✓          |      |          |
| 3      |             |            | ✓          |      |          |
| 4      |             |            | ✓          |      |          |
| 5      |             |            | ✓          |      |          |

9. Gaps in the syllabus: NIL

10. Content Beyond Syllabus: NIL

11. Subject History

- ✓ Year Of Introduction of the subject – 2019
- ✓ Faculty Handled Just before this time – *Mr. Divyathej. M.V.*
- ✓ Pass Percentage during last three years – 60%
- ✓ Target Pass Percentage – 80%

12. Any other important matter to be brought into consideration:

Manual Prepared by:



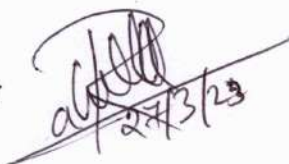
Mr. Rahul C G  
Assistant Professor  
Mechanical Engineering Department

Approved by:



Mr. Jacob Thomas  
Assistant Professor  
Mechanical Engineering Department

Dated signature of faculty member



Dated signature of Module Coordinator



Dated signature of HOD







**SREE NARAYANA GURU  
COLLEGE OF ENGINEERING  
KANNUR**

**CCW MOCK TEST 1**

1.

In a static fluid

- (a) resistance to shear stress is small
- (b) fluid pressure is zero
- (c) linear deformation is small
- (d) only normal stresses can exist
- (e) viscosity is nil.

2.

A fluid is said to be ideal, if it is

- (a) incompressible
- (b) inviscous
- (c) viscous and incompressible
- (d) inviscous and compressible
- (e) inviscous and incompressible.

3.

Density of water is maximum at

- (a) 0°C
- (b) 0°K
- (c) 4°C
- (d) 100°C
- (e) 20°C.

4.

Property of a fluid by which its own molecules are attracted is called

- (a) adhesion
- (b) cohesion
- (c) viscosity
- (d) compressibility
- (e) surface tension.

5.

Mercury does not wet glass. This is due to property of liquid known as

- (a) adhesion
- (b) cohesion
- (c) surface tension
- (d) viscosity
- (e) compressibility.

6.

The property of a fluid which enables it to resist tensile stress is known as

- (a) compressibility
- (b) surface tension
- (c) cohesion
- (d) adhesion
- (e) viscosity.

7.

When the flow parameters at any given instant remain same at every point, then flow is said

- (a) quasi static
- (b) steady state
- (c) laminar
- (d) uniform
- (e) static.

8.

The normal stress in a fluid will be constant in all directions at a point only if

- (a) it is incompressible
- (b) it has uniform viscosity
- (c) it has zero viscosity
- (d) it is frictionless
- (e) it is at rest.

9.

The tendency of a liquid surface to contract is due to the following property

- (a) cohesion
- (b) adhesion
- (c) viscosity
- (d) surface tension
- (e) elasticity.

10.

Viscosity of water in comparison to mercury is

- (a) higher
- (b) lower
- (c) same
- (d) higher/lower depending on temperature
- (e) unpredictable.

11.

The bulk modulus of elasticity

- (a) has the dimensions of 1/pressure
- (b) increases with pressure
- (c) is large when fluid is more compressible
- (d) is independent of pressure and viscosity
- (e) is directly proportional to flow.

12.

A balloon lifting in air follows the following principle

- (a) law of gravitation
- (b) Archimedes principle
- (c) principle of buoyancy
- (d) all of the above
- (e) continuity equation.

13.

The increase of temperature results in

- (a) increase in viscosity of gas
- (b) increase in viscosity of liquid
- (c) decrease in viscosity of gas
- (d) decrease in viscosity of liquid
- (e) (a) and (d) above.

14.

Units of surface tension are

- (a) energy/unit area
- (b) distance
- (c) both of the above
- (d) it has no units
- (e) none of the above.

15.

Choose the correct relationship

- (a) specific gravity = gravity  $\times$  density
- (b) dynamic viscosity = kinematic viscosity  $\times$  density
- (c) gravity = specific gravity  $\times$  density
- (d) kinematic viscosity = dynamic viscosity  $\times$  density
- (e) hydrostatic force = surface tension  $\times$  gravity.



16.

For manometer, a better liquid combination is one having

- (a) higher surface tension
- (b) lower surface tension
- (c) surface tension is no criterion
- (d) high density and viscosity
- (e) low density and viscosity.

17.

Dimensions of surface tension are

- (a)  $M^1L^0T^{-2}$
- (b)  $M^1L^0T^{-1}$
- (c)  $M^1L^1T^{-2}$
- (d)  $M^1L^2T^{-2}$
- (e)  $M^1L^0T^1$ .

18.

The units of viscosity are

- (a) metres<sup>2</sup> per sec
- (b) kg sec/metre<sup>2</sup>
- (c) Newton-sec per metre<sup>2</sup>
- (d) Newton-sec<sup>2</sup> per metre
- (e) None of the above.

19.

Kinematic viscosity is dependent upon

- (a) pressure
- (b) distance
- (c) level
- (d) flow
- (e) density.

20.

Units of surface tension are

- (a) energy/unit area
- (b) distance
- (c) both of the above
- (d) it has no units
- (e) none of the above.

21.

The property of fluid by virtue of which it offers resistance to shear is called

- (a) surface tension
- (b) adhesion
- (c) cohesion
- (d) viscosity
- (e) all of the above.

22.

Specific weight of sea water is more than that of pure water because it contains

- (a) dissolved air
- (b) dissolved salt
- (c) suspended matter
- (d) all of the above
- (e) heavy water.

23.

The point in the immersed body through which the resultant pressure of the liquid may be taken to act is known as

- (a) meta centre
- (b) centre of pressure
- (c) centre of buoyancy
- (d) centre of gravity
- (e) none of the above.

24.

The resultant upward pressure of a fluid on a floating body is equal to the weight of the fluid displaced by the body. This definition is according to

- (a) Buoyancy
- (b) Equilibrium of a floating body
- (c) Archimedes' principle
- (d) Bernoulli's theorem
- (e) Metacentric principle.

25.

The resultant upward pressure of the fluid on an immersed body is called

- (a) upthrust
- (b) buoyancy
- (c) centre of pressure
- (d) all the above are correct
- (e) none of above is correct.

26.

The centre of gravity of the volume of the liquid displaced by an immersed body is called

- (a) meta-centre
- (b) centre of pressure
- (c) centre of buoyancy
- (d) centre of gravity
- (e) none of the above.

27.

The angle of contact in case of a liquid depends upon

- (a) the nature of the liquid and the solid
- (b) the material which exists above the free surface of the liquid
- (c) both of the above
- (d) any one of the above
- (e) none of the above.

28.

Free surface of a liquid behaves like a sheet and tends to contract to smallest possible area due to the

- (a) force of adhesion
- (b) force of cohesion
- (c) force of friction
- (d) force of diffusion
- (e) none of the above.

29.

The angle of contact in case of a liquid depends upon

- (a) the nature of the liquid and the solid
- (b) the material which exists above the free surface of the liquid
- (c) both of the above
- (d) any one of the above
- (e) none of the above.

30.

The property by virtue of which a liquid opposes relative motion between its different layers is called

- (a) surface tension
- (b) co-efficient of viscosity
- (c) viscosity
- (d) osmosis
- (e) cohesion.

31.

The process of diffusion of one liquid into the other through a semi-permeable membrane is called

- (a) viscosity
- (b) osmosis
- (c) surface tension
- (d) cohesion
- (e) diffusivity.



32.

The units of dynamic or absolute viscosity are

- (a) metres<sup>2</sup> per sec
- (b) kg sec/metre
- (c) Newton-sec per metre<sup>2</sup>
- (d) Newton-sec<sup>2</sup> per metre
- (e) none of the above.

33.

The dimensions of coefficient of viscosity are

- (a)  $M^1L^{-1}T^{-1}$
- (b)  $M^{-1}L^{-1}T^{-1}$
- (c)  $M^1L^1T^{-1}$
- (d)  $M^{-1}L^1T^1$
- (e)  $M^1L^{-1}T^1$

34.

The rise or depression of liquid in a tube due to surface tension with increase in size of tube will

- (a) increase
- (b) remain unaffected
- (c) may increase or decrease depending on the characteristics of liquid
- (d) decrease
- (e) unpredictable.

35.

Liquids transmit pressure equally in all the directions. This is according to

- (a) Boyle's law
- (b) Archimedes principle
- (c) Pascal's law
- (d) Newton's formula
- (e) Chezy's equation.

36.

Capillary action is due to the

- (a) surface tension
- (b) cohesion of the liquid
- (c) adhesion of the liquid molecules and the molecules on the surface of a solid
- (d) all of the above
- (e) none of the above.

37.

The rise or fall of head 'h' in a capillary tube of diameter 'd' and liquid surface tension 'σ' and specific weight 'w' is equal to

- (a)  $\frac{4\sigma}{wd}$
- (b)  $\frac{4d\sigma}{w}$
- (c)  $\frac{4wd}{\sigma}$
- (d)  $\frac{4w\sigma}{d}$
- (e)  $\frac{4d}{w\sigma}$

38.

Newton's law of viscosity is a relationship between

- (a) shear stress and the rate of angular distortion
- (b) shear stress and viscosity
- (c) shear stress, velocity and viscosity
- (d) pressure, velocity and viscosity
- (e) shear stress, pressure and rate of angular distortion.

39.

The atmospheric pressure with rise in altitude decreases

- (a) linearly
- (b) first slowly and then steeply
- (c) first steeply and then gradually
- (d) unpredictable
- (e) none of the above.

40.

Mercury is often used in barometer because

- (a) it is the best liquid
- (b) the height of barometer will be less
- (c) its vapour pressure is so low that it may be neglected
- (d) both (b) and (c)
- (e) it moves easily.

41.

Barometer is used to measure

- (a) pressure in pipes, channels etc.
- (b) atmospheric pressure
- (c) very low pressure
- (d) difference of pressure between two points
- (e) rain level.

42.

Which of the following instrument can be used for measuring speed of an aeroplane ?

- (a) Venturimeter
- (b) Orifice plate
- (c) hot wire anemometer
- (d) rotameter
- (e) pitot tube.

43.

Piezometer is used to measure

- (a) pressure in pipe, channels etc.
- (b) atmospheric pressure
- (c) very low pressures
- (d) difference of pressure between two points
- (e) flow.

44.

Which of the following instruments is used to measure flow on the application of Bernoulli's theorem ?

- (a) Venturimeter
- (b) Orifice plate
- (c) nozzle
- (d) pitot tube
- (e) all of the above.

45.

The speed of sound in a ideal gas varies directly as its

- (a) pressure
- (b) temperature
- (c) density
- (d) modulus of elasticity
- (e) absolute temperature.



**SREE NARAYANA GURU COLLEGE OF ENGINEERING &**  
**TECHNOLOGY, KANNUR**

**CCW MOCK 1 ANSWER KEY**

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1D  | 2 E | 3C  | 4B  | 5C  | 6C  | 7D  | 8E  | 9D  | 10A | 11B | 12D |
| 13D | 14C | 15B | 16A | 17A | 18B | 19E | 20C | 21D | 22D | 23B | 24C |
| 25B | 26C | 27C | 28B | 29C | 30C | 31B | 32C | 33A | 34D | 35C | 36D |
| 37A | 38A | 39B | 40D | 41B | 42E | 43C | 44E | 45E |     |     |     |





**SREE NARAYANA GURU  
COLLEGE OF ENGINEERING  
KANNUR**

**CCW MOCK TEST 1**

1. In a static fluid  
(a) resistance to shear stress is small  
(b) fluid pressure is zero  
(c) linear deformation is small  
(d) only normal stresses can exist  
(e) viscosity is nil.
2. A fluid is said to be ideal, if it is  
(a) incompressible (b) inviscous  
(c) viscous and incompressible  
(d) inviscous and compressible  
(e) inviscous and incompressible.
3. Density of water is maximum at  
(a) 0°C (b) 0°K  
(c) 4°C (d) 100°C  
(e) 20°C.
4. Property of a fluid by which its own molecules are attracted is called  
(a) adhesion (b) cohesion  
(c) viscosity (d) compressibility  
(e) surface tension.
5. Mercury does not wet glass. This is due to property of liquid known as  
(a) adhesion (b) cohesion  
(c) surface tension (d) viscosity  
(e) compressibility.
6. The property of a fluid which enables it to resist tensile stress is known as  
(a) compressibility (b) surface tension  
(c) cohesion (d) adhesion  
(e) viscosity.
7. When the flow parameters at any given instant remain same at every point, then flow is said  
(a) quasi static (b) steady state  
(c) laminar (d) uniform  
(e) static.

8. The normal stress in a fluid will be constant in all directions at a point only if  
(a) it is incompressible  
(b) it has uniform viscosity  
(c) it has zero viscosity  
(d) it is frictionless  
(e) it is at rest.
9. The tendency of a liquid surface to contract is due to the following property  
(a) cohesion (b) adhesion  
(c) viscosity (d) surface tension  
(e) elasticity.
10. Viscosity of water in comparison to mercury is  
(a) higher (b) lower  
(c) same  
(d) higher/lower depending on temperature  
(e) unpredictable.
11. The bulk modulus of elasticity  
(a) has the dimensions of 1/pressure  
(b) increases with pressure  
(c) is large when fluid is more compressible  
(d) is independent of pressure and viscosity  
(e) is directly proportional to flow.
12. A balloon lifting in air follows the following principle  
(a) law of gravitation (b) Archimedes principle  
(c) principle of buoyancy (d) all of the above  
(e) continuity equation.
13. The increase of temperature results in  
(a) increase in viscosity of gas  
(b) increase in viscosity of liquid  
(c) decrease in viscosity of gas  
(d) decrease in viscosity of liquid  
(e) (a) and (d) above.
14. Units of surface tension are  
(a) energy/unit area (b) distance  
(c) both of the above (d) it has no units  
(e) none of the above. *Newton's per meter*
15. Choose the correct relationship  
(a) specific gravity = gravity  $\times$  density  
(b) dynamic viscosity = kinematic viscosity  $\times$  density  
(c) gravity = specific gravity  $\times$  density  
(d) kinematic viscosity = dynamic viscosity  $\times$  density  
(e) hydrostatic force = surface tension  $\times$  gravity.
- 16.



For manometer, a better liquid combination is one having

- (a) higher surface tension
- (b) lower surface tension
- (c) surface tension is no criterion
- (d) high density and viscosity
- (e) low density and viscosity.

17.

Dimensions of surface tension are

- (a)  $M^1L^0T^{-2}$
- (b)  $M^1L^0T^{-1}$
- (c)  $M^1L^1T^{-2}$
- (d)  $M^1L^2T^{-2}$
- (e)  $M^1L^0T^1$ .

18.

The units of viscosity are

- (a) metres<sup>2</sup> per sec
- (b) kg sec/metre<sup>2</sup>
- (c) Newton-sec per metre<sup>2</sup>
- (d) Newton-sec<sup>2</sup> per metre
- (e) None of the above.

19.

Kinematic viscosity is dependent upon

- (a) pressure
- (b) distance
- (c) level
- (d) flow
- (e) density.

20.

Units of surface tension are

- (a) energy/unit area
- (b) distance
- (c) both of the above
- (d) it has no units
- (e) none of the above.

21.

The property of fluid by virtue of which it offers resistance to shear is called

- (a) surface tension
- (b) adhesion
- (c) cohesion
- (d) viscosity
- (e) all of the above.

22.

Specific weight of sea water is more than that of pure water because it contains

- (a) dissolved air
- (b) dissolved salt
- (c) suspended matter
- (d) all of the above
- (e) heavy water.

23.

The point in the immersed body through which the resultant pressure of the liquid may be taken to act is known as

- (a) meta centre
- (b) centre of pressure
- (c) centre of buoyancy
- (d) centre of gravity
- (e) none of the above.

24.

The resultant upward pressure of a fluid on a floating body is equal to the weight of the fluid displaced by the body. This definition is according to

- (a) Buoyancy
- (b) Equilibrium of a floating body
- (c) Archimedes' principle
- (d) Bernoulli's theorem
- (e) Metacentric principle.

25.

The resultant upward pressure of the fluid on an immersed body is called

- (a) upthrust
- (b) buoyancy
- (c) centre of pressure
- (d) all the above are correct
- (e) none of above is correct.

26.

The centre of gravity of the volume of the liquid displaced by an immersed body is called

- (a) meta-centre
- (b) centre of pressure
- (c) centre of buoyancy
- (d) centre of gravity
- (e) none of the above.

27.

The angle of contact in case of a liquid depends upon

- (a) the nature of the liquid and the solid
- (b) the material which exists above the free surface of the liquid
- (c) both of the above
- (d) any one of the above
- (e) none of the above.

28.

Free surface of a liquid behaves like a sheet and tends to contract to smallest possible area due to the

- (a) force of adhesion
- (b) force of cohesion
- (c) force of friction
- (d) force of diffusion
- (e) none of the above.

29.

The angle of contact in case of a liquid depends upon

- (a) the nature of the liquid and the solid
- (b) the material which exists above the free surface of the liquid
- (c) both of the above
- (d) any one of the above
- (e) none of the above.

30.

The property by virtue of which a liquid opposes relative motion between its different layers is called

- (a) surface tension
- (b) co-efficient of viscosity
- (c) viscosity
- (d) osmosis
- (e) cohesion.

31.

The process of diffusion of one liquid into the other through a semi-permeable membrane is called

- (a) viscosity
- (b) osmosis
- (c) surface tension
- (d) cohesion
- (e) diffusivity.

32.



The units of dynamic or absolute viscosity are

- (a)  $\text{metres}^2 \text{ per sec}$  (b)  $\text{kg sec/metre}$
- (c)  $\text{Newton-sec per metre}^2$
- (d)  $\text{Newton-sec}^2 \text{ per metre}$
- (e) none of the above.

33.

The dimensions of coefficient of viscosity are

- (a)  $M^1 L^{-1} T^{-1}$  (b)  $M^{-1} L^{-1} T^{-1}$
- (c)  $M^1 L^1 T^{-1}$  (d)  $M^{-1} L^1 T^1$
- (e)  $M^1 L^{-1} T^1$ .

34.

The rise or depression of liquid in a tube due to surface tension with increase in size of tube will

- (a) increase
- (b) remain unaffected
- (c) may increase or decrease depending on the characteristics of liquid
- (d) decrease
- (e) unpredictable.

35.

Liquids transmit pressure equally in all the directions. This is according to

- (a) Boyle's law (b) Archimedes principle
- (c) Pascal's law (d) Newton's formula
- (e) Chezy's equation.

36.

Capillary action is due to the

- (a) surface tension (b) cohesion of the liquid
- (c) adhesion of the liquid molecules and the molecules on the surface of a solid
- (d) all of the above
- (e) none of the above.

37.

The rise or fall of head 'h' in a capillary tube of diameter 'd' and liquid surface tension ' $\sigma$ ' and specific weight 'w' is equal to

- (a)  $\frac{4\sigma}{wd}$  (b)  $\frac{4d\sigma}{w}$
- (c)  $\frac{4wd}{\sigma}$  (d)  $\frac{4w\sigma}{d}$
- (e)  $\frac{4d}{w\sigma}$ .

38.

Newton's law of viscosity is a relationship between

- (a) shear stress and the rate of angular distortion
- (b) shear stress and viscosity
- (c) shear stress, velocity and viscosity
- (d) pressure, velocity and viscosity
- (e) shear stress, pressure and rate of angular distortion.

39.

The atmospheric pressure with rise in altitude decreases

- (a) linearly
- (b) first slowly and then steeply
- (c) first steeply and then gradually
- (d) unpredictable
- (e) none of the above.

40.

Mercury is often used in barometer because

- (a) it is the best liquid
- (b) the height of barometer will be less
- (c) its vapour pressure is so low that it may be neglected
- (d) both (b) and (c) (e) it moves easily.

41.

Barometer is used to measure

- (a) pressure in pipes, channels etc.
- (b) atmospheric pressure
- (c) very low pressure
- (d) difference of pressure between two points
- (e) rain level.

42.

Which of the following instrument can be used for measuring speed of an aeroplane?

- (a) Venturimeter (b) Orifice plate
- (c) hot wire anemometer (d) rotameter
- (e) pitot tube.

43.

Piezometer is used to measure

- (a) pressure in pipe, channels etc.
- (b) atmospheric pressure
- (c) very low pressures
- (d) difference of pressure between two points
- (e) flow.

44.

Which of the following instruments is used to measure flow on the application of Bernoulli's theorem?

- (a) Venturimeter (b) Orifice plate
- (c) nozzle (d) pitot tube
- (e) all of the above.

45.

The speed of sound in a ideal gas varies directly as its

- (a) pressure (b) temperature
- (c) density (d) modulus of elasticity
- (e) absolute temperature.



15/45

ASHWIN JOHN

ROLL NO: 3

SNC20ME003



**SREE NARAYANA GURU  
COLLEGE OF ENGINEERING  
KANNUR**

**CCW MOCK TEST 1**

1.

In a static fluid

- (a) resistance to shear stress is small
- (b) fluid pressure is zero
- (c) linear deformation is small
- (d) only normal stresses can exist ✓
- (e) viscosity is nil.

2.

A fluid is said to be ideal, if it is

- (a) incompressible (b) inviscous
- (c) viscous and incompressible ✓
- (d) inviscous and compressible
- (e) inviscous and incompressible.

3.

Density of water is maximum at

- (a) 0°C (b) 0°K
- (c) 4°C ✓ (d) 100°C
- (e) 20°C.

4.

Property of a fluid by which its own molecules are attracted is called

- (a) adhesion ✗ (b) cohesion
- (c) viscosity (d) compressibility
- (e) surface tension. ✓

5.

Mercury does not wet glass. This is due to property of liquid known as

- (a) adhesion (b) cohesion ✓
- (c) surface tension (d) viscosity
- (e) compressibility.

6.

The property of a fluid which enables it to resist tensile stress is known as

- (a) compressibility (b) surface tension
- (c) cohesion (d) adhesion
- (e) viscosity. ✓

7.

When the flow parameters at any given instant remain same at every point, then flow is said

- (a) quasi static (b) steady state
- (c) laminar (d) uniform. ✓
- (e) static.

8.

The normal stress in a fluid will be constant in all directions at a point only if

- (a) it is incompressible
- (b) it has uniform viscosity
- (c) it has zero viscosity ✓
- (d) it is frictionless
- (e) it is at rest.

9.

The tendency of a liquid surface to contract is due to the following property

- (a) cohesion (b) adhesion
- (c) viscosity (d) surface tension ✓
- (e) elasticity.

10.

Viscosity of water in comparison to mercury is

- (a) higher ✓ (b) lower
- (c) same
- (d) higher/lower depending on temperature
- (e) unpredictable.

11.

The bulk modulus of elasticity

- (a) has the dimensions of 1/pressure
- (b) increases with pressure
- (c) is large when fluid is more compressible
- (d) is independent of pressure and viscosity ✓
- (e) is directly proportional to flow.

12.

A balloon lifting in air follows the following principle

- (a) law of gravitation (b) Archimedes principle
- (c) principle of buoyancy (d) all of the above ✓
- (e) continuity equation.

13.

The increase of temperature results in

- (a) increase in viscosity of gas
- (b) increase in viscosity of liquid
- (c) decrease in viscosity of gas
- (d) decrease in viscosity of liquid
- (e) (a) and (d) above. ✓

14.

Units of surface tension are

- (a) energy/unit area (b) distance
- (c) both of the above (d) it has no units ✓
- (e) none of the above.

15.

Choose the correct relationship

- (a) specific gravity = gravity × density
- (b) dynamic viscosity = kinematic viscosity × density
- (c) gravity = specific gravity × density ✓
- (d) kinematic viscosity = dynamic viscosity × density
- (e) hydrostatic force = surface tension × gravity.

16.



16.

For manometer, a better liquid combination is one having

- (a) higher surface tension
- (b) lower surface tension
- (c) surface tension is no criterion
- (d) high density and viscosity
- (e) low density and viscosity. ✓

17.

Dimensions of surface tension are

- (a)  $M^1L^0T^{-2}$
- (b)  $M^1L^0T^{-1}$  ✓
- (c)  $M^1L^1T^{-2}$
- (d)  $M^1L^2T^{-2}$
- (e)  $M^1L^0T^1$ .

18.

The units of viscosity are

- (a) metres<sup>2</sup> per sec
- (b) kg sec/metre<sup>2</sup>
- (c) Newton-sec per metre<sup>2</sup> ✓
- (d) Newton-sec<sup>2</sup> per metre
- (e) None of the above.

19.

Kinematic viscosity is dependent upon

- (a) pressure
- (b) distance ✓
- (c) level
- (d) flow
- (e) density.

20.

Units of surface tension are

- (a) energy/unit area
- (b) distance
- (c) both of the above
- (d) it has no units
- (e) none of the above. ✓

21.

The property of fluid by virtue of which it offers resistance to shear is called

- (a) surface tension ✓
- (b) adhesion
- (c) cohesion
- (d) viscosity
- (e) all of the above.

22.

Specific weight of sea water is more than that of pure water because it contains

- (a) dissolved air
- (b) dissolved salt
- (c) suspended matter
- (d) all of the above ✓
- (e) heavy water.

23.

The point in the immersed body through which the resultant pressure of the liquid may be taken to act is known as

- (a) meta centre ✓
- (b) centre of pressure
- (c) centre of buoyancy
- (d) centre of gravity
- (e) none of the above.

24.

The resultant upward pressure of a fluid on a floating body is equal to the weight of the fluid displaced by the body. This definition is according to

- (a) Buoyancy
- (b) Equilibrium of a floating body
- (c) Archimedes' principle
- (d) Bernoulli's theorem
- (e) Metacentric principle. ✓

25.

The resultant upward pressure of the fluid on an immersed body is called

- (a) upthrust
- (b) buoyancy
- (c) centre of pressure
- (d) all the above are correct
- (e) none of above is correct. ✓

26.

The centre of gravity of the volume of the liquid displaced by an immersed body is called

- (a) meta-centre ✓
- (b) centre of pressure
- (c) centre of buoyancy
- (d) centre of gravity
- (e) none of the above.

27.

The angle of contact in case of a liquid depends upon

- (a) the nature of the liquid and the solid
- (b) the material which exists above the free surface of the liquid ✓
- (c) both of the above
- (d) any one of the above
- (e) none of the above.

28.

Free surface of a liquid behaves like a sheet and tends to contract to smallest possible area due to the

- (a) force of adhesion
- (b) force of cohesion ✓
- (c) force of friction
- (d) force of diffusion
- (e) none of the above.

29.

The angle of contact in case of a liquid depends upon

- (a) the nature of the liquid and the solid
- (b) the material which exists above the free surface of the liquid
- (c) both of the above ✓
- (d) any one of the above
- (e) none of the above.

30.

The property by virtue of which a liquid opposes relative motion between its different layers is called

- (a) surface tension
- (b) co-efficient of viscosity
- (c) viscosity
- (d) osmosis ✓
- (e) cohesion.

31.

The process of diffusion of one liquid into the other through a semi-permeable membrane is called

- (a) viscosity
- (b) osmosis ✓
- (c) surface tension
- (d) cohesion
- (e) diffusivity.



The units of dynamic or absolute viscosity are

- (a) metres<sup>2</sup> per sec
- (b) kg sec/metre ✓
- (c) Newton-sec per metre<sup>2</sup>
- (d) Newton-sec<sup>2</sup> per metre
- (e) none of the above.

33.

The dimensions of coefficient of viscosity are

- (a)  $M^1L^{-1}T^{-1}$  ✓
- (b)  $M^{-1}L^{-1}T^{-1}$
- (c)  $M^1L^1T^{-1}$
- (d)  $M^{-1}L^1T^1$
- (e)  $M^1L^{-1}T^1$ .

34.

The rise or depression of liquid in a tube due to surface tension with increase in size of tube will

- (a) increase
- (b) remain unaffected
- (c) may increase or decrease depending on the characteristics of liquid ✓
- (d) decrease
- (e) unpredictable.

35.

Liquids transmit pressure equally in all the directions. This is according to

- (a) Boyle's law
- (b) Archimedes principle
- (c) Pascal's law
- (d) Newton's formula
- (e) Chezy's equation. ✓

36.

Capillary action is due to the

- (a) surface tension
- (b) cohesion of the liquid
- (c) adhesion of the liquid molecules and the molecules on the surface of a solid
- (d) all of the above ✓
- (e) none of the above.

37.

The rise or fall of head 'h' in a capillary tube of diameter 'd' and liquid surface tension 'σ' and specific weight 'w' is equal to

- (a)  $\frac{4\sigma}{wd}$
- (b)  $\frac{4d\sigma}{w}$
- (c)  $\frac{4wd}{\sigma}$
- (d)  $\frac{4w\sigma}{d}$
- (e)  $\frac{4d}{w\sigma}$ . ✓

38.

Newton's law of viscosity is a relationship between

- (a) shear stress and the rate of angular distortion
- (b) shear stress and viscosity
- (c) shear stress, velocity and viscosity
- (d) pressure, velocity and viscosity ✓
- (e) shear stress, pressure and rate of angular distortion.

39.

The atmospheric pressure with rise in altitude decreases

- (a) linearly
- (b) first slowly and then steeply ✓
- (c) first steeply and then gradually
- (d) unpredictable
- (e) none of the above.

40.

Mercury is often used in barometer because

- (a) it is the best liquid
- (b) the height of barometer will be less
- (c) its vapour pressure is so low that it may be neglected
- (d) both (b) and (c) ✓
- (e) it moves easily.

41.

Barometer is used to measure

- (a) pressure in pipes, channels etc.
- (b) atmospheric pressure ✓
- (c) very low pressure
- (d) difference of pressure between two points
- (e) rain level.

42.

Which of the following instrument can be used for measuring speed of an aeroplane ?

- (a) Venturimeter
- (b) Orifice plate
- (c) hot wire anemometer
- (d) rotameter ✓
- (e) pitot tube.

43.

Piezometer is used to measure

- (a) pressure in pipe, channels etc. ✓
- (b) atmospheric pressure
- (c) very low pressures
- (d) difference of pressure between two points
- (e) flow.

44.

Which of the following instruments is used to measure flow on the application of Bernoulli's theorem ?

- (a) Venturimeter
- (b) Orifice plate
- (c) nozzle
- (d) pitot tube
- (e) all of the above. ✓

45.

The speed of sound in a ideal gas varies directly as its

- (a) pressure ✓
- (b) temperature
- (c) density
- (d) modulus of elasticity
- (e) absolute temperature.





**SREE NARAYANA GURU  
COLLEGE OF ENGINEERING  
KANNUR**

**CCW MOCK TEST 1**

1.

In a static fluid

- (a) resistance to shear stress is small
- (b) fluid pressure is zero
- (c) linear deformation is small
- (d) only normal stresses can exist
- (e) viscosity is nil.

2.

A fluid is said to be ideal, if it is

- (a) incompressible
- (b) inviscous
- (c) viscous and incompressible
- (d) inviscous and compressible
- (e) inviscous and incompressible.

3.

Density of water is maximum at

- (a) 0°C
- (b) 0°K
- (c) 4°C
- (d) 100°C
- (e) 20°C.

4.

Property of a fluid by which its own molecules are attracted is called

- (a) adhesion
- (b) cohesion
- (c) viscosity
- (d) compressibility
- (e) surface tension.

5.

Mercury does not wet glass. This is due to property of liquid known as

- (a) adhesion
- (b) cohesion
- (c) surface tension
- (d) viscosity
- (e) compressibility.

6.

The property of a fluid which enables it to resist tensile stress is known as

- (a) compressibility
- (b) surface tension
- (c) cohesion
- (d) adhesion
- (e) viscosity.

7.

When the flow parameters at any given instant remain same at every point, then flow is said

- (a) quasi static
- (b) steady state
- (c) laminar
- (d) uniform
- (e) static.

8.

The normal stress in a fluid will be constant in all directions at a point only if

- (a) it is incompressible
- (b) it has uniform viscosity
- (c) it has zero viscosity
- (d) it is frictionless
- (e) it is at rest.

9.

The tendency of a liquid surface to contract is due to the following property

- (a) cohesion
- (b) adhesion
- (c) viscosity
- (d) surface tension
- (e) elasticity.

10.

Viscosity of water in comparison to mercury is

- (a) higher
- (b) lower
- (c) same
- (d) higher/lower depending on temperature
- (e) unpredictable.

11.

The bulk modulus of elasticity

- (a) has the dimensions of 1/pressure
- (b) increases with pressure
- (c) is large when fluid is more compressible
- (d) is independent of pressure and viscosity
- (e) is directly proportional to flow.

12.

A balloon lifting in air follows the following principle

- (a) law of gravitation
- (b) Archimedes principle
- (c) principle of buoyancy
- (d) all of the above
- (e) continuity equation.

13.

The increase of temperature results in

- (a) increase in viscosity of gas
- (b) increase in viscosity of liquid
- (c) decrease in viscosity of gas
- (d) decrease in viscosity of liquid
- (e) (a) and (d) above.

14.

Units of surface tension are

- (a) energy/unit area
- (b) distance
- (c) both of the above
- (d) it has no units
- (e) none of the above.

15.

Choose the correct relationship

- (a) specific gravity = gravity  $\times$  density
- (b) dynamic viscosity = kinematic viscosity  $\times$  density
- (c) gravity = specific gravity  $\times$  density
- (d) kinematic viscosity = dynamic viscosity  $\times$  density
- (e) hydrostatic force = surface tension  $\times$  gravity.

16.



16.

For manometer, a better liquid combination is one having

- (a) higher surface tension
- (b) lower surface tension
- (c) surface tension is no criterion
- (d) high density and viscosity
- (e) low density and viscosity.

17.

Dimensions of surface tension are

- (a)  $M^1L^0T^{-2}$
- (b)  $M^1L^0T^{-1}$
- (c)  $M^1L^1T^{-2}$
- (d)  $M^1L^2T^{-2}$
- (e)  $M^1L^0T^1$ .

18.

The units of viscosity are

- (a) metres<sup>2</sup> per sec
- (b) kg sec/metre<sup>2</sup>
- (c) Newton-sec per metre<sup>2</sup>
- (d) Newton-sec<sup>2</sup> per metre
- (e) None of the above.

19.

Kinematic viscosity is dependent upon

- (a) pressure
- (b) distance
- (c) level
- (d) flow
- (e) density.

20.

Units of surface tension are

- (a) energy/unit area
- (b) distance
- (c) both of the above
- (d) it has no units
- (e) none of the above.

21.

The property of fluid by virtue of which it offers resistance to shear is called

- (a) surface tension
- (b) adhesion
- (c) cohesion
- (d) viscosity
- (e) all of the above.

22.

Specific weight of sea water is more than that of pure water because it contains

- (a) dissolved air
- (b) dissolved salt
- (c) suspended matter
- (d) all of the above
- (e) heavy water.

23.

The point in the immersed body through which the resultant pressure of the liquid may be taken to act is known as

- (a) meta centre
- (b) centre of pressure
- (c) centre of buoyancy
- (d) centre of gravity
- (e) none of the above.

24.

The resultant upward pressure of a fluid on a floating body is equal to the weight of the fluid displaced by the body. This definition is according to

- (a) Buoyancy
- (b) Equilibrium of a floating body
- (c) Archimedes' principle
- (d) Bernoulli's theorem
- (e) Metacentric principle.

25.

The resultant upward pressure of the fluid on an immersed body is called

- (a) upthrust
- (b) buoyancy
- (c) centre of pressure
- (d) all the above are correct
- (e) none of above is correct.

26.

The centre of gravity of the volume of the liquid displaced by an immersed body is called

- (a) meta-centre
- (b) centre of pressure
- (c) centre of buoyancy
- (d) centre of gravity
- (e) none of the above.

27.

The angle of contact in case of a liquid depends upon

- (a) the nature of the liquid and the solid
- (b) the material which exists above the free surface of the liquid
- (c) both of the above
- (d) any one of the above
- (e) none of the above.

28.

Free surface of a liquid behaves like a sheet and tends to contract to smallest possible area due to the

- (a) force of adhesion
- (b) force of cohesion
- (c) force of friction
- (d) force of diffusion
- (e) none of the above.

29.

The angle of contact in case of a liquid depends upon

- (a) the nature of the liquid and the solid
- (b) the material which exists above the free surface of the liquid
- (c) both of the above
- (d) any one of the above
- (e) none of the above.

30.

The property by virtue of which a liquid opposes relative motion between its different layers is called

- (a) surface tension
- (b) co-efficient of viscosity
- (c) viscosity
- (d) osmosis
- (e) cohesion.

31.

The process of diffusion of one liquid into the other through a semi-permeable membrane is called

- (a) viscosity
- (b) osmosis
- (c) surface tension
- (d) cohesion
- (e) diffusivity.



The units of dynamic or absolute viscosity are

- (a) metres<sup>2</sup> per sec
- (b) kg sec/metre
- (c) Newton-sec per metre<sup>2</sup>
- (d) Newton-sec<sup>2</sup> per metre
- (e) none of the above.

33.

The dimensions of coefficient of viscosity are

- (a)  $M^1L^{-1}T^{-1}$
- (b)  $M^{-1}L^{-1}T^{-1}$
- (c)  $M^1L^1T^{-1}$
- (d)  $M^{-1}L^1T^1$
- (e)  $M^1L^{-1}T^1$

34.

The rise or depression of liquid in a tube due to surface tension with increase in size of tube will

- (a) increase
- (b) remain unaffected
- (c) may increase or decrease depending on the characteristics of liquid
- (d) decrease
- (e) unpredictable.

35.

Liquids transmit pressure equally in all the directions. This is according to

- (a) Boyle's law
- (b) Archimedes principle
- (c) Pascal's law
- (d) Newton's formula
- (e) Chezy's equation.

36.

Capillary action is due to the

- (a) surface tension
- (b) cohesion of the liquid
- (c) adhesion of the liquid molecules and the molecules on the surface of a solid
- (d) all of the above
- (e) none of the above.

37.

The rise or fall of head 'h' in a capillary tube of diameter 'd' and liquid surface tension 'σ' and specific weight 'w' is equal to

- (a)  $\frac{4\sigma}{wd}$
- (b)  $\frac{4d\sigma}{w}$
- (c)  $\frac{4wd}{\sigma}$
- (d)  $\frac{4w\sigma}{d}$
- (e)  $\frac{4d}{w\sigma}$

38.

Newton's law of viscosity is a relationship between

- (a) shear stress and the rate of angular distortion
- (b) shear stress and viscosity
- (c) shear stress, velocity and viscosity
- (d) pressure, velocity and viscosity
- (e) shear stress, pressure and rate of angular distortion.

39.

The atmospheric pressure with rise in altitude decreases

- (a) linearly
- (b) first slowly and then steeply
- (c) first steeply and then gradually
- (d) unpredictable
- (e) none of the above.

40.

Mercury is often used in barometer because

- (a) it is the best liquid
- (b) the height of barometer will be less
- (c) its vapour pressure is so low that it may be neglected
- (d) both (b) and (c)
- (e) it moves easily.

41.

Barometer is used to measure

- (a) pressure in pipes, channels etc.
- (b) atmospheric pressure
- (c) very low pressure
- (d) difference of pressure between two points
- (e) rain level.

42.

Which of the following instrument can be used for measuring speed of an aeroplane?

- (a) Venturimeter
- (b) Orifice plate
- (c) hot wire anemometer
- (d) rotameter
- (e) pitot tube.

43.

Piezometer is used to measure

- (a) pressure in pipe, channels etc.
- (b) atmospheric pressure
- (c) very low pressures
- (d) difference of pressure between two points
- (e) flow.

44.

Which of the following instruments is used to measure flow on the application of Bernoulli's theorem?

- (a) Venturimeter
- (b) Orifice plate
- (c) nozzle
- (d) pitot tube
- (e) all of the above.

45.

The speed of sound in a ideal gas varies directly as its

- (a) pressure
- (b) temperature
- (c) density
- (d) modulus of elasticity
- (e) absolute temperature.





**SREE NARAYANA GURU**

**COLLEGE OF  
ENGINEERING**

**CCW MOCK TEST 2**

1.

Malleability of a material can be defined as  
(a) ability to undergo large permanent deformations in compression  
(b) ability to recover its original form  
(c) ability to undergo large permanent deformations in tension  
(d) all of the above (e) none of the above

2.

Mild steel belongs to the following category  
(a) low carbon steel (b) medium carbon steel  
(c) high carbon steel (d) alloy steel  
(e) special steel

3.

The number of electrons in  $1 \text{ cm}^3$  of metal would be of the order of  
(a)  $10^{10}$  (b)  $10^{16}$   
(c)  $10^{22}$  (d)  $10^{40}$   
(e)  $10^{32}$

4.

Points of arrest for iron correspond to  
(a) stages at which allotropic forms change  
(b) stages at which further heating does not increase temperature for some time  
(c) stages at which properties do not change with increase in temperature  
(d) there is nothing like points of arrest  
(e) none of the above

5.

A material is known as allotropic or polymorphic if it  
(a) has a fixed structure under all conditions  
(b) exists in several crystal forms at different temperatures  
(c) responds to heat treatment  
(d) has its atoms distributed in a random pattern  
(e) none of the above

6.

Superconduction by metals is observed in the temperature range of

- (a) below  $10^\circ\text{K}$  (b) above  $100^\circ\text{K}$   
(c) around  $0^\circ\text{C}$  (d) around  $100^\circ\text{C}$   
(e) above  $1000^\circ\text{C}$

7.

Gamma iron exists at following temperature  
(a) room temperature (b) near melting point  
(c) between  $1400^\circ\text{C}$  and  $1539^\circ\text{C}$   
(d) between  $910^\circ\text{C}$  and  $1400^\circ\text{C}$   
(e) none of the above

8.

Cast iron is characterised by minimum of following %age of carbon  
(a) 0.2% (b) 0.8%  
(c) 1.3% (d) 2%  
(e) 6.3%

9.

Pick up wrong statement about wrought iron  
(a) It contains carbon of the order of 0 to 0.25%  
(b) It melts at  $1535^\circ\text{C}$   
(c) It is very soft and ductile  
(d) It can be easily forge welded  
(e) It is made by adding suitable percentage of carbon to molten iron and subjecting the product to repeated hammering and rolling

10.

An important property of malleable cast iron in comparison to grey cast iron is the high  
(a) compressive strength  
(b) ductility (c) carbon content  
(d) hardness (e) surface finish

11.

Annealing of white cast iron results in production of  
(a) malleable iron (b) nodular iron  
(c) spheroidal iron (d) grey iron  
(e) none of the above



12.

Hardness of steel depends on  
 (a) amount of carbon it contains  
 (b) the shape and distribution of the carbides in iron  
 (c) method of fabrication  
 (d) contents of alloying elements  
 (e) the quality of ore from which it is made.

13.

Maximum percentage of carbon in ferrite is  
 (a) 0.025% (b) 0.06%  
 (c) 0.1% (d) 0.25%  
 (e) 0.8%.

14.

The most effective inhibitor of grain growth, when added in small quantities is  
 (a) carbon (b) vanadium  
 (c) manganese (d) cobalt  
 (e) copper.

15.

Machining properties of steel are improved by adding  
 (a) sulphur, lead, phosphorous  
 (b) silicon, aluminium, titanium  
 (c) vanadium, aluminium  
 (d) chromium, nickel (e) lubricants.

16.

Inconel is an alloy of  
 (a) nickel, chromium and iron  
 (b) nickel, copper (c) nickel, chromium  
 (d) nickel, zinc (e) nickel, lead.

17.

The loss of strength in compression with simultaneous gain in strength in tension due to overloading is known as  
 (a) hysteresis (b) creep  
 (c) visco elasticity (d) Boeschinger effect  
 (e) inelasticity.

18.

The surface hardness of the following order is achieved by nitriding operation  
 (a) 600 VPN (b) 1500 VPN  
 (c) 1000 to 1100 VPN (d) 250 VPN  
 (e) 2000 VPN.

19.

Hardness of martensite is about  
 (a) RC 65 (b) RC 48  
 (c) RC 57 (d) RC 80  
 (e) RC 32.

20.

Hardness of lower bainite (tempered martensite) is about  
 (a) RC 65 (b) RC 48  
 (c) RC 57 (d) RC 80  
 (e) RC 32.

21.

Which is false statement about normalising ?  
 Normalising is done to  
 (a) refine grain structure  
 (b) reduce segregation in casting  
 (c) improve mechanical properties  
 (d) induce stresses  
 (e) relieve internal stresses.

22.

Vanadium in high speed steels  
 (a) promotes decarburisation  
 (b) provides high hot hardness  
 (c) forms very hard carbides and thus increases wear resistance  
 (d) promotes retention of austenite  
 (e) increases toughness.

23.

Amorphous material is one  
 (a) in which atoms align themselves in a geometric pattern upon solidification  
 (b) in which there is no definite atomic structure and atoms exist in a random pattern just as in a liquid  
 (c) which is not attacked by phosphorous  
 (d) which emits fumes on melting  
 (e) none of the above.

24.

Tungsten in steel  
 (a) improves wear resistance, cutting ability and toughness  
 (b) refines grain size and produces less tendency to carburisation, improves corrosion and heat resistant properties  
 (c) improves cutting ability and reduces hardenability  
 (d) gives ductility, toughness, tensile strength and anticorrosion properties  
 (e) raises its melting point.



25.

The hardness of steel increases if it contains  
 (a) austenite (b) martensite  
 (c) pearlite (d) cementite  
 (e) all of the above.

26.

Which of the following laws is applicable for the behaviour of a perfect gas?  
 (a) Boyle's law (b) Charles' law  
 (c) Gay-Lussac law (d) all of the above  
 (e) Joule's law.

27.

According to Charles' law for a perfect gas  
 (a)  $\frac{T_2}{T_1} = \frac{P_2}{P_1}$ , if  $V$  is kept constant  
 (b)  $\frac{T_2}{T_1} = \frac{V_2}{V_1}$ , if  $P$  is kept constant  
 (c) both (a) and (b) above  
 (d)  $\frac{P_2}{P_1} = \frac{V_1}{V_2}$ , if  $T$  is kept constant

28.

According to Gay-Lussac law for a perfect gas, the absolute pressure of given mass varies directly as  
 (a) temperature (b) absolute  
 (c) absolute temperature, if volume is kept constant  
 (d) volume, if temperature is kept constant  
 (e) remains constant, if volume and temperature are kept constant.

29.

General gas equation is  
 (a)  $PV = nRT$  (b)  $PV = mRT$   
 (c)  $PV = \frac{1}{3}nRT$  (d)  $PV^n = C$   
 (e)  $C_p - C_v = R/J$ .

30.

No liquid can exist as liquid at  
 (a)  $-273^\circ\text{K}$  (b) vacuum  
 (c) zero pressure (d) centre of earth  
 (e) in space.

31.

The ratio of two specific heats of air is equal to  
 (a) 0.17 (b) 0.24  
 (c) 0.1 (d) 1.41  
 (e) 2.71.

32.

Which law states that the specific heat of a gas remains constant at all temperatures and pressures?  
 (a) Charles' law (b) Joule's law  
 (c) Regnault's law (d) Boyle's law  
 (e) there is no such law.

33.

Which law states that the specific heat of a gas remains constant at all temperatures and pressures?  
 (a) Charles' law (b) Joule's law  
 (c) Regnault's law (d) Boyle's law  
 (e) there is no such law.

34.

43. Extensive property of a system is one whose value  
 (a) depends on the mass of the system, like volume  
 (b) does not depend on the mass of the system, like temperature, pressure, etc.  
 (c) is not dependent on the path followed but on the state  
 (d) is dependent on the path followed and not on the state  
 (e) is always constant.

35.

Work done in a free expansion process is  
 (a) +ve (b) -ve  
 (c) zero (d) maximum  
 (e) minimum.

36.

To convert volumetric analysis to gravimetric analysis, the relative volume of each constituent of the flue gases is  
 (a) divided by its molecular weight  
 (b) multiplied by its molecular weight  
 (c) multiplied by its density  
 (d) multiplied by its specific weight  
 (e) divided by its specific weight.



37.

Zeroth law of thermodynamics

- (a) deals with conversion of mass and energy
- (b) deals with reversibility and irreversibility of process
- (c) states that if two systems are both in equilibrium with a third system, they are in thermal equilibrium with each other
- (d) deals with heat engines
- (e) does not exist.

38.

The basis for measuring thermodynamic property of temperature is given by

- (a) zeroth law of thermodynamics
- (b) first law of thermodynamics
- (c) second law of thermodynamics
- (d) third law of thermodynamics
- (e) Avogadro's hypothesis.

39.

The more effective way of increasing efficiency of Carnot engine is to

- (a) increase higher temperature
- (b) decrease higher temperature
- (c) increase lower temperature
- (d) decrease lower temperature
- (e) keep lower temperature constant.

40.

For reversible adiabatic process, change in entropy is

- (a) maximum
- (b) minimum
- (c) zero
- (d) unpredictable
- (e) negative.

41.

The work done in the expansion of a gas from volume  $V_1$  to  $V_2$  under constant pressure  $p$  is equal to

- (a) zero
- (b)  $p(V_2 - V_1)$
- (c)  $p(V_2 + V_1)$
- (d)  $p(V_2 - V_1)$
- (e)  $p(V_1 - V_2)/2$ .

42.

An expansion process as per law  $pV = \text{constant}$  is known as

- (a) parabolic expansion
- (b) hyperbolic expansion
- (c) isentropic expansion
- (d) adiabatic expansion
- (e) free expansion.

43.

Under ideal conditions, isothermal, isobaric, isochoric and adiabatic processes are

- (a) static processes
- (b) dynamic processes
- (c) quasi-static processes

44.

First law of thermodynamics

- (a) enables to determine change in internal energy to the system
- (b) does not help to predict whether the system will or not undergo a change
- (c) does not enable to determine change in entropy
- (d) provides relationship between heat, work and internal energy
- (e) all of the above.

45.

The temperature in a process in which work is done by expanding a gas under adiabatic condition will

- (a) increase
- (b) decrease
- (c) remain unchanged
- (d) decrease/increase depending on properties of gas
- (e) first increase and then decrease.

46.

In a polytropic process, heat rejected is given by

- (a)  $\frac{\gamma}{\gamma - 1} \times \text{Work done on the system}$
- (b)  $\frac{\gamma - n}{\gamma - 1} \times \text{Work done on the system}$
- (c)  $\frac{\gamma - n}{\gamma} \times \text{Work done on the system}$
- (d)  $\frac{\gamma - n}{n} \times \text{Work done on the system}$
- (e) work done on the systems.

47.

Heat transfer during polytropic process is given by

- (a)  $\frac{n - \gamma}{1 - \gamma} C_v (T_2 - T_1)$
- (b)  $\frac{\gamma - n}{\gamma - 1} C_v (T_2 - T_1)$
- (c)  $\frac{\gamma - n}{1 - \gamma} C_v (T_2 - T_1)$
- (d)  $\frac{\gamma}{\gamma - 1} C_v (T_2 - T_1)$
- (e)  $\frac{\gamma - 1}{\gamma} C_v (T_2 - T_1)$ .



## **SREE NARAYANA GURU COLLEGE OF ENGINEERING**

### **CCW MOCK 2 ANSWER KEY**

1A 2A 3C 4A 5B 6A 7D 8D 9B 10B 11A 12B 13A 14B 15A 16A  
17D 18C 19A 20C 21D 22C 23B 24B 25B 26D 27B 28C 29B 30C  
31D 32C 33C 34A 35C 36B 37C 38A 39D 40C 41B 42B 43C 44C  
45B 46B 47B



37

ASHWIN JOHN

SG ME

SNC20MG003



**SREE NARAYANA GURU**

**COLLEGE OF  
ENGINEERING**

**CCW MOCK TEST 2**

1.

Malleability of a material can be defined as  
✓(a) ability to undergo large permanent deformations in compression  
(b) ability to recover its original form  
(c) ability to undergo large permanent deformations in tension  
(d) all of the above (e) none of the above

2.

Mild steel belongs to the following category  
✓(a) low carbon steel (b) medium carbon steel  
(c) high carbon steel (d) alloy steel  
(e) special steel

3.

The number of electrons in  $1 \text{ cm}^3$  of metal would be of the order of  
(a)  $10^{10}$  ✓(b)  $10^{16}$   
(c)  $10^{22}$  (d)  $10^{40}$   
(e)  $10^{52}$

4.

Points of arrest for iron correspond to  
✓(a) stages at which allotropic forms change  
(b) stages at which further heating does not increase temperature for some time  
(c) stages at which properties do not change with increase in temperature  
(d) there is nothing like points of arrest  
(e) none of the above.

5.

A material is known as allotropic or polymorphic if it  
(a) has a fixed structure under all conditions  
✓(b) exists in several crystal forms at different temperatures  
(c) responds to heat treatment  
(d) has its atoms distributed in a random pattern  
(e) none of the above.

6.

Superconduction by metals is observed in the temperature range of

- ✓(a) below  $10^\circ\text{K}$  (b) above  $100^\circ\text{K}$   
(c) around  $0^\circ\text{C}$  (d) around  $100^\circ\text{C}$   
(e) above  $1000^\circ\text{C}$ .

7.

Gamma iron exists at following temperature

- (a) room temperature (b) near melting point  
(c) between  $1400^\circ\text{C}$  and  $1539^\circ\text{C}$   
✓(d) between  $910^\circ\text{C}$  and  $1400^\circ\text{C}$   
(e) none of the above.

8.

Cast iron is characterised by minimum of following %age of carbon

- (a) 0.2% (b) 0.8%  
(c) 1.3% ✓(d) 2%  
(e) 6.3%.

9.

Pick up wrong statement about wrought iron

- (a) It contains carbon of the order of 0 to 0.25%  
(b) It melts at  $1535^\circ\text{C}$   
(c) It is very soft and ductile  
(d) It can be easily forge welded  
✓(e) It is made by adding suitable percentage of carbon to molten iron and subjecting the product to repeated hammering and rolling.

10.

An important property of malleable cast iron in comparison to grey cast iron is the high

- (a) compressive strength  
✓(b) ductility (c) carbon content  
(d) hardness (e) surface finish.

11.

Annealing of white cast iron results in production of

- ✓(a) malleable iron (b) nodular iron  
(c) spheroidal iron (d) grey iron  
(e) none of the above.



12.

Hardness of steel depends on

- (a) amount of carbon it contains
- (b) the shape and distribution of the carbides in iron
- (c) method of fabrication
- (d) contents of alloying elements
- (e) the quality of ore from which it is made.

13.

Maximum percentage of carbon in ferrite is

- (a) 0.025%
- (b) 0.06%
- (c) 0.1%
- (d) 0.25%
- (e) 0.8%

14.

The most effective inhibitor of grain growth, when added in small quantities is

- (a) carbon
- (b) vanadium
- (c) manganese
- (d) cobalt
- (e) copper.

15.

Machining properties of steel are improved by adding

- (a) sulphur, lead, phosphorous
- (b) silicon, aluminium, titanium
- (c) vanadium, aluminium
- (d) chromium, nickel
- (e) lubricants.

16.

Inconel is an alloy of

- (a) nickel, chromium and iron
- (b) nickel, copper
- (c) nickel, chromium
- (d) nickel, zinc
- (e) nickel, lead.

17.

The loss of strength in compression with simultaneous gain in strength in tension due to overloading is known as

- (a) hysteresis
- (b) creep
- (c) visco elasticity
- (d) Boeschinger effect
- (e) inelasticity.

18.

The surface hardness of the following order is achieved by nitriding operation

- (a) 600 VPN
- (b) 1500 VPN
- (c) 1000 to 1100 VPN
- (d) 250 VPN
- (e) 2000 VPN.

19.

Hardness of martensite is about

- (a) RC 65
- (b) RC 48
- (c) RC 57
- (d) RC 80
- (e) RC 32.

20.

Hardness of lower bainite (tempered martensite) is about

- (a) RC 65
- (b) RC 48
- (c) RC 57
- (d) RC 80
- (e) RC 32.

21.

Which is false statement about normalising ?

Normalising is done to

- (a) refine grain structure
- (b) reduce segregation in casting
- (c) improve mechanical properties
- (d) induce stresses
- (e) relieve internal stresses.

22.

Vanadium in high speed steels

- (a) promotes decarburisation
- (b) provides high hot hardness
- (c) forms very hard carbides and thus increases wear resistance
- (d) promotes retention of austenite
- (e) increases toughness.

23.

Amorphous material is one

- (a) in which atoms align themselves in a geometric pattern upon solidification
- (b) in which there is no definite atomic structure and atoms exist in a random pattern just as in a liquid
- (c) which is not attacked by phosphorous
- (d) which emits fumes on melting
- (e) none of the above.

24.

Tungsten in steel

- (a) improves wear resistance, cutting ability and toughness
- (b) refines grain size and produces less tendency to carburisation, improves corrosion and heat resistant properties
- (c) improves cutting ability and reduces hardenability
- (d) gives ductility, toughness, tensile strength and anticorrosion properties
- (e) raises its melting point.



25.

The hardness of steel increases if it contains  
 (a) austenite (b) martensite  
 (c) pearlite (d) cementite  
 (e) all of the above.

31.

The ratio of two specific heats of air is equal to  
 (a) 0.17 (b) 0.24  
 (c) 0.1 (d) 1.41  
 (e) 2.71

26.

Which of the following laws is applicable for the behaviour of a perfect gas?  
 (a) Boyle's law (b) Charles' law  
 (c) Gay-Lussac law (d) all of the above  
 (e) Joule's law.

32.

Which law states that the specific heat of a gas remains constant at all temperatures and pressures?  
 (a) Charles' law (b) Joule's law  
 (c) Regnault's law (d) Boyle's law  
 (e) there is no such law.

27.

According to Charles' law for a perfect gas  
 (a)  $\frac{T_2}{T_1} = \frac{P_2}{P_1}$ , if  $V$  is kept constant  
 (b)  $\frac{T_2}{T_1} = \frac{V_2}{V_1}$ , if  $P$  is kept constant  
 (c) both (a) and (b) above  
 (d)  $\frac{P_2}{P_1} = \frac{V_1}{V_2}$ , if  $T$  is kept constant

33.

Which law states that the specific heat of a gas remains constant at all temperatures and pressures?  
 (a) Charles' law (b) Joule's law  
 (c) Regnault's law (d) Boyle's law  
 (e) there is no such law.

28.

According to Gay-Lussac law for a perfect gas, the absolute pressure of given mass varies directly as  
 (a) temperature (b) absolute  
 (c) absolute temperature, if volume is kept constant  
 (d) volume, if temperature is kept constant  
 (e) remains constant, if volume and temperature are kept constant.

34.

43. Extensive property of a system is one whose value  
 (a) depends on the mass of the system, like volume  
 (b) does not depend on the mass of the system, like temperature, pressure, etc.  
 (c) is not dependent on the path followed but on the state  
 (d) is dependent on the path followed and not on the state  
 (e) is always constant.

29.

General gas equation is  
 (a)  $PV = nRT$  (b)  $PV = mRT$   
 (c)  $PV = \frac{1}{3}nRT$  (d)  $PV^n = C$   
 (e)  $C_p - C_v = R/J$

35.

Work done in a free expansion process is  
 (a) +ve (b) -ve  
 (c) zero (d) maximum  
 (e) minimum.

30.

No liquid can exist as liquid at  
 (a)  $-273^\circ\text{K}$  (b) vacuum  
 (c) zero pressure (d) centre of earth  
 (e) in space.

36.

To convert volumetric analysis to gravimetric analysis, the relative volume of each constituent of the flue gases is  
 (a) divided by its molecular weight  
 (b) multiplied by its molecular weight  
 (c) multiplied by its density  
 (d) multiplied by its specific weight  
 (e) divided by its specific weight.



37.

Zeroth law of thermodynamics

- (a) deals with conversion of mass and energy
- (b) deals with reversibility and irreversibility of process
- ✓ (c) states that if two systems are both in equilibrium with a third system, they are in thermal equilibrium with each other
- (d) deals with heat engines
- (e) does not exist

38.

The basis for measuring thermodynamic property of temperature is given by

- ✓ (a) zeroth law of thermodynamics
- (b) first law of thermodynamics
- (c) second law of thermodynamics
- (d) third law of thermodynamics
- (e) Avogadro's hypothesis

39.

The more effective way of increasing efficiency of Carnot engine is to

- (a) increase higher temperature
- (b) decrease higher temperature
- (c) increase lower temperature
- ✓ (d) decrease lower temperature
- (e) keep lower temperature constant

40.

For reversible adiabatic process, change in entropy is

- (a) maximum
- (b) minimum
- ✓ (c) zero
- (d) unpredictable
- (e) negative

41.

The work done in the expansion of a gas from volume  $V_1$  to  $V_2$  under constant pressure  $p$  is equal to

- (a) zero
- ✓ (b)  $p(V_2 - V_1)$
- (c)  $p(V_2 + V_1)$
- (d)  $p(V_2 - V_1)^2$
- (e)  $p(V_1 - V_2)V_2$

42.

An expansion process as per law  $pV = \text{constant}$  is known as

- ✓ (a) parabolic expansion
- (b) hyperbolic expansion
- (c) isentropic expansion
- (d) adiabatic expansion
- (e) free expansion

43.

Under ideal conditions, isothermal, isobaric, isochoric and adiabatic processes are

- (a) static processes
- (b) dynamic processes
- ✓ (c) quasi-static processes

44.

First law of thermodynamics

- ✓ (a) enables to determine change in internal energy to the system
- (b) does not help to predict whether the system will or not undergo a change
- (c) does not enable to determine change in entropy
- (d) provides relationship between heat, work and internal energy
- ✓ (e) all of the above

45.

The temperature in a process in which work is done by expanding a gas under adiabatic condition will

- (a) increase
- ✓ (b) decrease
- (c) remain unchanged
- (d) decrease/increase depending on properties of gas
- (e) first increase and then decrease

46.

In a polytropic process, heat rejected is given by

- (a)  $\frac{\gamma}{\gamma - 1} \times \text{Work done on the system}$
- ✓ (b)  $\frac{\gamma - n}{\gamma - 1} \times \text{Work done on the system}$
- (c)  $\frac{\gamma - n}{\gamma} \times \text{Work done on the system}$
- (d)  $\frac{\gamma - n}{n} \times \text{Work done on the system}$
- (e) work done on the systems.

47.

Heat transfer during polytropic process is given by

- (a)  $\frac{n - \gamma}{1 - \gamma} C_v (T_2 - T_1)$
- ✓ (b)  $\frac{\gamma - n}{\gamma - 1} C_v (T_2 - T_1)$
- (c)  $\frac{\gamma - n}{1 - \gamma} C_v (T_2 - T_1)$
- (d)  $\frac{\gamma}{\gamma - 1} C_v (T_2 - T_1)$
- (e)  $\frac{\gamma - 1}{\gamma} C_v (T_2 - T_1)$





**SREE NARAYANA GURU**

**COLLEGE OF  
ENGINEERING**

**CCW MOCK TEST 2**

1.

Malleability of a material can be defined as  
(a) ability to undergo large permanent deformations in compression  
(b) ability to recover its original form  
(c) ability to undergo large permanent deformations in tension  
(d) all of the above  
(e) none of the above

2.

Mild steel belongs to the following category  
(a) low carbon steel  
(b) medium carbon steel  
(c) high carbon steel  
(d) alloy steel  
(e) special steel.

3.

The number of electrons in  $1 \text{ cm}^3$  of metal would be of the order of  
(a)  $10^{10}$   
(b)  $10^{16}$   
(c)  $10^{22}$   
(d)  $10^{40}$   
(e)  $10^{52}$

4.

Points of arrest for iron correspond to  
(a) stages at which allotropic forms change  
(b) stages at which further heating does not increase temperature for some time  
(c) stages at which properties do not change with increase in temperature  
(d) there is nothing like points of arrest  
(e) none of the above.

5.

A material is known as allotropic or polymorphic if it  
(a) has a fixed structure under all conditions  
(b) exists in several crystal forms at different temperatures  
(c) responds to heat treatment  
(d) has its atoms distributed in a random pattern  
(e) none of the above.

6.

Superconduction by metals is observed in the temperature range of  
(a) below  $10^\circ\text{K}$   
(b) above  $100^\circ\text{K}$   
(c) around  $0^\circ\text{C}$   
(d) around  $100^\circ\text{C}$   
(e) above  $1000^\circ\text{C}$ .

7.

Gamma iron exists at following temperature  
(a) room temperature  
(b) near melting point  
(c) between  $1400^\circ\text{C}$  and  $1539^\circ\text{C}$   
(d) between  $910^\circ\text{C}$  and  $1400^\circ\text{C}$   
(e) none of the above.

8.

Cast iron is characterised by minimum of following %age of carbon  
(a) 0.2%  
(b) 0.8%  
(c) 1.3%  
(d) 2%  
(e) 6.3%.

9.

Pick up wrong statement about wrought iron  
(a) It contains carbon of the order of 0 to 0.25%  
(b) It melts at  $1535^\circ\text{C}$   
(c) It is very soft and ductile  
(d) It can be easily forge welded  
(e) It is made by adding suitable percentage of carbon to molten iron and subjecting the product to repeated hammering and rolling.

10.

An important property of malleable cast iron in comparison to grey cast iron is the high  
(a) compressive strength  
(b) ductility  
(c) carbon content  
(d) hardness  
(e) surface finish.

11.

Annealing of white cast iron results in production of  
(a) malleable iron  
(b) nodular iron  
(c) spheroidal iron  
(d) grey iron  
(e) none of the above.



12.

Hardness of steel depends on  
 (a) amount of carbon it contains  
 (b) the shape and distribution of the carbides in iron  
 (c) method of fabrication  
 (d) contents of alloying elements  
 (e) the quality of ore from which it is made.

13.

Maximum percentage of carbon in ferrite is  
 (a) 0.025% (b) 0.06%  
 (c) 0.1% (d) 0.25%  
 (e) 0.8%.

14.

The most effective inhibitor of grain growth, when added in small quantities is  
 (a) carbon (b) vanadium  
 (c) manganese (d) cobalt  
 (e) copper.

15.

Machining properties of steel are improved by adding  
 (a) sulphur, lead, phosphorous  
 (b) silicon, aluminium, titanium  
 (c) vanadium, aluminium  
 (d) chromium, nickel (e) lubricants.

16.

Inconel is an alloy of  
 (a) nickel, chromium and iron  
 (b) nickel, copper (c) nickel, chromium  
 (d) nickel, zinc (e) nickel, lead.

17.

The loss of strength in compression with simultaneous gain in strength in tension due to overloading is known as  
 (a) hysteresis (b) creep  
 (c) visco elasticity (d) Boeschinger effect  
 (e) inelasticity.

18.

The surface hardness of the following order is achieved by nitriding operation  
 (a) 600 VPN (b) 1500 VPN  
 (c) 1000 to 1100 VPN (d) 250 VPN  
 (e) 2000 VPN.

19.

Hardness of martensite is about  
 (a) RC 65 (b) RC 48  
 (c) RC 57 (d) RC 80  
 (e) RC 32.

20.

Hardness of lower bainite (tempered martensite) is about  
 (a) RC 65 (b) RC 48  
 (c) RC 57 (d) RC 80  
 (e) RC 32.

21.

Which is false statement about normalising ?  
 Normalising is done to  
 (a) refine grain structure  
 (b) reduce segregation in casting  
 (c) improve mechanical properties  
 (d) induce stresses  
 (e) relieve internal stresses.

22.

Vanadium in high speed steels  
 (a) promotes decarburisation  
 (b) provides high hot hardness  
 (c) forms very hard carbides and thus increases wear resistance  
 (d) promotes retention of austenite  
 (e) increases toughness.

23.

Amorphous material is one  
 (a) in which atoms align themselves in a geometric pattern upon solidification  
 (b) in which there is no definite atomic structure and atoms exist in a random pattern just as in a liquid  
 (c) which is not attacked by phosphorous  
 (d) which emits fumes on melting  
 (e) none of the above.

24.

Tungsten in steel  
 (a) improves wear resistance, cutting ability and toughness  
 (b) refines grain size and produces less tendency to carburisation, improves corrosion and heat resistant properties  
 (c) improves cutting ability and reduces hardenability  
 (d) gives ductility, toughness, tensile strength and anticorrosion properties  
 (e) raises its melting point.



25.

The hardness of steel increases if it contains  
 (a) austenite (b) martensite  
 (c) pearlite (d) cementite  
 (e) all of the above.

31.

The ratio of two specific heats of air is equal to  
 (a) 0.17 (b) 0.24  
 (c) 0.1 (d) 1.41  
 (e) 2.71

26.

Which of the following laws is applicable for the behaviour of a perfect gas?  
 (a) Boyle's law (b) Charles' law  
 (c) Gay-Lussac law (d) all of the above  
 (e) Joule's law.

32.

Which law states that the specific heat of a gas remains constant at all temperatures and pressures?  
 (a) Charles' law (b) Joule's law  
 (c) Regnault's law (d) Boyle's law  
 (e) there is no such law.

27.

According to Charles' law for a perfect gas  
 (a)  $\frac{T_2}{T_1} = \frac{P_2}{P_1}$ , if  $V$  is kept constant  
 (b)  $\frac{T_2}{T_1} = \frac{V_2}{V_1}$ , if  $P$  is kept constant  
 (c) both (a) and (b) above  
 (d)  $\frac{P_2}{P_1} = \frac{V_1}{V_2}$ , if  $T$  is kept constant

33.

Which law states that the specific heat of a gas remains constant at all temperatures and pressures?  
 (a) Charles' law (b) Joule's law  
 (c) Regnault's law (d) Boyle's law  
 (e) there is no such law.

28.

According to Gay-Lussac law for a perfect gas, the absolute pressure of given mass varies directly as  
 (a) temperature (b) absolute  
 (c) absolute temperature, if volume is kept constant  
 (d) volume, if temperature is kept constant  
 (e) remains constant, if volume and temperature are kept constant.

34.

43. Extensive property of a system is one whose value  
 (a) depends on the mass of the system, like volume  
 (b) does not depend on the mass of the system, like temperature, pressure, etc.  
 (c) is not dependent on the path followed but on the state  
 (d) is dependent on the path followed and not on the state  
 (e) is always constant.

29.

General gas equation is  
 (a)  $PV = nRT$  (b)  $PV = mRT$   
 (c)  $PV = \frac{1}{3}nRT$  (d)  $PV^n = C$   
 (e)  $C_p - C_v = R$

35.

Work done in a free expansion process is  
 (a) +ve (b) -ve  
 (c) zero (d) maximum  
 (e) minimum.

30.

No liquid can exist as liquid at  
 (a)  $-273^\circ\text{K}$  (b) vacuum  
 (c) zero pressure (d) centre of earth  
 (e) in space.

36.

To convert volumetric analysis to gravimetric analysis, the relative volume of each constituent of the flue gases is  
 (a) divided by its molecular weight  
 (b) multiplied by its molecular weight  
 (c) multiplied by its density  
 (d) multiplied by its specific weight  
 (e) divided by its specific weight.



37.

Zeroth law of thermodynamics

- (a) deals with conversion of mass and energy
- (b) deals with reversibility and irreversibility of process
- (c) states that if two systems are both in equilibrium with a third system, they are in thermal equilibrium with each other
- (d) deals with heat engines
- (e) does not exist.

38.

The basis for measuring thermodynamic property of temperature is given by

- (a) zeroth law of thermodynamics
- (b) first law of thermodynamics
- (c) second law of thermodynamics
- (d) third law of thermodynamics
- (e) Avogadro's hypothesis.

39.

The more effective way of increasing efficiency of Carnot engine is to

- (a) increase higher temperature
- (b) decrease higher temperature
- (c) increase lower temperature
- (d) decrease lower temperature
- (e) keep lower temperature constant.

40.

For reversible adiabatic process, change in entropy is

- (a) maximum
- (b) minimum
- (c) zero
- (d) unpredictable
- (e) negative.

41.

The work done in the expansion of a gas from volume  $V_1$  to  $V_2$  under constant pressure  $p$  is equal to

- (a) zero
- (b)  $p(V_2 - V_1)$
- (c)  $p(V_2 + V_1)$
- (d)  $p(V_2 - V_1)$
- (e)  $p(V_1 - V_2)V_2$ .

42.

An expansion process as per law  $pV = \text{constant}$  is known as

- (a) parabolic expansion
- (b) hyperbolic expansion
- (c) isentropic expansion
- (d) adiabatic expansion
- (e) free expansion.

43.

Under ideal conditions, isothermal, isobaric, isochoric and adiabatic processes are

- (a) static processes
- (b) dynamic processes
- (c) quasi-static processes

44.

First law of thermodynamics

- (a) enables to determine change in internal energy to the system
- (b) does not help to predict whether the system will or not undergo a change
- (c) does not enable to determine change in entropy
- (d) provides relationship between heat, work and internal energy
- (e) all of the above.

45.

The temperature in a process in which work is done by expanding a gas under adiabatic condition will

- (a) increase
- (b) decrease
- (c) remain unchanged
- (d) decrease/increase depending on properties of gas
- (e) first increase and then decrease.

46.

In a polytropic process, heat rejected is given by

- (a)  $\frac{\gamma}{\gamma - 1} \times \text{Work done on the system}$
- (b)  $\frac{\gamma - n}{\gamma - 1} \times \text{Work done on the system}$
- (c)  $\frac{\gamma - n}{\gamma} \times \text{Work done on the system}$
- (d)  $\frac{\gamma - n}{n} \times \text{Work done on the system}$
- (e) work done on the systems.

47.

Heat transfer during polytropic process is given by

- (a)  $\frac{n - \gamma}{1 - \gamma} C_v (T_2 - T_1)$
- (b)  $\frac{1 - n}{\gamma - 1} C_v (T_2 - T_1)$
- (c)  $\frac{\gamma - n}{1 - \gamma} C_v (T_2 - T_1)$
- (d)  $\frac{\gamma}{\gamma - 1} C_v (T_2 - T_1)$
- (e)  $\frac{\gamma - 1}{\gamma} C_v (T_2 - T_1)$ .





**SREE NARAYANA GURU**

**COLLEGE OF  
ENGINEERING**

**CCW MOCK TEST 2**

1.

Malleability of a material can be defined as  
(a) ability to undergo large permanent deformations in compression  
(b) ability to recover its original form  
(c) ability to undergo large permanent deformations in tension  
(d) all of the above  
(e) none of the above

2.

Mild steel belongs to the following category  
(a) low carbon steel  
(b) medium carbon steel  
(c) high carbon steel  
(d) alloy steel  
(e) special steel

3.

The number of electrons in  $1 \text{ cm}^3$  of metal would be of the order of  
(a)  $10^{10}$   
(b)  $10^{16}$   
(c)  $10^{22}$   
(d)  $10^{40}$   
(e)  $10^{52}$

4.

Points of arrest for iron correspond to  
(a) stages at which allotropic forms change  
(b) stages at which further heating does not increase temperature for some time  
(c) stages at which properties do not change with increase in temperature  
(d) there is nothing like points of arrest  
(e) none of the above.

5.

A material is known as allotropic or polymorphic if it  
(a) has a fixed structure under all conditions  
(b) exists in several crystal forms at different temperatures  
(c) responds to heat treatment  
(d) has its atoms distributed in a random pattern  
(e) none of the above.

6.

Superconduction by metals is observed in the temperature range of  
(a) below  $10^\circ\text{K}$   
(b) above  $100^\circ\text{K}$   
(c) around  $0^\circ\text{C}$   
(d) around  $100^\circ\text{C}$   
(e) above  $1000^\circ\text{C}$ .

7.

Gamma iron exists at following temperature  
(a) room temperature  
(b) near melting point  
(c) between  $1400^\circ\text{C}$  and  $1539^\circ\text{C}$   
(d) between  $910^\circ\text{C}$  and  $1400^\circ\text{C}$   
(e) none of the above.

8.

Cast iron is characterised by minimum of following %age of carbon  
(a) 0.2%  
(b) 0.8%  
(c) 1.3%  
(d) 2%  
(e) 6.3%.

9.

Pick up wrong statement about wrought iron  
(a) It contains carbon of the order of 0 to 0.25%  
(b) It melts at  $1535^\circ\text{C}$   
(c) It is very soft and ductile  
(d) It can be easily forge welded  
(e) It is made by adding suitable percentage of carbon to molten iron and subjecting the product to repeated hammering and rolling.

10.

An important property of malleable cast iron in comparison to grey cast iron is the high  
(a) compressive strength  
(b) ductility  
(c) carbon content  
(d) hardness  
(e) surface finish.

11.

Annealing of white cast iron results in production of  
(a) malleable iron  
(b) nodular iron  
(c) spheroidal iron  
(d) grey iron  
(e) none of the above.



12.

Hardness of steel depends on  
☒ (a) amount of carbon it contains  
 (b) the shape and distribution of the carbides in iron  
 (c) method of fabrication  
 (d) contents of alloying elements  
 (e) the quality of ore from which it is made.

13.

Maximum percentage of carbon in ferrite is  
☒ (a) 0.025% (b) 0.06%  
 (c) 0.1% (d) 0.25%  
 (e) 0.8%.

14.

The most effective inhibitor of grain growth, when added in small quantities is  
 (a) carbon ☒ (b) vanadium  
 (c) manganese (d) cobalt  
 (e) copper.

15.

Machining properties of steel are improved by adding  
☒ (a) sulphur, lead, phosphorous  
 (b) silicon, aluminium, titanium  
 (c) vanadium, aluminium  
 (d) chromium, nickel (e) lubricants.

16.

Inconel is an alloy of  
 (a) nickel, chromium and iron  
 (b) nickel, copper ☒ (c) nickel, chromium  
 (d) nickel, zinc (e) nickel, lead.

17.

The loss of strength in compression with simultaneous gain in strength in tension due to overloading is known as  
 (a) hysteresis (b) creep  
 (c) visco elasticity ☒ (d) Boeschinger effect  
 (e) inelasticity.

18.

The surface hardness of the following order is achieved by nitriding operation  
 (a) 600 VPN (b) 1500 VPN  
☒ (c) 1000 to 1100 VPN (d) 250 VPN  
 (e) 2000 VPN.

19.

Hardness of martensite is about  
☒ (a) RC 65 (b) RC 48  
 (c) RC 57 (d) RC 80  
 (e) RC 32.

20.

Hardness of lower bainite (tempered martensite) is about  
 (a) RC 65 (b) RC 48  
☒ (c) RC 57 (d) RC 80  
 (e) RC 32.

21.

Which is false statement about normalising ?  
 Normalising is done to  
 (a) refine grain structure  
 (b) reduce segregation in casting  
 (c) improve mechanical properties  
☒ (d) induce stresses  
 (e) relieve internal stresses.

22.

Vanadium in high speed steels  
 (a) promotes decarburisation  
 (b) provides high hot hardness  
☒ (c) forms very hard carbides and thus increases wear resistance  
 (d) promotes retention of austenite  
 (e) increases toughness.

23.

Amorphous material is one  
 (a) in which atoms align themselves in a geometric pattern upon solidification  
☒ (b) in which there is no definite atomic structure and atoms exist in a random pattern just as in a liquid  
 (c) which is not attacked by phosphorous  
 (d) which emits fumes on melting  
 (e) none of the above.

24.

Tungsten in steel  
 (a) improves wear resistance, cutting ability and toughness  
☒ (b) refines grain size and produces less tendency to carburisation, improves corrosion and heat resistant properties  
 (c) improves cutting ability and reduces hardenability  
 (d) gives ductility, toughness, tensile strength and anticorrosion properties  
 (e) raises its melting point.



25.

The hardness of steel increases if it contains  
 (a) austenite (b) ☒ martensite  
 (c) pearlite (d) cementite  
 (e) all of the above.

31.

The ratio of two specific heats of air is equal to  
 (a) 0.17 (b) 0.24  
 (c) 0.1 (d) ☒ 1.41  
 (e) 2.71.

26.

Which of the following laws is applicable for the behaviour of a perfect gas?  
 (a) Boyle's law (b) Charles' law  
 (c) Gay-Lussac law (d) ☒ all of the above  
 (e) Joule's law.

32.

Which law states that the specific heat of a gas remains constant at all temperatures and pressures?  
 (a) Charles' law (b) Joule's law  
 (c) ☒ Regnault's law (d) Boyle's law  
 (e) there is no such law.

27.

According to Charles' law for a perfect gas  
 (a)  $\frac{T_2}{T_1} = \frac{P_2}{P_1}$ , if  $V$  is kept constant  
 (b)  $\frac{T_2}{T_1} = \frac{V_2}{V_1}$ , if  $P$  is kept constant  
 (c) both (a) and (b) above  
 (d)  $\frac{P_2}{P_1} = \frac{V_2}{V_1}$ , if  $T$  is kept constant

33.

Which law states that the specific heat of a gas remains constant at all temperatures and pressures?  
 (a) Charles' law (b) Joule's law  
 (c) ☒ Regnault's law (d) Boyle's law  
 (e) there is no such law.

28.

According to Gay-Lussac law for a perfect gas, the absolute pressure of given mass varies directly as  
 (a) temperature (b) absolute  
 (c) ☒ absolute temperature, if volume is kept constant  
 (d) volume, if temperature is kept constant  
 (e) remains constant, if volume and temperature are kept constant.

34.

43. Extensive property of a system is one whose value  
 (a) ☒ depends on the mass of the system, like volume  
 (b) does not depend on the mass of the system, like temperature, pressure, etc.  
 (c) is not dependent on the path followed but on the state  
 (d) is dependent on the path followed and not on the state  
 (e) is always constant.

29.

General gas equation is  
 (a) ☒  $PV = nRT$  (b) ☒  $PV = mRT$   
 (c)  $PV = \frac{1}{3}nRT$  (d)  $PV^n = C$   
 (e)  $C_p - C_v = R/J$ .

35.

Work done in a free expansion process is  
 (a) +ve (b) -ve  
 (c) ☒ zero (d) maximum  
 (e) minimum.

30.

No liquid can exist as liquid at  
 (a) ☒ 273°K (b) vacuum  
 (c) zero pressure (d) centre of earth  
 (e) in space.

36.

To convert volumetric analysis to gravimetric analysis, the relative volume of each constituent of the flue gases is  
 (a) divided by its molecular weight  
 (b) ☒ multiplied by its molecular weight  
 (c) multiplied by its density  
 (d) multiplied by its specific weight  
 (e) divided by its specific weight.



37.

Zeroth law of thermodynamics  
 (a) deals with conversion of mass and energy  
 (b) deals with reversibility and irreversibility of process  
 (c) states that if two systems are both in equilibrium with a third system, they are in thermal equilibrium with each other  
 (d) deals with heat engines  
 (e) does not exist.

38.

The basis for measuring thermodynamic property of temperature is given by  
 (a) zeroth law of thermodynamics  
 (b) first law of thermodynamics  
 (c) second law of thermodynamics  
 (d) third law of thermodynamics  
 (e) Avogadro's hypothesis.

39.

The more effective way of increasing efficiency of Carnot engine is to  
 (a) increase higher temperature  
 (b) decrease higher temperature  
 (c) increase lower temperature  
 (d) decrease lower temperature  
 (e) keep lower temperature constant.

40.

For reversible adiabatic process, change in entropy is  
 (a) maximum (b) minimum  
 (c) zero (d) unpredictable  
 (e) negative.

41.

The work done in the expansion of a gas from volume  $V_1$  to  $V_2$  under constant pressure  $p$  is equal to  
 (a) zero (b)  $p(V_2 - V_1)$   
 (c)  $p(V_2 + V_1)$  (d)  $p(V_2 - V_1)$   
 (e)  $p(V_1 - V_2)/2$ .

42.

An expansion process as per law  $pV = \text{constant}$  is known as  
 (a) parabolic expansion (b) hyperbolic expansion  
 (c) isentropic expansion (d) adiabatic expansion  
 (e) free expansion.

43.

Under ideal conditions, isothermal, isobaric, isochoric and adiabatic processes are  
 (a) static processes (b) dynamic processes  
 (c) quasi-static processes

44.

First law of thermodynamics  
 (a) enables to determine change in internal energy to the system  
 (b) does not help to predict whether the system will or not undergo a change  
 (c) does not enable to determine change in entropy  
 (d) provides relationship between heat, work and internal energy  
 (e) all of the above.

45.

The temperature in a process in which work is done by expanding a gas under adiabatic condition will  
 (a) increase (b) decrease  
 (c) remain unchanged (d) decrease/increase depending on properties of gas  
 (e) first increase and then decrease.

46.

In a polytropic process, heat rejected is given by  
 (a)  $\frac{\gamma}{\gamma - 1} \times \text{Work done on the system}$   
 (b)  $\frac{\gamma - n}{\gamma - 1} \times \text{Work done on the system}$   
 (c)  $\frac{\gamma - n}{\gamma} \times \text{Work done on the system}$   
 (d)  $\frac{\gamma - n}{n} \times \text{Work done on the system}$   
 (e) work done on the systems.

47.

Heat transfer during polytropic process is given by  
 (a)  $\frac{n - \gamma}{1 - \gamma} C_v (T_2 - T_1)$  (b)  $\frac{\gamma - n}{\gamma - 1} C_v (T_2 - T_1)$   
 (c)  $\frac{\gamma - n}{1 - \gamma} C_v (T_2 - T_1)$  (d)  $\frac{\gamma}{\gamma - 1} C_v (T_2 - T_1)$   
 (e)  $\frac{\gamma - 1}{\gamma} C_v (T_2 - T_1)$ .

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

Sixth Semester B.Tech Degree Examination June 2022 (2019 Scheme)

**Course Code: MET308****Course name: COMPREHENSIVE COURSE WORK**

Max. Marks: 50

Duration: 1 Hour

- Instructions:**
- (1) Each question carries one mark. No negative marks for wrong answers
  - (2) Total number of questions: 50
  - (3) All questions are to be answered. Each question will be followed by 4 possible answers of which only ONE is correct.
  - (4) If more than one option is chosen, it will not be considered for valuation.

1. Which one of the following mechanisms represents an inversion of single slider crank chain?  
a) Elliptical trammel    b) Oldham's coupling    c) Whitworth quick return mechanism    d) Pantograph
2. A planar mechanism has 10 links and 12 joints. The degree of freedom of the mechanism is  
a) 1    b) 3    c) 2    d) 4
3. Number of instantaneous centres of rotation for a 6-link mechanism are  
a) 4    b) 6    c) 12    d) 15
4. Pressure angle of a cam is directly proportional to  
a) Pitch circle diameter    b) Prime circle diameter    c) Lift of cam    d) Base circle diameter
5. For the follower with stroke S following cycloidal motion, the radius of rolling circle will be  
a)  $S \cdot 2\pi$     b)  $S/2\pi$     c)  $2\pi/S$     d)  $2\pi + S$
6. Which of the following mechanism is an exact straight line motion mechanism?  
a) Watt's mechanism    b) Robert's mechanism    c) Peaucellier mechanism    d) All of these
7. Transmission angle is the angle between the  
a) Output link and frame    b) Output link and coupler    c) Input link and frame    d) Input link and coupler
8. The Coriolis component of acceleration is taken into account for  
a) Slider crank mechanism    b) Four bar chain mechanism    c) Quick return motion mechanism    d) All of these
9. The component of the acceleration, parallel to the velocity of the particle, at the given instant is called



- a) Radial component    b) Tangential component    c) Coriolis component    d) None of these
10. For low and moderate speed engines the cam follower should move with  
a) Cycloidal motion    b) Simple Harmonic Motion    c) Uniform velocity    d) Uniform acceleration and retardation
11. Which sand is used for making ferrous and non-ferrous alloys  
a) Natural sand    b) Synthetic sand    c) Loam sand    d) Refractory sand
12. Which among the following wood is most widely used for making patterns  
a) White Pine    b) Mahogany    c) Teak    d) Maple
13. Which of the following has the most magnitude in rolling  
a) Slip velocity    b) Surface velocity    c) Entering velocity    d) Exiting velocity
14. The earing defect in the rolling of the work piece is not caused by \_\_\_\_\_  
a) Material dependent    b) Blank holding    c) Low clearance between the roll and workpiece    d) Too high speed
15. The extra metal which settles down in the gutter is known as  
a) Flux    b) ) Barrelling    c) ) Slag    d) Flash
16. The distance from the center of arc to the tip of electrode is called  
a) Arc length    b) Arc distance    c) Arc crater    d) Arc depth
17. Which of the following is not included in weldability  
a) Ability of mechanical soundness    b) Serviceability of joint    c) Strain relieving brittleness    d) Metallurgical compatibility of metal
18. As the grain size of a metal increases, its strength \_\_\_\_\_  
a) Decreases    b) Increases    c) Remains constant    d) No effect
19. Which of the following method is used for making crankshafts?  
a) Drop forging    b) Press forging    c) Open die forging    d) Closed die forging
20. Which is the operation to relive residual stress from the welding joint  
a) Shot peening    b) post heating    c) peening    d) Pre heating
21. Which of the following is the extensive property of the system  
a) Volume    b) Pressure    c) Temperature    d) Density
22. An ideal gas at 27°C is heated at constant pressure till its volume becomes three times. What would be then the temperature of the gas  
a) 81°C    b) 327°C    c) 543°C    d) 627°C

23. For a simple closed system of constant composition, the difference between the net heat and work interactions is identifiable as the change in  
 a) Enthalpy                      b) Entropy                      c) Flow energy                      d) Internal Energy
24. A 4 kW, 20 litre water heater is switched on for 10 minutes. The heat capacity  $C_p$  for water is 4 kJ/kg-K. Assuming all the electrical energy has gone into heating the water, the increase of the water temperature is  
 a) 15°C                      b) 20°C                      c) 26 °C                      d) 30°C
25. In throttling process, which one of the following parameters remains constant  
 a) Temperature                      b) pressure                      c) entropy                      d) enthalpy
26. When a system undergoes a process such that  $\int \frac{dq}{T} = 0$  and  $\Delta S > 0$ , the process is  
 a) Reversible                      b) Irreversible                      c) Isothermal                      d) None of these  
     adiabatic                      adiabatic
27. For a heat engine operating on a Carnot cycle, the work output is  $1/4^{\text{th}}$  of the heat transferred to the sink. The efficiency of the engine is  
 a) 25%                      b) 30%                      c) 20%                      d) 33.3%
28. Which of the following devices complies with Clausius statement of the second law of thermodynamics  
 1. Closed cycle gas turbine  
 2. Internal combustion engine  
 3. Steam powerplant  
 4. Domestic refrigerator  
 a) 1 only                      b) 1 and 4 only                      c) 2 and 3 only                      d) 4 only
29. For a given high temperature reservoir  $T_1$ , as the difference between  $T_1$  and  $T_2$  increases, the COP of a Carnot heat pump  
 a) Increases                      b) Decreases                      c) Does not change                      d) Cannot predict
30. Which of the following statements are correct?  
 1. The entropy of a pure crystalline substance at absolute zero temperature is zero.  
 2. The efficiency of a reversible heat engine is independent of the nature of the working substance and depends only on the temperature.  
 3. Carnot's theorem states that of all heat engines operating between a given constant temperature source and a given constant temperature sink, none has a higher efficiency than a reversible engine.  
 a) 1 and 2 only                      b) 1 and 3 only                      c) 2 and 3 only                      d) 1,2 and 3
31. Atomic packing factor of FCC crystal structure is  
 a) 0.52                      b) 0.58                      c) 0.68                      d) 0.74
32. Number of atoms and coordination number respectively for a BCC crystal structure is  
 a) 2,8                      b) 2,12                      c) 4,8                      d) 6,12
33. Edge dislocation is a  
 a) Point imperfection                      b) Line imperfection                      c) Surface imperfection                      d) Volume imperfection

34. In the study of phase diagrams, the rule which helps to calculate the relative proportions of liquid and solid material present in the mixture at any given temperature is known as  
 a) Hume-Rothery rule    b) Lever rule    c) Gibb's phase rule    d) Empirical rule
35. Fe-C alloy containing less than 0.8% carbon is called  
 a) High speed steel    b) Hypo-eutectoid steel    c) Hyper-eutectoid steel    d) Cast iron
36. What is the movement of block of atoms along certain crystallographic plane and direction, termed as  
 a) Glide    b) Twinning    c) Slip    d) Jog
37. Reaction in which solid phase transforms into two other solid phases on cooling is called  
 a) Peritectic reaction    b) Eutectic reaction    c) Peritectoid reaction    d) Eutectoid reaction
38. Gibb's phase rule is given by  
 [F= Number of degrees of freedom, C= Number of components, P= Number of phases]  
 a)  $F = C+P$     b)  $F = C+P-2$     c)  $F = C-P-2$     d)  $F = C-P+2$
39. TTT diagram shows the times required for isothermal transition from  
 a) Austenite to pearlite    b) Austenite to ferrite    c) Ferrite to pearlite    d) Martensite to pearlite
40. Hardenability of steel is assessed by  
 a) Charpy impact test    b) Rockwell hardness test    c) Jominy end quench test    d) Open hole test
41. Unit of surface tension is  
 a)  $\text{N/m}^2$     b)  $\text{N/m}$     c)  $\text{Nm}$     d)  $\text{N}$
42. Relation between poise and  $\text{N sec/ m}^2$  is  
 a)  $1 \text{ poise} = 1 \text{ N sec/ m}^2$     b)  $1 \text{ poise} = 10 \text{ N sec/ m}^2$     c)  $1 \text{ poise} = 0.1 \text{ N sec/ m}^2$     d)  $1 \text{ poise} = 0.01 \text{ N sec/ m}^2$
43. A rectangular block with specific gravity  $x$  and height  $y$  when floating in water, the depth of immersion will be  
 a)  $xy$     b)  $x/y$     c)  $y/x$     d) None
44. In a flow net the angle in degrees between stream lines and equipotential lines is  
 a) 0    b) 45    c) 90    d) 180
45. Bernoulli's equation is law of conservation of  
 a) mass    b) momentum    c) velocity    d) energy
46. While deriving Euler's equation the following forces are considered  
 a) Pressure and viscous    b) Gravity and viscous    c) Pressure and gravity    d) Pressure and surface tension
47. The variation of shear stress and velocity at a cross section of a circular pipe when laminar flow takes place are  
 a) Both parabolic    b) Both linear    c) Linear and parabolic    d) Parabolic and linear



48. The ratio of maximum velocity to average velocity for a laminar flow through a circular pipe is  
a) 1                                      b) 1.5                                      c)  $4/3$                                       d) 2
49. For the flow of water through the penstocks of Idukki Power plant, the head loss due to friction is calculated using  
a) Hagen- Poiseuille equation      b) Darcy Weisbach equation      c) Both                                      d) None
50. The type of fluid flow analysis where the observer remains stationary is called  
a) Eulerian                                      b) Lagrangian                                      c) Archimedes                                      d) None

\*\*\*\*\*

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**SIXTH SEMESTER B.TECH DEGREE EXAMINATION, APRIL 2018**

**Course Code: CE352**  
**Course Name: COMPREHENSIVE EXAM (CE)**

Max. Marks: 50

Duration: 1 Hour

**Instructions**

- (1) Each question carries one mark. No negative marks for wrong answers
- (2) Total number of questions: 50
- (3) All questions are to be answered. Each question will be followed by 4 possible answers of which only ONE is correct.
- (4) If more than one option is chosen, it will not be considered for valuation.
- (5) Calculators are not permitted

- 1 Find the distance travelled if  $r(t) = (1 - 3\sin t)i + 3\cos t j$ ,  $0 \leq t \leq \pi$ .  
(A) 0 (B)  $3\pi$  (C)  $2\pi$  (D)  $4\pi$
- 2 If  $y=x$  is a solution of  $x^2y'' + xy' - y = 0$ , then the second linearly independent solution is :  
(A)  $x^2$  (B)  $x^{-2}$  (C)  $x^{-1}$  (D)  $x^n$
- 3 Moment of inertia of a triangular section of base ( $b$ ) and height ( $h$ ) about an axis passing through its C.G. and parallel to the base, is :  
(A)  $bh^3/4$  (B)  $bh^3/8$  (C)  $bh^3/12$  (D)  $bh^3/36$
- 4 The angle between two forces when the resultant is maximum and minimum respectively are :  
(A)  $0^\circ$  and  $180^\circ$  (B)  $180^\circ$  and  $0^\circ$  (C)  $90^\circ$  and  $180^\circ$  (D)  $90^\circ$  and  $0^\circ$
- 5 If front and top view of a point lie above the reference line, in which quadrant the point lies ?  
(A) First quadrant (B) Second First quadrant  
(C) Third First quadrant (D) Fourth First quadrant
- 6 In an isometric projection all horizontal lines of the object are represented by lines inclined at an angle of ..... to horizontal  
(A)  $20^\circ$  (B)  $30^\circ$  (C)  $40^\circ$  (D)  $45^\circ$
- 7 Which of the following is not a green house gas ?  
(A)  $\text{CO}_2$  (B)  $\text{H}_2\text{S}$  (C)  $\text{O}_3$  (D)  $\text{CH}_4$
- 8 As per LEED certification, the platinum scale for building design and construction phase is  
(A) 40-49 points (B) 50-59 points  
(C) 60-79 points (D) greater than or equal to 80 points

- 9 Which manufacturing technique is based on the principle of "Seeing what is out there"?
- (A) Concurrent Engineering (B) Value Engineering  
(C) Reverse Engineering (D) Prototype Engineering
- 10 The concept of the high speed trains, Shinkansen Bullet Trains, was inspired by :
- (A) The kingfisher (B) Shark skin  
(C) The burr seed (D) The Gecko feet
- 11 Yield point of brittle material can be ascertained by drawing a line parallel to the stress-strain curve at
- (A) 0.2 % of max strain (B) 2 % of max strain  
(C) 5 % of max strain (D) 10 % of max strain
- 12 If the modulus of elasticity for a material is  $250 \text{ GN/m}^2$  and Poisson's ratio is 0.25, the modulus of rigidity of the material is
- (A)  $250 \text{ GN/m}^2$  (B)  $125 \text{ GN/m}^2$  (C)  $100 \text{ GN/m}^2$  (D)  $65 \text{ GN/m}^2$
- 13 For a given shear force, across a symmetrical I section, the intensity of shear stress is maximum at the
- (A) extreme fibres  
(B) centroid of the section  
(C) at the junction of the flange and the web, but on the web  
(D) at the junction of the flange and the web, but on the flange
- 14 If  $w$  is the load intensity,  $F$  the shear force and  $M$  the bending moment, which of the following relationship is correct?
- (A)  $dF/dx = M$  (B)  $dw/dx = F$  (C)  $dM/dx = w$  (D)  $dF/dx = w$
- 15 In a thin cylinder of diameter  $d$  and thickness  $t$ , subjected to internal pressure  $p$ , the hoop stress developed is given by
- (A)  $pd/4t$  (B)  $pd/2t$  (C)  $pd/8t$  (D)  $pd/6t$
- 16 In a shaft subjected to pure twist, the maximum shear stress occurs at
- (A) Centre of section (B) mid radius  
(C)  $3/4$  radius from centre (D) surface
- 17 The ratio of Euler buckling load for two columns with same material and geometric parameters having (i) both ends fixed and (ii) both ends pinned is
- (A) 2 (B) 4 (C)  $1/8$  (D) 8
- 18 Pressure of 10m head of water is .....
- (A)  $9.81 \text{ kN/m}^2$  (B)  $98.1 \text{ kN/m}^2$  (C)  $981 \text{ kN/m}^2$  (D)  $9810 \text{ kN/m}^2$



- 19 The flow of a liquid at constant rate in a conically tapered pipe is classified as :  
(A) Steady, non-uniform flow (B) steady, uniform flow  
(C) unsteady, uniform flow (D) unsteady, non-uniform flow
- 20 A Pitot tube is used to measure :  
(A) discharge (B) pressure head  
(A) velocity (D) energy
- 21 Coconut oil has .....viscosity when compared with water  
(a) Lower (b) equal (c) higher (d) None of these
- 22 For stable equilibrium of a floating body, its metacentre  
(A) coincides with centre of gravity (B) is below the centre of gravity  
(C) is above the centre of gravity (D) None of above
- 23 When a mouth piece is fitted, the discharge through an orifice :  
(A) Increases (B) Decreases (C) No change (D) No discharge
- 24 A Cipolletti weir has a side slope of  
(A) 1 Vertical : 4 Horizontal (B) 1 Vertical : 2 Horizontal  
(C) 1 Horizontal : 4 Vertical (D) 1 Horizontal : 2 Vertical
- 25 Degree of indeterminacy of a pin supported portal frame :  
(A) 1 (B) 2 (C) 3 (D) 4
- 26 A pin jointed plane truss with  $m$  number of members and  $j$  number of joints, is unstable if :  
(A)  $(m+3) < 2j$  (B)  $(m+3) = 2j$  (C)  $(m+3) > 2j$  (D) None of the above
- 27 Identify which among the following is not a method for finding deflections  
(A) Macaulay's method (B) Mohr's area moment theorems  
(C) Virtual work principles (D) Three moment theorem
- 28 In a two span continuous beam ABC ( $AB = BC$ ,  $EI$  – constant) simply supported at the ends with a uniformly distributed load over the entire length, the maximum bending moment occurs at  
(A) Mid span of AB (B) Mid span of BC  
(C) a point between centre of AB and centre of BC (D) support B
- 29 A concentrated load  $W$  is acting at a distance of 'a' from the left hand support of a three hinged arch of span  $2l$  and rise  $h$  hinged at the crown, the horizontal reaction at the support is  
(A)  $Wa/h$  (B)  $Wa/(2h)$  (C)  $2W/(ah)$  (D)  $2h/(Wa)$
- 30 A single concentrated load of 8kN rolls along a girder of 15 m span. The absolute maximum bending moment will be  
(A) 8 kN.m (B) 15 kN.m (C) 30 kNm (D) 60 kN.m

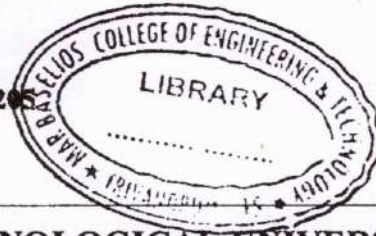
- 31 Types of steel reinforcement used in concrete structures:  
(A) Hot Rolled Deformed Bars (B) Mild Steel Plain bars  
(C) Prestressing Steel (D) All the above
- 32 Curing of pavements, floors, roofs and slabs, is done by  
(A) Membrane method (B) Ponding method  
(C) Covering surface with bags (D) Sprinkling water method
- 33 Out of the following which one is not a type of stone masonry  
(A) Veneer masonry (C) Fixer Masonry  
(B) Rubble Masonry (D) Ashlar Masonry
- 34 A volatile substance added to paint to make its application easy and smooth is known as:  
(A) Base (B) Solvent (C) Vehicle (D) None of these
- 35 Steps that are narrower on one side than the other and are used to change the direction of the stairs without landings  
(A) Trim (B) Volute (C) Winders (D) Stringer
- 36 Causes of Foundation failure is  
(A) Poor soil preparation (B) Water problems  
(C) Dry heat (D) All of the above
- 37 As per IS 456 nominal cover depends upon:  
(A) Grade of concrete (B) Grade of steel  
(C) Exposure conditions (D) Diameter of bar
- 38 Which type of failure is expected in over reinforced flexural members  
(A) Compression failure (B) Balanced failure  
(C) Tension failure (D) None of these.
- 39 Permissible tensile stress in M25 concrete is :  
(A)  $25 \text{ N/mm}^2$  (B)  $2.5 \text{ N/mm}^2$  (C)  $3.5 \text{ N/mm}^2$  (D)  $5 \text{ N/mm}^2$
- 40 Total area of side face reinforcement in a beam shall be:  
(A) 0.2% of web area (B) 0.1% of web area  
(C) 0.12% of web area (D) 0.15% of web area
- 41 For a column effectively held in position and restrained against rotation at both ends, the effective length as per IS 456 is :  
(A)  $1.0L$  (B)  $0.70L$  (C)  $0.65L$  (D)  $0.5L$
- 42 The span to depth ratio of a slab simply supported and spanning in two directions shall not exceed:  
(A) 25 (B) 30 (C) 35 (D) 40



- 43 For a two way slab the ratio of larger span to smaller span shall be :  
(A) equal to 3 (B) less than 3  
(C) greater than 3 (D) less than 2
- 44 Porosity of a soil is  $1/3$ . Void ratio of the soil is .....  
(A) 0.25 (B) 0.5 (C) 0.75 (D) 1
- 45 Effective stress concept was enunciated by:  
(A) Cassagrande (B) Atterberg (C) Terzaghi (D) Proctor
- 46 Liquid limit and plastic limit of a fine grained soil are 120% and 30% respectively. As per IS the soil is classified as :  
(A) CL (B) CH (C) MI (D) MH
- 47 Read the following statements related to IS light compaction test.  
I. Soil is always compacted in 3 layers in the compaction mould.  
II. Each layer is always given 25 blows.  
Select the correct answer from among the following:  
(A) Statement I is TRUE and Statement II is FALSE  
(B) Statement II is TRUE and Statement I is FALSE  
(C) Both Statements are TRUE  
(D) Both Statements are FALSE
- 48 The water level in a lake rises by 2m. The increase in effective stress at a depth of 1m below the bed level of the lake, due to above increase in water level would be (saturated unit weight of soil bed =  $18\text{kN/m}^3$ , unit weight of water =  $10\text{kN/m}^3$ )  
(A) 18kPa (B) 8kPa (C) 20kPa (D) zero
- 49 Choose the soil property useful for estimation of rate of consolidation settlement of a clay soil:  
(A) Compression index (B) Uniformity coefficient  
(C) Coefficient of consolidation (D) Time factor
- 50 Angle of internal friction of a purely cohesive soil is :  
(A)  $45^\circ$  (B)  $30^\circ$  (C) 0 (D)  $60^\circ$

\*\*\*\*





Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

SIXTH SEMESTER B.TECH DEGREE COMPREHENSIVE EXAMINATION(S), DECEMBER 2019

**Course Code: CE352****Course name: COMPREHENSIVE EXAM**

Max. Marks: 50

Duration: 1 Hour

**Instructions:**

- (1) Each question carries one mark. No negative marks for wrong answers
- (2) Total number of questions: 50
- (3) All questions are to be answered. Each question will be followed by 4 possible answers of which only ONE is correct.
- (4) If more than one option is chosen, it will not be considered for valuation.
- (5) Calculators are not permitted

**PART A- COMMON COURSES**

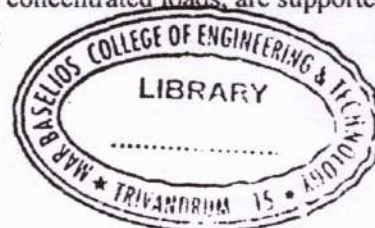
1. The sum of the series  $\sum_{k=0}^{\infty} \left(\frac{1}{3}\right)^k$  is  
 a)  $\frac{1}{3}$                       b)  $\frac{2}{3}$                       c)  $\frac{1}{2}$                       d) 1
2. The solution of the differential equation  $y'' - 4y' + 4y = 0$  is  
 a)  $y = (A + Bx)e^{2x}$     b)  $y = (A + Bx)e^{-2x}$     c)  $y = (A + Bx)e^x$     d)  $y = (A + Bx)e^{-x}$
3. The resultant of two equal forces has the same magnitude as either of the forces, then the angle between the two forces is  
 a)  $120^\circ$                       b)  $30^\circ$                       c)  $90^\circ$                       d)  $60^\circ$
4. Two bodies of masses  $m_1$  and  $m_2$  are dropped from the top of a tower of same height. When these bodies reach the ground, their kinetic energies will be in the ratio  
 a) 1 : 2                      b) 1 :  $\sqrt{2}$                       c) 1 : 4                      d) 1 : 1
5. The top view of a pentagonal prism with axis perpendicular to the vertical plane and parallel to horizontal plane will be a  
 a) Pentagon                      b) Rectangle                      c) Trapezoid                      d) Straight line
6. In perspective projection the object is assumed to be kept on which of these planes.  
 a) Picture plane                      b) Horizon plane                      c) Ground plane                      d) Central plane
7. Which is the most abundant element available in the atmosphere?  
 a) Oxygen                      b) Nitrogen                      c) Argon                      d) Carbon di oxide
8. The total amount of greenhouse gases produced to directly and indirectly support human activities, usually expressed in equivalent tons of carbon dioxide  
 a) Carbon Dating                      b) Carbon Trading                      c) Carbon Footprint                      d) Carbon Factor
9. One of the pins in a 3 pin plug top is bigger than the rest. This is most closely related to design for 'X', where 'X' is  
 a) Assembly                      b) Manufacturing                      c) Life cycle Cost                      d) Environment



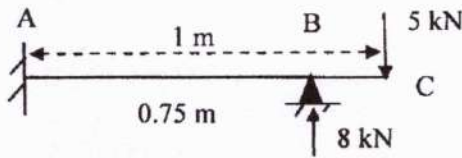
10. Which of the following can be most appropriately associated with the design space of a ball?  
 a) Speed                      b) Velocity                      c) Diameter                      d) Height

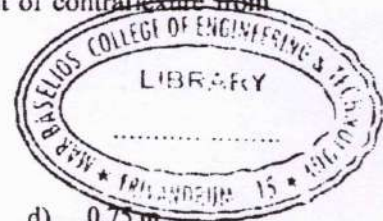
**PART B- CORE COURSES**

11. Elongation of a bar of uniform cross section having unit area of length 'L', due to its own weight 'W' is given by  
 a)  $2WL/E$                       b)  $WL/E$                       c)  $WL/2E$                       d)  $WL/3E$
12. If a material neither expands nor contracts in volume when subjected to stresses, then the Poisson's ratio must be  
 a) 0.25                      b) 0.33                      c) 0.5                      d) zero
13. A uniformly distributed load  $w$  in kN/m is acting over the entire length of a 3m long cantilever beam. If the shear force at the midpoint of cantilever is 6 kN, what is the value of  $w$ ?  
 a) 2                      b) 3                      c) 4                      d) 5
14. If two equal tensile stresses  $\sigma$  that are mutually perpendicular act on a rectangular parallelepiped bar with material properties  $E$  and  $\mu$ , the resulting strain of the bar is given by  
 a)  $\frac{\sigma}{E}(1 + \mu)$                       b)  $\frac{\sigma}{E}(1 - \mu)$                       c)  $\frac{\sigma}{E}(1 + 2\mu)$                       d)  $\frac{\sigma}{E}(1 - 2\mu)$
15. According to Euler's column theory, the crippling load of a column is given by  $P = \pi^2 EI/C^2$ . In the Euler's formula, the value of  $C$  for a column with one end fixed and the other end free, is  
 a) 5/8                      b) 8/5                      c) 5/4                      d) 4/5
16. The polar modulus (torsional section modulus) for a solid shaft of diameter ( $D$ ) is  
 a)  $\frac{\pi D^2}{4}$                       b)  $\frac{\pi D^3}{16}$                       c)  $\frac{\pi D^3}{32}$                       d)  $\frac{\pi D^4}{64}$
17. For a circular shaft subjected to torsion, the variation of shear stress across the section is  
 a) Parabolic with maximum stress at centre                      b) uniform over the section                      c) Linear with zero at centre                      d) linear with maximum at centre
18. Strain energy due to axial load  $P$  in a member with cross sectional area  $A$ , moment of inertia  $I$  is  
 a)  $\int P^2 dx/AE$                       b)  $\int P^2 dx/EI$                       c)  $\int P^2 dx/2EI$                       d)  $\int P^2 dx/2AE$
19. The prop reaction of a propped cantilever of span  $L$ , subjected to udl of intensity  $w$  over full span is  
 a)  $3wL/8$                       b)  $5wL/8$                       c)  $wL/8$                       d)  $9wL/8$
20. A UDL shorter than the half the span crosses a simply supported beam from left to right. The shear at left support is maximum when the UDL is placed  
 a) With its head at mid span                      b) With its tail at support A                      c) With its head at support A                      d) With its head at support B
21. The ends of a cable, which carries 3 equally spaced concentrated loads, are supported at different levels. Horizontal reaction at the supports:



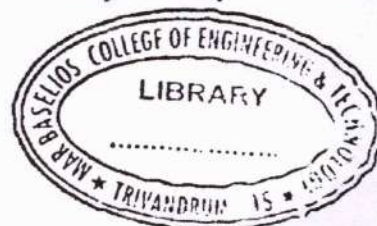


- a) More at the support which is at higher level      b) More at the support which is at lower level      c) equal      d) Cannot be generalised
22. A beam AB (span  $L$ , flexural rigidity  $EI$ ) is fixed at A and B. The support B settles by  $\Delta$ . The effect is
- a) A moment of  $\frac{6EI\Delta}{L^2}$  is induced at A only      b) A moment of  $\frac{6EI\Delta}{L^2}$  is induced at B only      c) Moment of  $\frac{6EI\Delta}{L^2}$  is induced at A and B      d) Moment of  $\frac{6EI\Delta}{L^2}$  at A and  $\frac{3EI\Delta}{L^2}$  at B
23. The analysis of a statically indeterminate beam can be done by
- a) Equations of equilibrium      b) Equations of displacements or deformations      c) Both (a) and (b)      d) None of the above.
24. The beam ABC shown in figure is horizontal. The distance to the point of contraflexure from the fixed end 'A' is
- 
- a) 0.333 m      b) 0.666 m      c) 0.25 m      d) 0.75 m
25. A uniform body 3m long, 2m wide and 1m deep floats in water. If the depth of immersion is 0.6m, the weight of the body is
- a) 3.53kN      b) 33.5kN      c) 35.3kN      d) 25.2kN
26. In pipe flow the critical Reynolds number is about
- a) 640      b) 500      c) 2000      d) 64000
27. The velocity vector in a fluid is given  $V=5x^4+3y^2+2z$  (in metre/sec). What is the acceleration of it at point (1,3,4) ?
- a)  $40 \text{ m/s}^2$       b)  $20 \text{ m/s}^2$       c)  $60 \text{ m/s}^2$       d)  $80 \text{ m/s}^2$
28. The flow in a pipe is said to be non-uniform when
- a) The liquid particles at all sections have the same velocities      b) The liquid particles at different sections have different velocities      c) The quantity of liquid flowing per second is constant      d) Each liquid particle has a definite path
29. Streamline and an equipotential line in a flow field
- a) Are parallel to each other      b) Are perpendicular to each other      c) Intersect at an acute angle      d) Are identical
30. Boundary layer thickness is the distance from the boundary to the point where velocity of the fluid is
- a) equal to 10% of free stream velocity      b) equal to 50% of free stream velocity      c) equal to 90% of free stream velocity      d) equal to 99% of free stream velocity





31. Mild steel contains carbon content up to  
 a) 0.25%                      b) 0.25 to 0.7%                      c) 0.7 to 1.5%                      d) >2%
32. Impact value of aggregate for concrete used in wearing surface  
 a) Not greater than 45%                      b) Not greater than 30%                      c) Not less than 15%                      d) Not greater than 15%
33. Most commonly used admixture in concrete to reduce the setting time of cement is  
 a) Calcium sulphate                      b) Calcium chloride                      c) Natural wood resins                      d) Pozzolana
34. A roof which slopes in 4 direction is called?  
 a) Shed roof                      b) Hipped                      c) Gambrel roof                      d) Gable end roof
35. The voussoir placed at crown of an arch is known as?  
 a) Key                      b) Soffit                      c) Springer                      d) Haunch
36. The process of injecting mortar with low water cement ratio at a high pressure through a nozzle to repair cracks in concrete is called  
 a) Grouting                      b) Shotcreting                      c) Guniting                      d) None of the above
37. Cohesionless soils are formed due to  
 a) Oxidation of rocks                      b) Leaching action of water on rocks                      c) Physical disintegration of rock                      d) Blowing of hot and cold wind
38. The ratio of saturated unit weight to dry unit weight of a soil is 1.25. The water content of the soil is  
 a) 10%                      b) 25%                      c) 50%                      d) 100%
39. The toughness index of clayey soils is given by  
 a) Plasticity Index/ Flow Index                      b) Liquid limit/ Plastic limit                      c) Liquidity Index/ Plastic Limit                      d) Plastic limit/ Liquidity index
40. Unconfined compressive strength of a pure clayey soil is given by  $120 \text{ kN/m}^2$ , what will be the value of cohesion?  
 a) 0                      b)  $60 \text{ kN/m}^2$                       c)  $120 \text{ kN/m}^2$                       d)  $240 \text{ kN/m}^2$
41. Square Root time method is to determine  
 a)  $T_v$ , Time factor                      b)  $a_v$ , Coefficient of compressibility                      c)  $C_v$ , Coefficient of consolidation                      d)  $m_v$ , Coefficient of volume compressibility
42. In the stability analysis of finite slopes, the Swedish Circle method assumes that the surface of sliding is  
 a) An Arc of a parabola                      b) Straight line                      c) An elliptical arc                      d) An arc of a Circle
43. Compaction by vibratory roller is the best method of compaction in the case of  
 a) Moist Silty Sand                      b) Well graded dry sand                      c) Clay of medium compressibility                      d) Silt of high compressibility



44. The modulus of rupture of concrete is
- a) The direct tensile strength of concrete      b) The direct compressive strength of concrete      c) The tensile strength of concrete under bending      d) The characteristic strength of concrete
45. As per IS 456-2000, in the limit state design of flexural member, the strain in reinforcing bars under tension at ultimate state should not be less than
- a)  $\frac{f_y}{E_s}$       b)  $\frac{f_y}{E_s} + 0.002$       c)  $\frac{f_y}{1.15 E_s}$       d)  $\frac{f_y}{1.15 E_s} + 0.002$
46. The limiting strain in an extreme fibre in concrete in a balanced section at limit state of flexure as per IS 456: 2000 is
- a) 0.002      b) 0.0035      c) 0.0038      d) 0.0041
47. For limit state of collapse in flexure of singly reinforced beams, if the strain in steel reaches the limiting value earlier than that in concrete, the beam section is called
- a) Under reinforced section      b) Critical section      c) Over reinforced section      d) Balanced section
48. The span to depth ratio limit is specified in IS 456-1978 for the reinforced concrete beams, in order to ensure that the
- a) Tensile crack width is below a limit      b) Shear failure is avoided      c) Stress in the tension reinforcement is less than the allowable value      d) Deflection of the beam is below a limiting value
49. If  $d$  is the diameter of a bar,  $f_t$  is allowable tensile stress and  $f_b$  is allowable bond stress, the bond length is given by
- a)  $\frac{f_t d}{4 f_b}$       b)  $\frac{\pi f_t d}{4 f_b}$       c)  $\frac{\pi f_t d^2}{f_b}$       d)  $\frac{\pi f_t d^2}{4 f_b}$
50. The load carrying capacity of a helically reinforced column as compared to that of a tied column is about
- a) 5% less      b) 10% less      c) 5% more      d) 10% more



\*\*\*\*



DEGREE / BRANCH..... MECHANICAL.....  
SEMESTER..... 6<sup>th</sup>..... SUBJECT CODE..... MET308.....  
SUBJECT..... COMPREHENSIVE COURSE WORK.....  
CLASSES  
COMMENCING DATE .....ENDING DATE.....  
ACADEMIC YEAR .....



# **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**P.O. CHALAKKODE - PAYYANUR.**

*Approved by AICTE, New Delhi, Affiliated to APJ Abdul Kalam Technological University, and Managed by Sree Bhakthi Samvardhini Yogam, Talap, Kannur*

## **ATTENDANCE AND ASSESSMENT RECORD**





# **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**P.O. CHALAKKODE - PAYYANUR.**

Approved by AICTE, New Delhi, Affiliated to APJ Abdul Kalam Technological University, and Managed by Sree Bhakthi Samvardhini Yogam, Talap, Kannur

## **ATTENDANCE AND ASSESSMENT RECORD**

NAME OF STAFF ..... *Rahul. C. G.* .....

DESIGNATION ..... *Assistant Professor* .....

DEPARTMENT ..... *Mechanical.* .....

| CLASS<br>ROLL<br>NO. | NAME                       | MONTH<br>DATE<br>HOUR | 2 | 2  | 2  | 2  | 3 | 3  | 4 | 4  | 4  | 6 |
|----------------------|----------------------------|-----------------------|---|----|----|----|---|----|---|----|----|---|
|                      |                            |                       | 9 | 10 | 21 | 28 | 8 | 31 | 4 | 11 | 18 | 9 |
|                      |                            |                       | 1 | 1  | 1  | 1  | 2 | 2  | 2 | 2  | 2  | 2 |
| 1                    | ARJUN SHYLESH              |                       | X | X  | X  | X  | A | X  | X | X  | X  | X |
| 2                    | ASHISH. K. K.              |                       | X | A  | X  | X  | A | X  | X | X  | X  | X |
| 3                    | ASHWIN JOHN                |                       | X | X  | X  | A  | A | X  | X | X  | X  | X |
| 4                    | ASWIN BABU. M.V            |                       | X | X  | A  | X  | X | X  | A | X  | X  | X |
| 5                    | ASWIN. P.P                 |                       | X | X  | A  | A  | X | X  | X | X  | X  | X |
| 6                    | DHEERAJ. K.V               |                       | X | X  | X  | A  | A | X  | X | X  | X  | X |
| 7                    | K.N. MUHAMMED MISHAL       |                       | X | X  | X  | A  | A | X  | X | X  | X  | X |
| 8                    | MAJID. V.V                 |                       | X | X  | X  | A  | A | X  | X | X  | X  | X |
| 9                    | MOHAMMED SHAD ABDUL SATHAR |                       | X | X  | X  | A  | X | X  | X | X  | X  | X |
| 10                   | SOURAG. K                  |                       | X | X  | A  | X  | A | X  | X | X  | X  | X |

|    |    |    |    |  |  |  |  |  |  |  |  |  |
|----|----|----|----|--|--|--|--|--|--|--|--|--|
| 6  | 6  | 6  | 6  |  |  |  |  |  |  |  |  |  |
| 13 | 16 | 20 | 23 |  |  |  |  |  |  |  |  |  |
| 2  | 2  | 2  | 1  |  |  |  |  |  |  |  |  |  |
| X  | X  | X  | A  |  |  |  |  |  |  |  |  |  |
| X  | X  | X  | A  |  |  |  |  |  |  |  |  |  |
| X  | X  | X  | A  |  |  |  |  |  |  |  |  |  |
| X  | X  | A  | X  |  |  |  |  |  |  |  |  |  |
| X  | X  | X  | A  |  |  |  |  |  |  |  |  |  |
| X  | X  | X  | A  |  |  |  |  |  |  |  |  |  |
| X  | X  | A  | X  |  |  |  |  |  |  |  |  |  |
| X  | X  | A  | X  |  |  |  |  |  |  |  |  |  |
| X  | X  | X  | A  |  |  |  |  |  |  |  |  |  |
| X  | X  | X  | A  |  |  |  |  |  |  |  |  |  |

R R R R R R R R R R

R R R R R R R R R R



### AWARDING OF MARKS

[illegible]

Signature of Staff Member

**Module Co-ordinator**





# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY,

## COURSE TEAM MEETING CHECKLIST

**SEMESTER:**

**DATE OF THE MEETING:**

**VENUE:**

**TIME:**

1. NAME OF THE FACULTY: RAHUL. C. G
2. DEPARTMENT: MECHANICAL ENGINEERING
3. SUBJECT CODE AND NAME: MET 308 : COMPREHENSIVE COURSE WORK
4. DETAILS REGARDING THE SUBJECT:

|                                                                                           |                             |
|-------------------------------------------------------------------------------------------|-----------------------------|
| WHETHER HANDLING SUBJECT FOR THE FIRST TIME? IF NOT MENTION THE COUNT EXCLUDING THIS TIME |                             |
| TARGET PASS PERCENTAGE                                                                    | 75%                         |
| NATURE OF THE SUBJECT                                                                     | EASY / MODERATE / TOUGH ✓   |
| CPS                                                                                       | COMPLETED / NOT COMPLETED ✓ |
| ATTENDANCE REGISTER                                                                       | COMPLETED / NOT COMPLETED   |
| ASSESSMENT PLAN                                                                           | FILED / NOT FILED           |
| ACADEMIC CALENDAR                                                                         | FILED / NOT FILED           |
| QP & SCHEME OF FIRST ASSIGNMENT                                                           | AVAILABLE / NOT AVAILABLE   |
| QP & SCHEME OF SERIES TEST 1                                                              | AVAILABLE / NOT AVAILABLE   |
| FEEDBACK OF THE TUTOR REGARDING THE CLASS                                                 |                             |
| ACTION PLAN BY THE FACULTY TO ACHEIVE TARGET PASS PERCENTAGE                              |                             |
| ANY OTHER REMARKS FROM THE FACULTY                                                        |                             |

FACULTY

COURSE CHAIRMAN



**CUMULATIVE ATTENDENCE**

**TOTAL HOURS=16**

| ROLL NO | REGISTER NO | NAME                       | ATTENDENCE % |
|---------|-------------|----------------------------|--------------|
| 1       | SNC20ME001  | ARJUN SHYLESH              | 86           |
| 2       | SNC20ME002  | ASHISH K                   | 84           |
| 3       | SNC20ME003  | ASHWIN JOHN                | 83           |
| 4       | SNC20ME004  | ASWIN BABU M V             | 82           |
| 5       | SNC20ME005  | ASWIN P P                  | 87           |
| 6       | SNC20ME006  | DHEERAJ K V                | 84           |
| 7       | SNC20ME007  | KN MUHAMMED MISHAL         | 82           |
| 8       | SNC20ME008  | MAJID V V                  | 82           |
| 9       | SNC20ME009  | MOHAMMED SHAD ABDUL SATHAR | 89           |
| 10      | SNC20ME010  | SOURAG K                   | 84           |



**INTERNAL MARKS (45 MARKS)**

| ROLL NO | REGISTER NO | NAME                       | TEST 1 | TEST 2 |
|---------|-------------|----------------------------|--------|--------|
| 1       | SNC20ME001  | ARJUN SHYLESH              | 10     | 32     |
| 2       | SNC20ME002  | ASHISH K                   | 15     | 33     |
| 3       | SNC20ME003  | ASHWIN JOHN                | 15     | 37     |
| 4       | SNC20ME004  | ASWIN BABU M V             | 12     | 28     |
| 5       | SNC20ME005  | ASWIN P P                  | 11     | 24     |
| 6       | SNC20ME006  | DHEERAJ K V                | 13     | 27     |
| 7       | SNC20ME007  | KN MUHAMMED MISHAL         | 10     | 30     |
| 8       | SNC20ME008  | MAJID V V                  | 11     | 29     |
| 9       | SNC20ME009  | MOHAMMED SHAD ABDUL SATHAR | 9      | 31     |
| 10      | SNC20ME010  | SOURAG K                   | 13     | 32     |





**APJ Abdul Kalam Technological University**  
**CET Campus, Thiruvananthapuram**  
**Kerala -695016**  
**India**

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

Students Examination Eligibility Details

**Academic Year : 2022 - 2023**

**Degree Type : Regular**

**Program :  
B.Tech(Full Time)**

**Branch : MECHANICAL ENGINEERING**

**Semester : S6**

**Course Name : COMPREHENSIVE COURSE  
WORK-MET308**

**Batch : 1**

**Eligibility For : Pursuing Students**

**Period of Registration : NA**

| Student Name                                  | Attendance<br>%, Internal<br>Marks          | Availed<br>Leaves            | Disc. Action | Eligible<br>for<br>Written<br>Exam | Status:                 | In-<br>eligibility<br>Type |
|-----------------------------------------------|---------------------------------------------|------------------------------|--------------|------------------------------------|-------------------------|----------------------------|
| ARJUN SHYLESH<br>Register No :<br>SNC20ME001  | Attendance :<br>86.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |              | Yes                                | Submitted by<br>faculty |                            |
| ASHISH K<br>Register No :<br>SNC20ME002       | Attendance :<br>84.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |              | Yes                                | Submitted by<br>faculty |                            |
| ASHWIN JOHN<br>Register No :<br>SNC20ME003    | Attendance :<br>83.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |              | Yes                                | Submitted by<br>faculty |                            |
| ASWIN BABU M V<br>Register No :<br>SNC20ME004 | Attendance :<br>82.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |              | Yes                                | Submitted by<br>faculty |                            |

|                                                              |                                             |                              |  |     |                         |  |
|--------------------------------------------------------------|---------------------------------------------|------------------------------|--|-----|-------------------------|--|
| ASWIN P P<br>Register No :<br>SNC20ME005                     | Attendance :<br>87.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>faculty |  |
| DHEERAJ K V<br>Register No :<br>SNC20ME006                   | Attendance :<br>84.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>faculty |  |
| KN MUHAMMED<br>MISHAL<br>Register No :<br>SNC20ME007         | Attendance :<br>82.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>faculty |  |
| MAJID V V<br>Register No :<br>SNC20ME008                     | Attendance :<br>82.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>faculty |  |
| MOHAMMED SHAD<br>ABDUL SATHAR<br>Register No :<br>SNC20ME009 | Attendance :<br>89.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>faculty |  |
| SOURAG K<br>Register No :<br>SNC20ME010                      | Attendance :<br>84.0<br>Internal Marks<br>: | Long Leave :<br>Duty Leave : |  | Yes | Submitted by<br>faculty |  |





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY,**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**STUDENTS NAME LIST -S6**

| <b>ROLL<br/>NO</b> | <b>REGISTER NO</b> | <b>NAME OF STUDENT</b>     |
|--------------------|--------------------|----------------------------|
| 1                  | SNC20ME001         | ARJUN SHYLESH              |
| 2                  | SNC20ME002         | ASHISH K K                 |
| 3                  | SNC20ME003         | ASHWIN JOHN                |
| 4                  | SNC20ME004         | ASWIN BABU M V             |
| 5                  | SNC20ME005         | ASWIN P P                  |
| 6                  | SNC20ME006         | DHEERAJ K V                |
| 7                  | SNC20ME007         | KN MUHAMMED MISHAL         |
| 8                  | SNC20ME008         | MAJID V V                  |
| 9                  | SNC20ME009         | MOHAMMED SHAD ABDUL SATHAR |
| 10                 | SNC20ME010         | SOURAG K                   |





# **SREE NARAYANA GURU COLLEGE OF ENGINEERING** **& TECHNOLOGY**

## **PEER EVALUATION FORM**

### **FORM 1**

**[TO BE FILLED BY THE OBSERVER AND THE OBSERVEE AFTER DISCUSSION]**

#### **PEER SUPPORT FOR LEARNING & TEACHING THROUGH OBSERVATION**

##### **PART 1: PRE-OBSERVATION MEETING**

The faculty being observed should complete this form in preparation for a short meeting with their peer observation group / observer prior to the session to be observed.

##### ***Peer Observation Group:***

1. Name & Department ..... DIVYATHEJ. M.V., Mechanical.

2. Name & Department .....

##### ***Details of Teaching / Learning Session to be observed:***

Observed: Rahul C.G., Mechanical.

Observer: Divyathej. M.V., Mechanical

Day / Date / Time: 18/04/2023

Group / Location: ME-SG.

Type of Session / Duration: Lecture.

No of Students: 10

Topic / Title of Session: Basic Thermodynamic Concepts.

##### ***What are the objectives for the session (both for you and for the students)?***

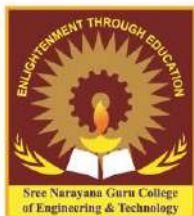
To understand the concept of basic thermodynamic concepts and working principle.

**What would you like feedback on? (e.g. use of visual aids / the white board, your voice, interaction with the students, pace, use of examples, use of new techniques etc.)**

- Communication skills
- Language
- Voice clarity.
- PPT presentations

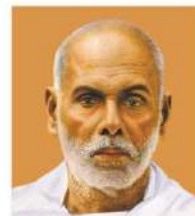
**Are there any factors which the observer needs to be aware of? (e.g. problems relating to the group or individual students, you are trying out something new etc.)**

- Student Interaction.



# **Sree Narayana Guru College of Engineering & Technology**

CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307



AY 2021 – 2022  
(PLACEMENT ACTIVITIES, STUDENTS PLACED  
ON AND OFF CAMPUS,  
HIGHER STUDIES)





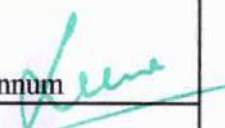
## Sree Narayana Guru College of Engineering & Technology

CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307



### 5.1.3 Percentage of Placement of ongoing students and students progressing to higher education

| Year    | Name of student placed | Program graduated from                              | Name of the employer with contact details | Pay package at appointment (In INR per annum) (applicable for students who got placement) |
|---------|------------------------|-----------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------|
| 2021-22 | AMAL P R               | BTECH IN CIVIL ENGINEERING                          | CAPEGEMINI                                | 400010                                                                                    |
|         | REVATHI K              | BTECH IN CIVIL ENGINEERING                          | CAPEGEMINI                                | 400010                                                                                    |
|         | VISMAYA SREEJITH       | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | TCS                                       | 3.5 L/Annum                                                                               |
|         |                        |                                                     | ZERONE                                    | 3.5 L/Annum                                                                               |
|         | C ATHIRA               | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | TCS                                       | 3.5 L/Annum                                                                               |
|         |                        |                                                     | Capgemini                                 | 3.5 L/Annum                                                                               |
|         | AKSHAYA M.K.           | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | ibsSoftware                               |                                                                                           |
|         |                        |                                                     | Capgemini                                 | 3.5 L/Annum                                                                               |
|         | AISWARYA SURENDRAN     | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | Infosys                                   | 3.5 L/Annum                                                                               |
|         |                        |                                                     | Capgemini                                 | 3.5 L/Annum                                                                               |
|         | SANDRA M               | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | Infosys                                   | 3.5 L/Annum                                                                               |
|         | PRANOY PRAMOD          | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | Capgemini                                 | 3.5 L/Annum                                                                               |
|         | VRINDA RAMACHANDRAN    | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | TCS                                       | 3.3L/annum                                                                                |
|         | SORAV RITHIN PM        | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | Valorem Reply                             | 4L/annum                                                                                  |

  
 Dr. LEENA A V  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR

|  |           |                                                        |           |          |
|--|-----------|--------------------------------------------------------|-----------|----------|
|  | MABITHA C | B TECH IN ELECTRONICS AND<br>COMMUNICATION ENGINEERING | Capgemini | 4L/annum |
|--|-----------|--------------------------------------------------------|-----------|----------|

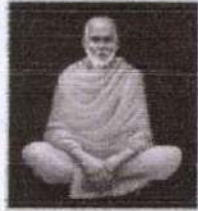
  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR





## **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

Promoted by Sree Bhakthi Samvardhini Yogam, Kannur  
Affiliated to KTU & Recognised by AICTE, New Delhi  
Payyanur, Kannur, Kerala, Pin-670307  
Office-04985-201989, 7812911912 Email-info@sngcet.org



Institutions Code

**SNC**

**The Training & Placement Cell at SNGCET presents**

## **A Meet with the HR**

### **Key Topics**

- . How to Build a Resume
- . How to face Interviews confidently
- . What the corporate expects from you



**10th May 2022**

**10am to 12 Noon**

**Venue: Seminar Hall**

**For the students of S6 and S8**

### **Student co ordinators**

**Aswitha Gangadharan**  
(S6-CE- College Union General Secretary)  
**Keerthana C V**  
(S6-EC)

### **Our Speaker**



**Dr. Surekha S Nair**

**Director-HR (India & Middle East)**  
**Eurofins India Pvt. Ltd.**

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY**

(PROMOTED BY SREE BHAKTHI SAMVARDHINI YOGAM, KANNUR)  
CHALAKODE P.O., PAYYANUR, KANNUR - 670307, KERALA.



**Training and Placement Cell, SNGCET**  
*presents*

**"A Meet with the HR"**

**AGENDA**

*Prayer*

*Welcome Address*

Prof. Raveendran K, HoD/ECE & EEE

*Presidential Address*

Dr. Leena A. V., Principal

*Felicitations Address*

Sri. Ashok Hegde L., AO

*Guest of Honour*

**Dr. Surekha Nair**

**Director- HR (India and Middle East), Eurofins India Pvt. Ltd**

*Introduction of Chief Guest*

Ms. Sanishma Sachithanand, S6 ECE

*Vote of Thanks*

Ms. Aswitha Gangadharan, S6 CE  
General Secretary, College Union, SNGCET

We will be pleased to see you at the inaugural function of the workshop on Tuesday, 10<sup>th</sup> May 2022

Venue  
**Seminar hall**

Time  
**10.00AM - 12Noon**

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



## SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

### TRAINING & PLACEMENT CELL


### REPORT ON A MEET WITH HR

**Date: 10/05/2022**

**Venue: Seminar Hall**

Training and Placement Cell is to guide students to choose right career and to give knowledge, skill, and aptitude and meet the manpower requirements of the industry. The industry is always on the lookout for students who are vibrant, energetic individuals and ready to accept challenges, attentive, a good academic background, fast learners, open to learning even at work and more importantly, good communication skills. Our college Training and Placement cell conducted a one day Seminar focusing on our students' skill development and to prepare them for the interviews. This activity focused on the personality development to make the students reliable, with a positive attitude and right decision making. We were honoured with an eminent personality, Dr. Surekha S Nair, who engaged the session. She is a Human Resources Leader with more than 2 decades of transforming organizations by designing future-ready, sustainable and scale-able HR ecosystems. The session came to be a great success with our students getting an opportunity to interact with Dr. Surekha S Nair, who helped them to learn about the non-academic expectations that a company expects from the candidates.



  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



| S/NO | NAME OF THE STUDENT     | SIGN |
|------|-------------------------|------|
| 1.   | AATHISH P JAGADEESH     |      |
| 2.   | ABHINAV.A.P             |      |
| 3.   | AHMED ADIL              |      |
| 4.   | AJMAL                   |      |
| 5.   | ALTHAF ASHRAF.K.V       |      |
| 6.   | AMAR RAJENDRAN          |      |
| 7.   | AMRITHA RAJEEVAN.M      |      |
| 8.   | ANAGHA.K                |      |
| 9.   | ANAGHA.M                |      |
| 10.  | ARCHANA CHITHRAN.K      |      |
| 11.  | AVANTIKA.K              |      |
| 12.  | FATHIMATHU SAHALA BEEVI |      |
| 13.  | SREENISHA.K.P           |      |
| 14.  | THANMAYA SANJEEV        |      |
| 15.  | THANYA MOHAN            |      |
| 16.  | THEJA RAJESH            |      |
| 17.  | U.V.VAISHNAV            |      |
| 18.  | VARUN                   |      |
| 19.  | VISHNU PRABHAKARAN      |      |
| 20.  | VISHNU.R                |      |
| 21.  | V.K.AYSHA               |      |
| 22.  | ABHIJITH RAMRAJ P K     |      |
| 23.  | JIJO JAISON             |      |
| 24.  | ADARSH K                |      |
| 25.  | JEEVA NARAYANAN         |      |
| 26.  | KAVYA DEVI.M.K          |      |
| 27.  | MANILA MAHESH           |      |
| 28.  | MEGHA.P.K               |      |
| 29.  | NIPUN S ANAND           |      |
| 30.  | PALLAVI SWAROOP KUMAR   |      |
| 31.  | PARVATHI.K              |      |
| 32.  | RAMRITHA RAJEEVAN       |      |
| 33.  | SAFA FATHIMA            |      |
| 34.  | SAFA SAYEED.V           |      |
| 35.  | SIDHARTH.K              |      |
| 36.  | SMIJITH.M               |      |
| 37.  | MOHAMMED RAMADAN ANWAR  |      |
| 38.  | MRIDUL C                |      |
| 39.  | NITHIN A                |      |
| 40.  | SAFVAN I M              |      |
| 41.  | SANDESH K DINESH        |      |
| 42.  | SREEHARI S NAMBIAR      |      |
| 43.  | VIDYASAGAR P            |      |
| 44.  | ANUSHA JYOTHI           |      |
| 45.  | DEVI KEERTHANA T P      |      |
| 46.  | VAISHNAV T V            |      |
| 47.  | VISHAL K                |      |
| 48.  | ARJUN ASHOK K           |      |
| 49.  | JITHIN SASIDHARAN N V   |      |
| 50.  | KEERTHANA C V           |      |
| 51.  | MARIYAMBI               |      |
| 52.  | SANISHMA SACHITHANAND   |      |

  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR





Sree Narayana Guru  
College of Engineering  
and Technology

Estd: 2003

## Sree Narayana Guru College of Engineering & Technology

P.O. Chalakode, Payyanur - 670 307, Kannur Dist., Kerala State.

(Approved by AICTE New Delhi and Affiliated to APJ Abdul Kalam Technological University)

Managed by Sree Bhakthi Samvardhini Yogam, Kannur-2.



Ph: 04985-201987, 201988, 201989 EPABX: 201702, 703, 709 Fax: 04985-201988

Email: info@sngcet.org sngcet@bsnl.in

Website: sngcet.org

### *Vision*

A knowledge society promoting  
human excellence and enlightenment  
through effective education

### *Mission*

To provide technical education of the highest quality  
and standard of excellence for socio-economic progress  
embedded in clearly articulated values  
and supported by commitments

# Class Record THEORY

Department Electronics & Communications Engineering

Faculty Meera M

Academic Year 2021-2022

Branch ECE

Course ECT308 Comprehensive work

  
Semester IV  
**DR. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

**DEPARTMENT OF :** Electronics & Communication Engineering

**CLASS RECORD  
THEORY**

**NAME**

: Meena. M

**DESIGNATION**

: Assistant Professor.

**ACADEMIC YEAR**


: 2021-2022



**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

### Class Attendance

| Sl.No     | Reg. No.   | Name                   |
|-----------|------------|------------------------|
| 1.        | SNC19EC001 | Arjun Ashok            |
| 2.        | SNC19EC002 | Jithin Sasidharan - N. |
| 3.        | SNC19EC003 | Keerthana - C.V        |
| 4.        | SNC19EC004 | Mariyambi              |
| 5.        | SNC19EC005 | Sanishma Sachithan     |
| 6.        |            |                        |
| 7.        |            |                        |
| 8.        |            |                        |
| 9.        |            |                        |
| 10.       |            |                        |
| 11.       |            |                        |
| 12.       |            |                        |
| 13.       |            |                        |
| 14.       |            |                        |
| 15.       |            |                        |
| 16.       |            |                        |
| 17.       |            |                        |
| 18.       |            |                        |
| 19.       |            |                        |
| 20.       |            |                        |
| 21.       |            |                        |
| 22.       |            |                        |
| 23.       |            |                        |
| 24.       |            |                        |
| 25.       |            |                        |
| 26.       |            |                        |
| 27.       |            |                        |
| 28.       |            |                        |
| 29.       |            |                        |
| 30.       |            |                        |
| 31.       |            |                        |
| 32.       |            |                        |
| 33.       |            |                        |
| 34.       |            |                        |
| 35.       |            |                        |
| Signature |            |                        |

| Sl.No | 6 7 7 7 7 7 7 7 7 7 7 7                                                               |   |   |   |   |   |   |   |   |   |   |   |
|-------|---------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|
|       | 30 4 5 5 7 7 7 21 21 21 26                                                            |   |   |   |   |   |   |   |   |   |   |   |
|       | 6 4 5 6 4 5 6 4 5 6 4                                                                 |   |   |   |   |   |   |   |   |   |   |   |
| 1.    | X                                                                                     | X | X | X | X | X | X | X | X | X | X | X |
| 2.    | X                                                                                     | X | X | X | X | X | X | X | X | X | X | X |
| 3.    | X                                                                                     | X | X | X | X | X | X | X | X | X | X | X |
| 4.    | X                                                                                     | X | X | X | X | X | X | X | X | X | X | X |
| 5.    | X                                                                                     | X | X | X | X | X | X | X | X | X | X | X |
| 6.    |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 7.    |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 8.    |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 9.    |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 10.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 11.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 12.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 13.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 14.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 15.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 16.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 17.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 18.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 19.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 20.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 21.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 22.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 23.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 24.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 25.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 26.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 27.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 28.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 29.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 30.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 31.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 32.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 33.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 34.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| 35.   |                                                                                       |   |   |   |   |   |   |   |   |   |   |   |
| SIGN  |  |   |   |   |   |   |   |   |   |   |   |   |

Dr. LEENA A V  
PRINCIPAL 10

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

| Sl.No | 7  | 8  |
|-------|----|----|
|       | 26 | 27 |
| 1.    | X  | X  |
| 2.    | X  | X  |
| 3.    | X  | X  |
| 4.    | X  | X  |
| 5.    | X  | X  |
| 6.    |    |    |
| 7.    |    |    |
| 8.    |    |    |
| 9.    |    |    |
| 10.   |    |    |
| 11.   |    |    |
| 12.   |    |    |
| 13.   |    |    |
| 14.   |    |    |
| 15.   |    |    |
| 16.   |    |    |
| 17.   |    |    |
| 18.   |    |    |
| 19.   |    |    |
| 20.   |    |    |
| 21.   |    |    |
| 22.   |    |    |
| 23.   |    |    |
| 24.   |    |    |
| 25.   |    |    |
| 26.   |    |    |
| 27.   |    |    |
| 28.   |    |    |
| 29.   |    |    |
| 30.   |    |    |
| 31.   |    |    |
| 32.   |    |    |
| 33.   |    |    |
| 34.   |    |    |
| 35.   |    |    |
| SIGN  |    |    |

11



### Class Attendance and Assessment

| Sl.No     | Reg. No.   | Name                   | Month                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5 | 5 | 5 | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5 |
|-----------|------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|----|----|----|----|----|----|----|----|---|
|           |            |                        | Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 5 | 5 | 5 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |   |
|           |            |                        | Hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 4 | 5 | 6 | 4  | 5  | 6  | 4  | 5  | 6  | 4  | 5  | 6 |
| 1.        | SNC19EC001 | Arjun Ashok            | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | X | X | X | X  | X  | A  | A  | A  | A  | A  | A  | A |
| 2.        | SNC19EC002 | Jithin Sasidharan. N V | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | X | X | A | A  | A  | A  | A  | A  | A  | A  | A  | A |
| 3.        | SNC19EC003 | Keerthana C.V          | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | X | X | A | A  | A  | A  | A  | A  | A  | A  | A  | A |
| 4.        | SNC19EC004 | Maxiyambi              | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | X | X | X | X  | X  | X  | X  | X  | X  | X  | X  | X |
| 5.        | SNC19EC005 | Sanishma Sachithanand  | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | X | X | X | X  | X  | X  | X  | X  | X  | X  | X  | X |
| 6.        |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 7.        |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 8.        |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 9.        |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 10.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 11.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 12.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 13.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 14.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 15.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 16.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 17.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 18.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 19.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 20.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 21.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 22.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 23.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 24.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 25.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 26.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 27.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 28.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 29.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 30.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 31.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 32.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 33.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 34.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| 35.       |            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |   |    |    |    |    |    |    |    |    |   |
| Signature |            |                        | X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X |   |   |   |    |    |    |    |    |    |    |    |   |

| Sl. No | Date |    |    |    |    |    |   |   |   |   |   |   |
|--------|------|----|----|----|----|----|---|---|---|---|---|---|
|        | 26   | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1.     | X    | X  | X  | X  | X  | X  | X | X | X | X | X | X |
| 2.     | X    | X  | X  | X  | X  | X  | X | X | X | X | X | X |
| 3.     | X    | X  | X  | X  | X  | X  | X | X | X | X | X | X |
| 4.     | X    | X  | X  | X  | X  | X  | X | X | X | X | X | X |
| 5.     | X    | X  | X  | X  | X  | X  | X | X | X | X | X | X |
| 6.     |      |    |    |    |    |    |   |   |   |   |   |   |
| 7.     |      |    |    |    |    |    |   |   |   |   |   |   |
| 8.     |      |    |    |    |    |    |   |   |   |   |   |   |
| 9.     |      |    |    |    |    |    |   |   |   |   |   |   |
| 10.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 11.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 12.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 13.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 14.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 15.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 16.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 17.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 18.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 19.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 20.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 21.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 22.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 23.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 24.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 25.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 26.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 27.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 28.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 29.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 30.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 31.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 32.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 33.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 34.    |      |    |    |    |    |    |   |   |   |   |   |   |
| 35.    |      |    |    |    |    |    |   |   |   |   |   |   |

SIGN 26 27 28 29 30 31 1 2 3 4 5 6

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

LIC

**1. Which of the following is not a characteristic of an ideal operational amplifier?**

a) BW is infinite b) Perfect balance  $V_0 = 0$  when  $V_1 = V_2$  c) Gain is infinite d) Input resistance is zero

**2. CMRR for an opamp should be**

a) As large as possible b) Close to zero c) Close to unity d) As small as possible

**3. Which of the following is an operational amplifier?**

a) IC 8085 b) IC 7805 c) IC 741 d) IC 555

**4. An opamp as a voltage follower has a voltage gain of**

a) infinity b) zero c) unity d) Less than unity

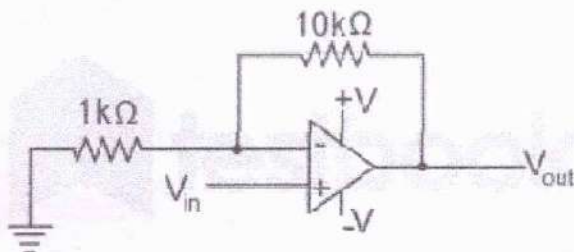
**5. An oscillator circuit which means for converting sine wave into square wave is called**

a) Schmitt trigger b) Blocking Oscillator c) Multivibrator d) Weinbridge oscillator

**6. The maximum rate that an output of an operational amplifier can change**

a) CMRR b) Slew rate c) input offset voltage d) none of the above

**7. For the circuit shown, find the output voltage for an input voltage of -1 V**



a) -11 V b) 11 V c) -10 V d) 10 V

**8. In an opamp inverting amplifier, pin 2 of 741 IC is at virtual ground. This statement is based on which law?**

a) KVL b) KCL c) Ohms law d) Coulombs law

**9. When a step input is given to an opamp integrator, the output will be**

a) A ramp b) A sinusoidal c) A rectangular wave d) A triangular wave with dc bias

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



**10. The approximate input impedance of an opamp circuit which had  $R_i=10\text{ K}$ ,  $R_f=100\text{ K}$ ,  $R_l=10\text{ K}$**

- a) infinity b)  $120\text{ K}$  c)  $110\text{ K}$  d)  $10\text{ K}$

**11. Which of the following electrical characteristics is not exhibited by an ideal opamp?**

- a) Infinite voltage gain b) Infinite BW c) Infinite output resistance d) Infinite slew rate

**12. A differential amplifier .....**

- a). is a part of an Op-amp b). has one input and one output c). has two outputs  
d) answers (a) and (b)

**13. Ideal opamp has infinite voltage gain because**

- a) To control the output voltage b) to obtain finite output voltage  
c) to receive zero noise output voltage d) None of the above

**14 Find the output voltage of an ideal opamp .If  $V_1$  and  $V_2$  are the two input voltages**

- a)  $V_0=V_1-V_2$  b)  $V_0=A*(V_1-V_2)$  c)  $A*(V_1+V_2)$  d)  $V_0=V_1*V_2$

**15. Which is not the ideal characteristics of an opamp?**

- a) Input resistance  $\geq 0$  b) Output resistance  $\geq 0$  c) Bandwidth  $\geq \text{infinity}$   
d) Openloop voltage gain  $\geq \text{infinity}$



**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



LCD

1. The output of a logic gate is 1 when all its inputs are logic 0. The gate is either

- a) NAND or EX-OR gate
- b) NOR or EX-NOR gate
- c) OR or Ex-Nor gate
- d) AND or EX-OR gate

2. Which of the examples below expresses the commutative law of multiplication?

- a)  $A+B=B+A$
- b)  $A*B=B*A$
- c)  $A*B=B+A$
- d)  $A*(B*C)=(A*B)*C$

3. What will be the output from a D flip-flop if  $D = 1$  and the clock is low?

- a) No change
- b) Toggle between 0 and 1
- c) 0
- d) 1

4. There are \_\_\_\_\_ cells in a 4-variable K-map.

- a) 12
- b) 16
- c) 18
- d) 8

5.  $A(A+B) = ?$

- a) AB
- b) 1
- c)  $(1+AB)$
- d) 0

6.  $(A+B)(A' * B') = ?$

- a) 1
- b) 0
- c) AB
- d)  $AB'$

7. The logical expression  $Y=A+A'B=$

- a)  $Y=AB$
- b)  $Y=AB'$
- c)  $Y=A'+B$
- d)  $Y=A+B$

8. Minimum number of NAND gate required to implement  $A+AB'+ABC' = ?$

- a) 0
- b) 1
- c) 4
- d) 7

9. The octal number  $(651.124)_8$  is =

- a)  $(1A9.2A)_{16}$
- b)  $(1B0.10)_{16}$
- c)  $(1A8.A3)_{16}$
- d)  $(1B0.B0)_{16}$

10. Convert hexadecimal number (1E2) into decimal

- a) 480
- b) 483
- c) 482
- d) 484

11. The string of 8 bits is known as

- a) Nibble
- b) Byte
- c) Octed
- d) Quad

12. The 1's complement of a binary number is obtained by changing

- a) Each 1 to a 0
- b) Each 0 to a 1
- c) Each 1 to 0 and each 0 to 1
- d) None of the above

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

**13.The base of a hexadecimal number is**

- a) 6 b) 8 c) 16 d) 10

**14.Which out of the following binary number is equivalent to decimal number 24**

- a) 1101111 b) 11000 c) 111111 d) 11001

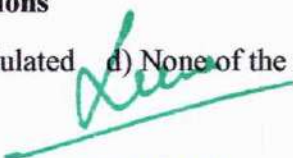
**15.If each successive code differs from its preceding code by a single bit only,then this code is called**

- a) BCD code b) Gray code c) weighted code d) Binary code

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

AC

1. **Neagtive feedback in an amplifier results in**  
a) Reduces gain b) Increases distortion c) Reduces BW d) Increases noise
2. **Cross over distortion occurs at**  
a) Class A output stage b) Class B output stage c) Class Ab output stage  
d) Common pulse output stage.
3. **Which of the following BJT configuration has highest power gain?**  
a) CE b) CC c) CB d) None of the above
4. **An amplifier has a open loop voltage gain of -500 .This gain is reduced to -100 when negative feedback is applied.The reverse transmission factor B of the system is?**  
a) -0.025 b) -0.008 c) 0.1 d) -0.2
5. **An amplifier has a voltage gain of 120.To reduce distortion ,10% negative FB is employed .The gain of the amplifier with feedback is ?**  
a) 141 b) 92.3 c) 9.23 d) 1.41
6. **In class B amplifier , the output current flows for?**  
a) less than half input cycle b) More than half input cycle c) Half input cycle  
d) Entire input cycle
7. **Push pull amplifier cicuit is used as**  
a) Power amplifier b) Audio amplifier c) RF amplifier d) Emitter follower
8. **In class A operation of the amplifier,the current flows through the active device for?**  
a) Whole input cycle b) Half of i/p cycle c) More than half of i/p cycle d) More than three fourth of the input cycle
9. **The maximum theoretical efficiency of a Class A amplifier can be**  
a) 50% b) 78% c) 25% d) 100%
10. **Class AB operation is often used in power amplifiers in order to**  
a) Get maximum efficiency b) Re,ove even harmonics c) Overcome a cross over distortion d) Reduce collector distortion
11. **An oscillator produces ----- oscillations**  
a) Damped b) Undamped c) Modulated d) None of the above

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



**12. An oscillator employs ----- feedback**

- a) Positive   b) Negative   c) neither positive nor negative   d) Data insufficient

**13 Hartley oscillator is commonly used in**

- a) Radio receivers   b) Radio transmitters   c) TV receivers   d) None of the above

**14. A weinbridge oscillator uses -----feedback**

- a) Positive   b) Negative   c) Both positive and negative   d) Non of the above

**15. The piezoelectric effect in crystal is -----**

- a) A voltage developed because of mechanical stress   b) A change in resistance because of temperature   c) A change in frequency because of temperature   d) None of the above



**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

Name Jithin Sasidharan NV

Subject AC

| Question Number | Response | Question Number | Response |
|-----------------|----------|-----------------|----------|
| 1               | a ✓      | 1               | a ✓      |
| 2               | b ✓      | 2               | a ✗      |
| 3               | a ✓      | 3               | b ✗      |
| 4               | b ✓      | 4               | e ✓      |
| 5               | a ✓      | 5               | b ✗      |
| 6               | d ✓      | 6               | c ✗      |
| 7               | b ✓      | 7               | a ✓      |
| 8               | b ✗      | 8               | c ✗      |
| 9               | a ✓      | 9               | b ✓      |
| 10              | a ✗      | 10              | c ✓      |
| 11              |          | 11              | a ✓      |
| 12              | c ✓      | 12              | b ✓      |
| 13              | c ✗      | 13              | d ✓      |
| 14              | a ✗      | 14              | c ✓      |
| 15              | b ✓      | 15              | d ✓      |
| 16              | b ✓      |                 |          |
| 17              | a ✓      |                 |          |
| 18              |          |                 |          |
| 19              | c ✓      |                 |          |
| 20              |          |                 |          |

15  
35

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

Name **ARJUN ASHOK. K**

Subject **LCD**

| Question Number | Response | Question Number | Response |
|-----------------|----------|-----------------|----------|
| 1               | A. ✓     | 1               | C ✓      |
| 2               | B. ✓     | 2               | D ✓      |
| 3               | A. ✓     | 3               |          |
| 4               | B. ✗     | 4               | b ✓      |
| 5               | A. ✓     | 5               |          |
| 6               | D. ✓     | 6               |          |
| 7               | b ✗      | 7               |          |
| 8               | b ✗      | 8               | a ✓      |
| 9               | a ✗      | 9               |          |
| 10              | a ✗      | 10              |          |
| 11              |          | 11              | b ✓      |
| 12              | C ✓      | 12              | C ✓      |
| 13              | C ✗      | 13              | C ✓      |
| 14              | a ✓      | 14              | b ✓      |
| 15              | b ✓      | 15              | A ✓      |
| 16              | b ✓      |                 |          |
| 17              | a ✗      |                 |          |
| 18              |          |                 |          |
| 19              | C ✗      |                 |          |
| 20              | B. ✗     |                 |          |

17  
35

*Leena*

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



Name *Sanishma Sachithanand*  
SG EC

Subject *LIC*

| Question Number | Response | Question Number | Response |
|-----------------|----------|-----------------|----------|
| 1               | a ✓      | 1               | c ✓      |
| 2               | d ✓      | 2               | a ✓      |
| 3               | a ✓      | 3               | c ✓      |
| 4               | b ✓      | 4               | a ✓      |
| 5               |          | 5               | d ✗      |
| 6               | d ✗      | 6               | b ✗      |
| 7               | b ✗      | 7               | b ✗      |
| 8               | a ✗      | 8               | b ✓      |
| 9               |          | 9               | c ✓      |
| 10              | a ✓      | 10              | d ✓      |
| 11              | a ✓      | 11              | d ✗      |
| 12              | d ✓      | 12              | a ✗      |
| 13              | a ✗      | 13              | c ✗      |
| 14              | b ✓      | 14              | b ✓      |
| 15              | a ✓      | 15              | c ✓      |
| 16              |          |                 |          |
| 17              |          |                 |          |
| 18              |          |                 |          |
| 19              | b ✗      |                 |          |
| 20              | c ✓      |                 |          |

19  
35

*Leena*  
Dr. LEENA A V  
PRINCIPAL

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

Name Keesthona. CV

Subject ADC, LCD

| Question Number | Response | Question Number | Response |
|-----------------|----------|-----------------|----------|
| 1               | a. ✓     | 1               | a p      |
| 2               | b ✓      | 2               | b ✓      |
| 3               | a. ✓     | 3               | c ✓      |
| 4               | b ✓      | 4               | d ✓      |
| 5               | a ✓      | 5               | a ✓      |
| 6               | d ✓      | 6               | d. p     |
| 7               | b ✓      | 7               | d. p     |
| 8               | b ✓      | 8               | d. p     |
| 9               | a ✓      | 9               | d. p     |
| 10              | a ✓      | 10              | b ✓      |
| 11              |          | 11              | a ✓      |
| 12              | c ✓      | 12              | a ✓      |
| 13              | c ✓      | 13              | b ✓      |
| 14              | a ✓      | 14              | c ✓      |
| 15              | b ✓      | 15              | b        |
| 16              | b ✓      |                 |          |
| 17              | a p      |                 |          |
| 18              |          |                 |          |
| 19              | c p      |                 |          |
| 20              | b -      |                 |          |

25/25

Dr. LEENA A V  
PRINCIPAL

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



## ADC

### 1. Generation of SSB SC signal is done by

- a) Amplitude Modulator      b) Frequency discrimination method
- c) Product modulator      d) None of the above

### 2. What is the maximum transmission efficiency of an AM signal?

- a) 64.4%    b) 33.33%    c) 56.66%    d) 75.55%

### 3. Which of the following analog modulation scheme requires minimum transmitted power and minimum channel bandwidth?

- a) DSB-FC (b) VSB c) DSB-SC (d) SSB

### 4. Armstrong method is used for the generation of

- a) Direct FM (b) Indirect FM c) SSB-SC (d) DSB-SC

### 5. For AM, with 100% modulation, power in each sideband is \_\_\_\_\_ of that of carrier?

- a) 50% (b) 70% c) 25% (d) 60%

### 6. The Nyquist sampling rate of the continuous time signal $\text{Sinc}(500t)$ is

- a) 1000 Hz. b) 100 Hz. c) 500 Hz d) 250 Hz

### 7. In the generation of a modulated signal, a varactor diode can be used for

- a) FM generation only. b) AM generation only. c) PM generation only. d) Both (b) and (c)

### 8 In uniform quantization process

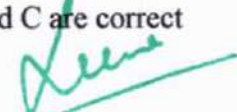
- a) The step size remains same    b) Step size varies according to the values of input signal
- c) The quantizer has linear characteristics    d) Both a and c are correct

### 9. One of the disadvantage of PCM is

- a) It requires large bandwidth    b) Very high noise    c) Cannot be decoded easily
- d) All the above

### 10. In Delta modulation

- a) One bit per sample is transmitted    b) All of the coded bits used for sampling are transmitted
- c) The sampling size is fixed    d) Both a and C are correct

  
DR. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



**11. Granular noise occurs when**

- a) Step size is too small   b) Step size is too large   c) There is interference from the adjacent channel   d) bandwidth is too large

**12. Matched Filter may be optimally used only for?**

- a) Gaussian noise   b) Transit time noise   c) Flicker   d) All the above

**13. Regenerative repeater is used for?**

- a) Eliminating noise   b) Reconstruction of signals   c) Transmission over long distance  
c) All the above

**14. The bandwidth of BFSK is ----- than BPSK**

- a) Lower   b) Same   c) Higher   d) Not predictable

**15. QPSK is a modulation scheme where each symbol consists of**

- a) 4 bits   b) 2 bits   c) 1 bit   d) m bits

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

## DSP

4. (a) 36

**Description:** Let the two sequences be M and N.

$$M = 40$$

$$N = 900$$

$$\text{Number of DFT} = 64$$

The number of smaller DTS required =  $L + M - 1$  = Number of given DFT points

$$L + M - 1 = 64$$

$$L + 40 - 1 = 64$$

$$L = 25$$

$$\text{Total blocks} = N / L = 900/25 = 36$$

Hence, the number of smallest DFTs required to compute the linear convolution is 36.

5. (d) The output sequence is represented in bit-reversal order.

**Description:** The output sequence of the DIT-FFT is represented in regular order instead of bit-reversal order.

6. (b)  $\{0.5, 0, 0.5, 0\}$

**Description:** IDFT is given by:

$$x(n) = \text{IDFT} [X(k)]$$

$$x(n) = \frac{1}{N} \sum_{k=0}^{N-1} X(k) e^{j \frac{2\pi kn}{N}}$$

$$x(n) = \frac{1}{4} [X(0) + X(1)e^{j\frac{\pi n}{2}} + X(2)e^{j\pi n} + X(3)e^{j\frac{3\pi n}{2}}]$$

**Step 1:** For,  $n = 0$

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

$$x(0) = \frac{1}{4} [x(0) + x(1) + x(2) + x(3)]$$

$$= \frac{1}{4}[1 + 0 + 1 + 0]$$

$$= \frac{2}{4}$$

$$= \frac{1}{2}$$

$$= 0.5$$

**Step 2:** For,  $n = 1$

$$x(1) = \frac{1}{4} [x(0) + x(1) + x(2) + x(3)]$$

$$= \frac{1}{4}[1 + 0(j) + 1(-1) + 0(-j)]$$

$$= \frac{1}{4} [1 + 0 - 1 + 0]$$

$$= 0$$

**Step 3:** For,  $n = 2$

$$x(2) = \frac{1}{4} [x(0) + x(1) + x(2) + x(3)]$$

$$= \frac{1}{4}[1 + 0(-1) + 1(1) + 0(-1)]$$

$$= \frac{1}{4}[1 + 0 + 1 + 0]$$

$$= \frac{2}{4}$$

$$= \frac{1}{2}$$

$$= 0.5$$

**Step 4:** For,  $n = 3$


$$x(3) = \frac{1}{4} [x(0) + x(1) + x(2) + x(3)]$$

$$= \frac{1}{4}[1 + 0(-j) + 1(-1) + 0(j)]$$

$$= \frac{1}{4} [1 + 0 - 1 + 0]$$

$$= 0$$

Thus,  $x(n) = \{0.5, 0, 0.5, 0\}$

  
**DR. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



7.(d) All of the above

**Description:** Butterfly structure is an efficient structure that has various advantages, such as reducing complexity, involvement of less number of multiplications and additions. It also combines the result of small DFTs into large or vice versa.

8.c) The filters in the cascade are connected in parallel.

**Description:** The filters in the cascade realization are connected in series.

9.: (a) Impulse invariant method

**Description:** The practical analog filters are not generally perfectly band-limited. Hence, the filter using the impulsive invariant method can cause such an aliasing effect in the filters.

10. (b)  $\frac{3}{4} y(n-1) - \frac{1}{8} y(n-2) + x(n) + \frac{1}{3} x(n-1)$

**Description:** The direct form-I is the structure formed after finding the z-transform of  $X(z)$  and  $Y(z)$ , which is mentioned on both sides of the figure. Let's first determine  $X(z)$  and  $Y(z)$  and then their inverse Z-transform to find the equation of the discrete system.

**Step 1: LHS**

The left side is the  $X(z)$ .

$$X(z) [1 + \frac{1}{3} z^{-1}] = W(z)$$

$$X(z) + \frac{1}{3} z^{-1} X(z) = W(z)$$

The inverse can be represented as:

$$x(n) + \frac{1}{3} x(n-1) = w(n)$$

**Step 2: RHS**

The right side is the  $Y(z)$ .

$$Y(z) = \frac{3}{4} z^{-1} Y(z) - \frac{1}{8} z^{-2} Y(z) + W(z)$$

The inverse can be represented as:

$$y(n) = \frac{3}{4} y(n-1) - \frac{1}{8} y(n-2) + w(n)$$

Substituting the value of  $w(n)$  from step 1, we get:

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

$$y(n) = 3/4 y(n-1) - 1/8 y(n-2) + x(n) + 1/3 x(n-1)$$

It is the discrete equation of the given system.

11. (a) Direct form- I

**Description:** There are two types of direct form, direct form I and direct form-II. Both forms can be used for IIR (Infinite Impulse Response) filters.

14. (b) Even

**Description:** Let  $x_1(n)$  and  $x_2(n)$  be the two signals.

If both these signals are odd,  $x_1(-n) = -x_1(n)$  and  $x_2(-n) = -x_2(n)$

If a signal is even,  $x(-n) = x(n)$

$$x(-n) = x_1(-n) \cdot x_2(-n)$$

$$x(-n) = -x_1(n) \cdot -x_2(n)$$

$$x(-n) = x_1(n) \cdot x_2(n)$$

It means that  $x(-n) = x(n)$ , which is even.

Hence, the product of two odd signals is even.

15.(b) Causal

**Description:**

**Step 1:** The system is causal if its output depends only on the past and present inputs. Let's check its causality.

We will check the value of  $y(n)$  for different values of  $n$ .

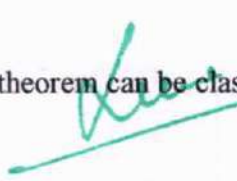
For,

$$n=0, y(0) = x(0) + 1/x(-1)$$

$$n=1, y(1) = x(1) + 1/x(0)$$

Thus, the system is causal.

**Step 2:** The system that satisfies the superposition theorem can be classified as the linear system.

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

$$Y1(n) = x1(n) + 1/x1(n - 1)$$

$$Y2(n) = x2(n) + 1/x2(n - 1)$$

To satisfy the linearity,  $ay1(n) + by2(n) = ax1(n) + bx2(n)$

LHS

$$ay1(n) + by2(n) = a [x1(n) + 1/x1(n - 1)] + b [x2(n) + 1/x2(n - 1)]$$

$$ay1(n) + by2(n) = ax1(n) + bx2(n) + a/x1(n - 1) + b/x2(n - 1)$$

It is not equal to RHS

Hence, the system is non-linear.



**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



$$Y1(n) = x1(n) + 1/x1(n - 1)$$

$$Y2(n) = x2(n) + 1/x2(n - 1)$$

To satisfy the linearity,  $ay1(n) + by2(n) = ax1(n) + bx2(n)$

LHS

$$ay1(n) + by2(n) = a [x1(n) + 1/x1(n - 1)] + b [x2(n) + 1/x2(n - 1)]$$

$$ay1(n) + by2(n) = ax1(n) + bx2(n) + a/x1(n - 1) + b/x2(n - 1)$$

It is not equal to RHS

Hence, the system is non-linear.

**DR. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



Sree Narayana Guru  
College of Engineering  
and Technology  
Estd: 2003

## Sree Narayana Guru College of Engineering & Technology

P.O. Chalakode, Payyanur - 670 307, Kannur Dist., Kerala State.

(Approved by AICTE New Delhi and Affiliated to APJ Abdul Kalam Technological University)

Managed by Sree Bhakthi Samvardhini Yogam, Kannur-2.



Ph: 04985-201987, 201988, 201989 EPABX: 201702, 703, 709 Fax: 04985-201988

Email: info@sngcet.org sngcet@bsnl.in

Website: sngcet.org

### *Vision*

A knowledge society promoting  
human excellence and enlightenment  
through effective education

### *Mission*

To provide technical education of the highest quality  
and standard of excellence for socio-economic progress  
embedded in clearly articulated values  
and supported by commitments

# Class Record

## THEORY

Department

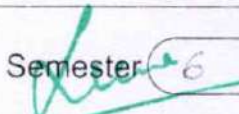
Faculty

Academic Year

Branch

Semester

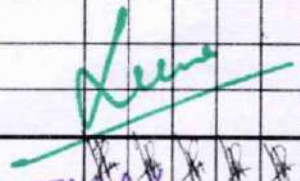
Course

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



### Class Attendance and Assessment

| Sl.No     | Reg. No.   | Name                 | Month | 4  | 5 | 5  | 5  | 6 | 6  |  |  |  |  |
|-----------|------------|----------------------|-------|----|---|----|----|---|----|--|--|--|--|
|           |            |                      | Date  | 30 | 7 | 14 | 28 | 4 | 11 |  |  |  |  |
|           |            |                      | Hour  | 4  | 4 | 4  | 4  | 4 | 4  |  |  |  |  |
| 1.        | SNC19EE001 | ANUSHA JYDHI         |       | X  | X | X  | X  | X | X  |  |  |  |  |
| 2.        | SNC19EE002 | DEVI KEERTHANA T. P. |       | X  | X | X  | X  | X | X  |  |  |  |  |
| 3.        | SNC19EE003 | VAISHNAV T. V.       |       | X  | X | X  | X  | X | X  |  |  |  |  |
| 4.        | SNC19EE004 | VISHAL K.            |       | X  | X | X  | X  | X | X  |  |  |  |  |
| 5.        |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 6.        |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 7.        |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 8.        |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 9.        |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 10.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 11.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 12.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 13.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 14.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 15.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 16.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 17.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 18.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 19.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 20.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 21.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 22.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 23.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 24.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 25.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 26.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 27.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 28.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 29.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 30.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 31.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 32.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 33.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 34.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| 35.       |            |                      |       |    |   |    |    |   |    |  |  |  |  |
| Signature |            |                      |       |    |   |    |    |   |    |  |  |  |  |

  
**Dr. LEENA**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR





**SREE NARAYANA GURU**  
**COLLEGE OF ENGINEERING & TECHNOLOGY, PAYYANUR**

**MODEL QUESTION PAPER**  
**EET308**  
**COMPREHENSIVE COURSE WORK**

Max Marks: 100

Duration: 1Hrs

**CIRCUITS AND NETWORKS**

1. Superposition theorem cannot be applied in linear circuits to find out the following variable

- A. voltage    B. current    C. power    D. none of these

2. source impedance of a non-ideal voltage source is  $Z_s = 6 + j8 \Omega$  and is connected to a resistive load. What should be the load for maximum power transfer.

- A.  $6 \Omega$     B.  $8 \Omega$     C.  $10 \Omega$     D.  $14 \Omega$

max. power trans. =  $|Z_s|$

3. there are 4 branches and 3 nodes then number of links in a co-tree are?

- A. 2    B. 4    C. 6    D. 8

4. two -port network is represented by the following equations,  
 $I_1 = V_1 - 0.5V_2$ ,  $I_2 = -V_1 + V_2$ , Z parameters are given by Z=

- A.  $Z = \begin{bmatrix} 1 & -0.5 \\ -1 & 1 \end{bmatrix}$ ,    B.  $Z = \begin{bmatrix} 1 & 2 \\ 2 & 1 \end{bmatrix}$ ,    C.  $Z = \begin{bmatrix} 1 & -2 \\ -1 & 1 \end{bmatrix}$     D.  $Z = \begin{bmatrix} 2 & 1 \\ 2 & 2 \end{bmatrix}$

5. The line A to neutral voltage is  $10\angle 150^\circ$  V for a balance three phase star connected load with phase sequence ABC. The voltage of line B with respect to line C is given by

- a)  $10\sqrt{3}\angle 105^\circ$  V  
 b)  $10\angle 105^\circ$  V  
 c)  $10\sqrt{3}\angle 75^\circ$  V  
 d)  $-10\sqrt{3}\angle 90^\circ$  V

$$V_L = \sqrt{3} V_{ph}$$

6. The average power delivered to an impedance  $(4 - j3)\Omega$  by a current  $5\cos(100\pi t + 100^\circ)$  A is

- a) 44.2 W  
 b) 50 W  
 c) 62.5 W  
 d) 125 W

$$|Z| = \sqrt{4^2 + 3^2} = 5$$

$$\cos \phi = \frac{R}{Z} = \frac{4}{5} = 0.8$$

**Dr. LEENA A V**  
 PRINCIPAL

SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR

## DC MACHINES AND TRANSFORMERS

- 1 The resistance of the transformer referred to low voltage side of a 240/120 V 1 – phase transformer with  $R_1 = 0.1 \text{ ohm}$  and  $R_2 = 0.03 \text{ ohm}$  is
  - A. 0.055 ohm
  - B. 0.43 ohm
  - C. 0.22 ohm
  - D. 0.1075 ohm
- 2 Retardation test on dc shunt motor is conducted to determine
  - ☒ A. stray loss only,
  - B. . Stray loss and moment of inertia,
  - C. Temperature rise.
  - D. effect of flux distortion on iron loss
- 3 Retardation test on dc shunt motor is conducted to determine
  - ☒ A. stray loss only,
  - B. Stray loss and moment of inertia,
  - C. Temperature rise.
  - D. effect of flux distortion on iron loss
- 4 DC Series generator is used for
  - A. charging batteries,
  - B. booster in distribution systems,
  - C. Arc welding
  - D. Lamp loads
- 5 The equalizer connections are used for
  - ☒ A. Lap winding
  - B. Wave winding
  - C. Wave winding with dummy coils
  - D. Not for dc windings
- 6 A 4-pole dc machine is having double layer lap winding arranged in 80 slots. Winding resistance is  $0.2 \text{ } \Omega$  per conductor. Determine the armature resistance ( $R_a$ ).
  - A. 8 ohms
  - B. 4 ohms
  - C. 2 ohms
  - D. 1 ohm
- 7 For a 1-phase transformer the maximum regulation occurs at 0.5 pf lagging, then the zero regulation occurs at a power factor equals to.....
  - A. upf
  - B. 0.5 lead
  - C. 0.707 lead
  - D. 0.866 lead
- 8 Which among the following statement regarding a star-delta 3 phase transformer is not true
  - A. no problem with third harmonic components
  - B. unbalanced loads can be handled
  - ☒ C. can operate this connection in parallel with delta- delta
  - D. there is a 30 Degree phase shift between Secondary to Primary phase voltages
9. The DC motor which can provide zero speed regulation at full load without any controller is
  - a) Series
  - b) Shunt

- c) Cumulatively compound
- d) Differentially compound

10. For a single phase, two winding transformer, the supply frequency and voltage are both increased by 10%. The percentage changes in the hysteresis and eddy current loss, respectively are

- a) 10 and 21
- b) -10 and 21
- c) 21 and 10
- d) -21 and 10

11. Match the following

List I-Performance Variables

- A. Armature emf (E)
- B. Developed Torque (T)
- C. Developed Power (P)

List II-Proportional to

- 1. Flux ( $\phi$ ), speed ( $\omega$ ), Armature Current ( $I_a$ )
- 2.  $\phi$  and  $\omega$  only
- 3.  $\phi$  and  $I_a$  only
- 4.  $I_a$  and  $\omega$  only
- 5.  $I_a$  only

Choices:

- A B C
- a) 3 3 1
- b) 2 5 4
- c) 3 5 4
- d) 2 3 1

## DIGITAL ELECTRONICS

- 1 A 4 bit pattern that will produce the same pattern when 2's complement is taken.  
A. 0001 B. 0010 C. 0100 D. 1000
- 2 The logical expression  $F = A + \bar{A}B$  can be simplified to  
A.  $F = AB$ , B.  $F = A + B$  C.  $F = 1$  D.  $F = \bar{A} + B$
- 3 In a one-digit BCD adder, the number of bits in the output is  
A. 3 B. 4 C. 5 D. 6
- 4 If D - FF is modified with switch -tail ring counter connection, the circuit becomes  
A. SR FF, B. D FF C. JK FF D. T FF
- 5 The number of Flip Flops required to build Mod- 13 counter is  
A. 2 B. 3 C. 4 D. 5
- 6 The capacity of a Memory chip is 8192 Bytes. The number of address lines required are  
A. 11 B. 12 C. 13 D. 14
- 7 The resistor corresponding to the LSB of a 4-bit Weighted Resistor DAC is 64 K ohms.



Then the value of resistor assigned to MSB will be

- A. 512 k ohm    B. 64 k ohm    C. 16 k ohm    D. 8 k ohm

8. The SOP (sum of products) form of a Boolean function is  $\Sigma(0, 1, 3, 7, 11)$ , where inputs are A, B, C, D (A is MSB and D is LSB). The equivalent minimized expression of the function is

- a)  $(B'+C)(A'+C)(A'+B')(C'+D)$   
b)  $(B'+C)(A'+C)(A'+C')(C'+D)$   
c)  $(B'+C)(A'+C)(A'+C')(C'+D')$   
d)  $(B'+C)(A+B')(A'+B')(C'+D)$

9. A cascade of three identical modulo-5 counters has an overall modulus of

- a) 5  
b) 25  
c) 125  
d) 625

10 The octal equivalent of the HEX number AB.CD is

- a) 253.314  
b) 253.632  
c) 526.314  
d) 526.632

### POWER SYSTEMS I

1. Efficiency of thermal power plant is ?

2. Corona losses are minimized when

- a) Conductor size is reduced  
~~b) Smoothness of the conductor is reduced~~  
c) Sharp points are provided in the line hardware  
d) Current density in the conductors is reduced

3. Keeping in view the cost and overall effectiveness, the following Circuit Breaker is best suited for capacitor bank switching

- ~~a) Vacuum~~  
b) Air Blast  
c) SF<sub>6</sub>  
d) Oil

4. The horizontally placed conductors of a single phase line operating at 50Hz are having

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

outside diameter of 1.6cm and the spacing between centres of the conductors is 6m. The permittivity of free space is  $8.854 \times 10^{-12}$  F/m. The capacitance to ground per kilometre of each line is

- a)  $4.2 \times 10^{-9}$  F
- b)  $4.2 \times 10^{-12}$  F
- c)  $8.4 \times 10^{-9}$  F
- d)  $8.4 \times 10^{-12}$  F

### SIGNALS AND SYSTEMS

1. The Laplace transform of a circuit current is  $I(s) = (5s^2 + 2s + 6) / [s(s^2 + 3s + 3)]$ . The initial value  $i(0)$  is

- A. 2 A    B. 5A    C. 6A    D. Infinity

2. A circuit with resistor, inductor and capacitor in series is resonant at  $f_0$  Hz. If all the component values are now doubled, the new resonant frequency is

- a)  $2 f_0$
- b) Still  $f_0$
- c)  $f_0 / 2$
- d)  $f_0 / 4$

3. Consider a continuous time system with input  $x(t)$  and output  $y(t)$  given by  $y(t) = x(t) \cos(t)$ . This system is


- a) Linear and time invariant
- b) Non-linear and time invariant
- c) Linear and time varying
- d) Non-linear time varying

4. Signal Flow Graph is used to obtain

- a) Stability of the system
- b) Transfer Function of a system
- c) Controllability of a system
- d) Observability of a system

5. The steady state error due to a step input for Type 1 system is

- a) Zero
- b) Infinity
- c) 1
- d) 0.5

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

Name: Anusha Dyothi

Roll No: - SN19EE001



**SREE NARAYANA GURU  
COLLEGE OF ENGINEERING & TECHNOLOGY, PAYYANUR**

**MODEL QUESTION PAPER  
EET308  
COMPREHENSIVE COURSE WORK**

Max Marks: 100

Duration: 1Hrs

**CIRCUITS AND NETWORKS**

1. Superposition theorem cannot be applied in linear circuits to find out the following variable

- A. voltage B. current ☒ C. power D. none of these

2. source impedance of a non-ideal voltage source is  $Z_s = 6 + j8 \Omega$  and is connected to a resistive load. What should be the load for maximum power transfer.

- A.  $6 \Omega$  B.  $8 \Omega$  ☒ C.  $10 \Omega$  D.  $14 \Omega$

3. there are 4 branches and 3 nodes then number of links in a co-tree are?

- ☒ A. 2 B. 4 C. 6 D. 8

4. two -port network is represented by the following equations,  
 $I_1 = V_1 - 0.5V_2$ ,  $I_2 = -V_1 + V_2$  Z parameters are given by Z=

- A.  $Z = \begin{bmatrix} 1 & -0.5 \\ -1 & 1 \end{bmatrix}$ , B.  $Z = \begin{bmatrix} 1 & 2 \\ 2 & 1 \end{bmatrix}$ , C.  $Z = \begin{bmatrix} 1 & -2 \\ -1 & 1 \end{bmatrix}$  D.  $Z = \begin{bmatrix} 2 & 1 \\ 2 & 2 \end{bmatrix}$

5. The line A to neutral voltage is  $10\angle 150^\circ$  V for a balance three phase star connected load with phase sequence ABC. The voltage of line B with respect to line C is given by

- a)  $10\sqrt{3}\angle 105^\circ$  V  
b)  $10\angle 105^\circ$  V  
c)  $10\sqrt{3}\angle 75^\circ$  V  
d)  $-10\sqrt{3}\angle 90^\circ$  V

6. The average power delivered to an impedance  $(4-j3)\Omega$  by a current  $5\cos(100\pi t + 100^\circ)$  A is

- a) 44.2 W  
☒ b) 50 W  
c) 62.5 W  
d) 125 W

$|Z| = \sqrt{4^2 - 3^2} = 5$

$\cos \phi = \frac{R}{Z} = \frac{4}{5} = 0.8$

$P = S \cos \phi = I_r^2 Z \cos \phi$

$I_r = \frac{S}{\sqrt{2} A}$

$P = \left(\frac{S}{\sqrt{2}}\right)^2 \cos \phi = 50 W$

Dr. LEENA K. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



## DC MACHINES AND TRANSFORMERS

- 1 The resistance of the transformer referred to low voltage side of a 240/120 V 1-phase transformer with  $R_1 = 0.1 \text{ ohm}$  and  $R_2 = 0.03 \text{ ohm}$  is
  - A. 0.055 ohm
  - B. 0.43 ohm
  - C. 0.22 ohm
  - D. 0.1075 ohm
- 2 Retardation test on dc shunt motor is conducted to determine
  - ☒ A. stray loss only,
  - B. Stray loss and moment of inertia,
  - C. Temperature rise.
  - D. effect of flux distortion on iron loss
- 3 Retardation test on dc shunt motor is conducted to determine
  - ☒ A. stray loss only,
  - B. Stray loss and moment of inertia,
  - C. Temperature rise.
  - D. effect of flux distortion on iron loss
- 4 DC Series generator is used for
  - ☒ A. charging batteries,
  - B. booster in distribution systems,
  - C. Arc welding
  - D. Lamp loads
- 5 The equalizer connections are used for
  - ☒ A. Lap winding
  - B. Wave winding
  - C. Wave winding with dummy coils
  - D. Not for dc windings
- 6 A 4-pole dc machine is having double layer lap winding arranged in 80 slots. Winding resistance is  $0.2 \text{ } \Omega$  per conductor. Determine the armature resistance ( $R_a$ ).
  - A. 8 ohms
  - B. 4 ohms
  - C. 2 ohms
  - D. 1 ohm
- 7 For a 1-phase transformer the maximum regulation occurs at 0.5 pf lagging, then the zero regulation occurs at a power factor equals to.....
  - A. upf
  - B. 0.5 lead
  - C. 0.707 lead
  - D. 0.866 lead
- 8 Which among the following statement regarding a star-delta 3 phase transformer is not true
  - A. no problem with third harmonic components
  - B. unbalanced loads can be handled
  - C. can operate this connection in parallel with delta- delta
  - D. there is a 30 Degree phase shift between Secondary to Primary phase voltages
9. The DC motor which can provide zero speed regulation at full load without any controller is
  - a) Series
  - b) Shunt

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

- c) Cumulatively compound  
☒ d) Differentially compound

10. For a single phase, two winding transformer, the supply frequency and voltage are both increased by 10%. The percentage changes in the hysteresis and eddy current loss, respectively are

- ☒ a) 10 and 21  
 b) -10 and 21  
 c) 21 and 10  
 d) -21 and 10

11. Match the following

List I-Performance Variables

- A. Armature emf (E)  
 B. Developed Torque (T)  
 C. Developed Power (P)

List II-Proportional to

1. Flux ( $\phi$ ), speed ( $\omega$ ), Armature Current ( $I_a$ )  
 2.  $\phi$  and  $\omega$  only  
 3.  $\phi$  and  $I_a$  only  
 4.  $I_a$  and  $\omega$  only  
 5.  $I_a$  only

Choices:

- A B C  
 a) 3 3 1  
 b) 2 5 4  
 c) 3 5 4  
 d) 2 3 1

$$F = \bar{A} \bar{B} + \bar{A} B + A \bar{B} + A B$$

$$F = \bar{A} (\bar{B} + B) + A (\bar{B} + B)$$

$$= \bar{A} + A$$

## DIGITAL ELECTRONICS

- 1 A 4 bit pattern that will produce the same pattern when 2's complement is taken.  
 A. 0001 B. 0010 C. 0100 ☒ D. 1000
- 2 The logical expression  $F = A + \bar{A}B$  can be simplified to  
 A.  $F = AB$ , B.  $F = A + B$  C.  $F = 1$  D.  $F = \bar{A} + B$
- 3 In a one-digit BCD adder, the number of bits in the output is  
 A. 3 B. 4 C. 5 D. 6
- 4 If D - FF is modified with switch -tail ring counter connection, the circuit becomes  
 A. SR FF, B. D FF C. JK FF D. T FF
- 5 The number of Flip Flops required to build Mod- 13 counter is  
 A. 2 B. 3 ☒ C. 4 D. 5
- 6 The capacity of a Memory chip is 8192 Bytes. The number of address lines required are  
 A. 11 B. 12 ☒ C. 13 D. 14
- 7 The resistor corresponding to the LSB of a 4-bit Weighted resistor DAC is 64 K ohms.

Then the value of resistor assigned to MSB will be

A. 512 k ohm    B. 64 k ohm    C. 16 k ohm    D. 8 k ohm

8. The SOP (sum of products) form of a Boolean function is  $\Sigma(0, 1, 3, 7, 11)$ , where inputs are

A, B, C, D (A is MSB and D is LSB). The equivalent minimized expression of the function is

- a)  $(B'+C)(A'+C)(A'+B')(C'+D)$
- b)  $(B'+C)(A'+C)(A'+C')(C'+D)$
- c)  $(B'+C)(A'+C)(A'+C')(C'+D')$
- d)  $(B'+C)(A+B')(A'+B')(C'+D)$

9. A cascade of three identical modulo-5 counters has an overall modulus of

- a) 5
- b) 25
- c) 125
- d) 625

10 The octal equivalent of the HEX number AB.CD is

- a) 253.314
- b) 253.632
- c) 526.314
- d) 526.632

## POWER SYSTEMS I

1. Efficiency of thermal power plant is ?
2. Corona losses are minimized when
  - a) Conductor size is reduced
  - b) Smoothness of the conductor is reduced
  - c) Sharp points are provided in the line hardware
  - d) Current density in the conductors is reduced
3. Keeping in view the cost and overall effectiveness, the following Circuit Breaker is best suited for capacitor bank switching
  - a) Vacuum
  - b) Air Blast
  - c) SF<sub>6</sub>
  - d) Oil
4. The horizontally placed conductors of a single phase line operating at 40 Hz are having



outside diameter of 1.6cm and the spacing between centres of the conductors is 6m. The permittivity of free space is  $8.854 \times 10^{-12}$  F/m. The capacitance to ground per kilometre of each line is

- a)  $4.2 \times 10^{-9}$  F
- b)  $4.2 \times 10^{-12}$  F
- c)  $8.4 \times 10^{-9}$  F
- d)  $8.4 \times 10^{-12}$  F

### SIGNALS AND SYSTEMS

1. The Laplace transform of a circuit current is  $I(s) = (5s^2 + 2s + 6) / [s(s^2 + 3s + 3)]$ . The initial value  $i(0)$  is

- A. 2 A    B. 5A    C. 6A    D. Infinity

2. A circuit with resistor, inductor and capacitor in series is resonant at  $f_0$  Hz. If all the component values are now doubled, the new resonant frequency is

- a)  $2 f_0$
- b) Still  $f_0$
- c)  $f_0 / 2$
- d)  $f_0 / 4$

3. Consider a continuous time system with input  $x(t)$  and output  $y(t)$  given by  $y(t) = x(t) \cos(t)$ . This system is

- a) Linear and time invariant
- b) Non-linear and time invariant
- c) Linear and time varying
- d) Non-linear time varying

4. Signal Flow Graph is used to obtain

- a) Stability of the system
- b) Transfer Function of a system
- c) Controllability of a system
- d) Observability of a system

5. The steady state error due to a step input for Type 1 system is

- a) Zero
- b) Infinity
- c) 1
- d) 0.5

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

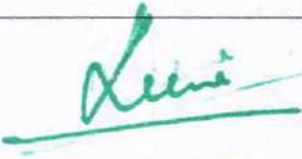


**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY,**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**STUDENTS NAME LIST(2019-2023)**

| ROLL<br>NO | REGISTER<br>NO | NAME OF STUDENT            |
|------------|----------------|----------------------------|
| 1          | SNC19ME001     | ADARSH P K                 |
| 2          | SNC19ME002     | ADWAIDH BALAN              |
| 4          | SNC19ME004     | ANURAG A                   |
| 5          | SNC19ME005     | ARSH IBRAHIM               |
| 6          | SNC19ME006     | ASWANTH C                  |
| 7          | SNC19ME007     | ATHUL. B                   |
| 8          | SNC19ME008     | BIPIN.K                    |
| 9          | SNC19ME009     | FARHAN.C                   |
| 10         | SNC19ME010     | JASIN.P                    |
| 11         | SNC19ME011     | MOHAMMED AAFIL ISMAYIL M K |
| 12         | SNC19ME012     | MOHAMMED RAMADAN ANWAR     |
| 13         | SNC19ME013     | MRIDUL.C                   |
| 14         | SNC19ME014     | NITHIN.A                   |
| 15         | SNC19ME015     | SAFVAN. I M                |
| 16         | SNC19ME016     | SANDESH K DINESH           |
| 17         | SNC19ME017     | SREEHARI S NAMBIAR         |
| 18         | SNC19ME018     | VIDYASAGAR.P               |

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR





Sree Narayana Guru  
College of Engineering  
and Technology  
Estd: 2003

## Sree Narayana Guru College of Engineering & Technology

P.O. Chalakode, Payyanur - 670 307, Kannur Dist., Kerala State.

(Approved by AICTE New Delhi and Affiliated to APJ Abdul Kalam Technological University)

Managed by Sree Bhakthi Samvardhini Yogam, Kannur-2.



Ph: 04985-201987, 201988, 201989 EPABX: 201702, 703, 709 Fax: 04985-201988

Email: info@sngcet.org

sngcet@bsnl.in

Website: sngcet.org

### *Vision*

A knowledge society promoting  
human excellence and enlightenment  
through effective education

### *Mission*

To provide technical education of the highest quality  
and standard of excellence for socio-economic progress  
embedded in clearly articulated values  
and supported by commitments

# Class Record THEORY

Department

CIVIL ENGINEERING

Faculty

Dr. SUSAN ABRAHAM

Academic Year

2021-2022

Branch

CIVIL ENGG

Semester

Course

CET308 COMPREHENSIVE COURSE

*Dr. Leena A V*  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



# Class Attendance and Assessment

| Sl.No | Reg. No.   | Name              | Month |   |   |    |   |   |    |   |   |   |   |   | Date |   |   |    |   |   |    |   |   |   |   |   | Hour |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------|------------|-------------------|-------|---|---|----|---|---|----|---|---|---|---|---|------|---|---|----|---|---|----|---|---|---|---|---|------|---|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|       |            |                   | 4     |   |   | 12 |   |   | 26 |   |   | 4 |   |   | 5    |   |   | 10 |   |   | 10 |   |   | 5 |   |   | 10   |   |   | 10 |   |   | 5 |   |   | 5 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|       |            |                   | 4     |   |   | 5  |   |   | 6  |   |   | 5 |   |   | 6    |   |   | 4  |   |   | 5  |   |   | 6 |   |   | 4    |   |   | 5  |   |   | 6 |   |   | 4 |   |   | 5 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1.    | SNC19CE001 | AADITHYA KRISHNAN | X     | X | X | X  | X | X | X  | X | X | X | X | X | X    | X | X | X  | X | X | X  | X | X | X | X | X | X    | X | X | X  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PATTANUR, MANNUR



| Sl.No | 7 | 7 | 7  | 7  | 7  | 7  |
|-------|---|---|----|----|----|----|
|       | 5 | 5 | 19 | 19 | 26 | 26 |
|       | 5 | 6 | 5  | 6  | 5  | 6  |
| 1.    | A | A | A  | A  | X  | X  |
| 2.    | X | X | X  | X  | X  | X  |
| 3.    | A | X | X  | X  | X  | X  |
| 4.    | X | X | A  | X  | X  | X  |
| 5.    | X | X | X  | X  | X  | X  |
| 6.    | X | X | A  | X  | X  | X  |
| 7.    | X | X | X  | X  | X  | X  |
| 8.    | A | A | X  | X  | X  | X  |
| 9.    | X | X | X  | X  | X  | X  |
| 10.   | X | X | X  | X  | X  | X  |
| 11.   | X | X | X  | X  | X  | X  |
| 12.   | X | X | X  | X  | X  | X  |
| 13.   | X | X | X  | X  | X  | X  |
| 14.   | A | X | X  | X  | X  | X  |
| 15.   | X | X | X  | X  | X  | X  |
| 16.   | A | A | A  | A  | X  | X  |
| 17.   | X | X | X  | X  | X  | X  |
| 18.   | X | X | X  | X  | X  | X  |
| 19.   | A | A | A  | A  | X  | X  |
| 20.   | X | X | X  | X  | X  | X  |
| 21.   | X | X | X  | X  | X  | X  |
| 22.   |   |   |    |    |    |    |
| 23.   |   |   |    |    |    |    |
| 24.   |   |   |    |    |    |    |
| 25.   |   |   |    |    |    |    |
| 26.   |   |   |    |    |    |    |
| 27.   |   |   |    |    |    |    |
| 28.   |   |   |    |    |    |    |
| 29.   |   |   |    |    |    |    |
| 30.   |   |   |    |    |    |    |
| 31.   |   |   |    |    |    |    |
| 32.   |   |   |    |    |    |    |
| 33.   |   |   |    |    |    |    |
| 34.   |   |   |    |    |    |    |
| 35.   |   |   |    |    |    |    |
| SIGN  |   |   |    |    |    |    |

[illegible]

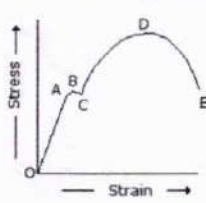
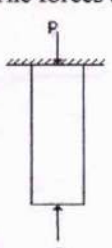
Dr. LEENA A V  
11. PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF CIVIL ENGINEERING**  
**SEMESTER S6 CE**  
**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

|     |                                                                                                                                                                                                                                                                                                      |                   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 1.  | The ratio of change in volume to the original volume is called<br>A. linear strain B. lateral strain <input checked="" type="checkbox"/> C. volumetric strain D. Poisson's ratio                                                                                                                     | ✓                 |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A. yield point stress B. breaking stress <input checked="" type="checkbox"/> C. ultimate stress D. elastic limit                                 | ✓<br>3/10<br>24/5 |
| 3.  | Hook's law holds good up to<br>A. yield point <input checked="" type="checkbox"/> B. elastic limit C. plastic limit D. breaking point                                                                                                                                                                | ✓                 |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical method <input checked="" type="checkbox"/> B. method of joints C. method of sections D. all the above.                                                                                                               | ✗                 |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress <input checked="" type="checkbox"/> B. tensile stress C. shear stress D. none of these. | ✗                 |
| 6.  | The Young's modulus of a material is 125 GPa and Poisson's ratio is 0.25. The modulus of rigidity of the material is<br>A. 30 GPa <input checked="" type="checkbox"/> B. 50 GPa C. 80 GPa D. 100 GPa                                                                                                 | ✗                 |
| 7.  | The compression test is carried on _____ materials.<br>A. Ductile <input checked="" type="checkbox"/> B. brittle C. malleable <input checked="" type="checkbox"/> D. Plastic                                                                                                                         | ✗                 |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A. 10 Kn/mm <sup>2</sup> <input checked="" type="checkbox"/> B. 80 Kn/mm <sup>2</sup> C. 100 Kn/mm <sup>2</sup> D. 210 Kn/mm <sup>2</sup>                                                                                      | ✗                 |
| 9.  | The deformation per unit length is called <u>strain</u>                                                                                                                                                                                                                                              | ✗                 |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity <input checked="" type="checkbox"/><br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                              | ✗                 |

*Leena*  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR





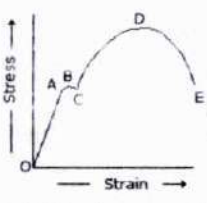

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**DEPARTMENT OF CIVIL ENGINEERING**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

|     |                                                                                                                                                                                                                                                                  |                   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 1.  | The ratio of change in volume to the original volume is called<br>A. linear strain B. lateral strain C. volumetric strain D. Poisson's ratio                                                                                                                     | ✓                 |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A. yield point stress B. breaking stress C. ultimate stress D. elastic limit                                 | ✓<br>3/10<br>24/5 |
| 3.  | Hook's law holds good up to<br>A. yield point B. elastic limit C. plastic limit D. breaking point                                                                                                                                                                | ✓                 |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical method B. method of joints C. method of sections D. all the above.                                                                                                               | ✗                 |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress B. tensile stress C. shear stress D. none of these. | ✗                 |
| 6.  | The Young's modulus of a material is 125 GPa and Poisson's ratio is 0.25. The modulus of rigidity of the material is<br>A. 30 GPa B. 50 GPa C. 80 GPa D. 100 GPa                                                                                                 | ✗                 |
| 7.  | The compression test is carried on _____ materials.<br>A. Ductile B. brittle C. malleable D. Plastic                                                                                                                                                             | ✓                 |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A. 10 Kn/mm <sup>2</sup> B. 80 Kn/mm <sup>2</sup> C. 100 Kn/mm <sup>2</sup> D. 210 Kn/mm <sup>2</sup>                                                                                      | ✗                 |
| 9.  | The deformation per unit length is called <u>strain</u>                                                                                                                                                                                                          | ✓                 |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                              | ✗                 |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

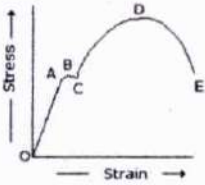

**DEPARTMENT OF CIVIL ENGINEERING**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

8/10

|     |                                                                                                                                                                                                                                                                  |   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1.  | The ratio of change in volume to the original volume is called<br>A. linear strain B. lateral strain C. volumetric strain D. Poisson's ratio                                                                                                                     | ✓ |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A. yield point stress B. breaking stress C. ultimate stress D. elastic limit                                 | ✓ |
| 3.  | Hook's law holds good up to<br>A. yield point B. elastic limit C. plastic limit D. breaking point                                                                                                                                                                | ✓ |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical method B. method of joints C. method of sections D. all the above.                                                                                                               | ✓ |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress B. tensile stress C. shear stress D. none of these. | ✓ |
| 6.  | The Young's modulus of a material is 125 GPa and Poissons ratio is 0.25. The modulus of rigidity of the material is<br>a. 30 GPa B. 50 GPa C. 80 GPa D. 100 GPa                                                                                                  | ✓ |
| 7.  | The compression test is carried on _____ materials.<br>A. Ductile B. brittle C. malleable D. Plastic                                                                                                                                                             | ✓ |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A. 10 Kn/mm <sup>2</sup> B. 80 Kn/mm <sup>2</sup> C. 100 Kn/mm <sup>2</sup> D. 210 Kn/mm <sup>2</sup>                                                                                      | ✓ |
| 9.  | The deformation per unit length is called <u>Strain</u>                                                                                                                                                                                                          | ✓ |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity ✓<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                            | ✓ |

DR. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





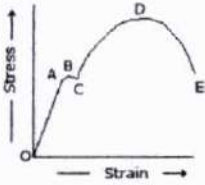

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF CIVIL ENGINEERING**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

7  
10

|     |                                                                                                                                                                                                                                                                |           |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1.  | The ratio of change in volume to the original volume is called<br>A.linear strainB.lateral strainC.volumetric strainD.Poisson's ratio                                                                                                                          | ✓         |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A.yield point stressB.breaking stressC.ultimate stressD.elastic limit                                      | ✓<br>24/5 |
| 3.  | Hook's law holds good up to<br>A.yield pointB.elastic limitC.plastic limitD.breaking point                                                                                                                                                                     | ✓         |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical methodB.method of jointsC. method of sectionsD.all the above.                                                                                                                  | ✓         |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A.compressive stress B. tensile stress C. shear stressD. none of these. | ✓         |
| 6.  | The Young's modulus of a material is 125 GPa and Poissons ratio is 0.25. The modulus of rigidity of me material is<br>a.30 GPa B.50 GPa C.80 GPa D.100 GPa                                                                                                     | ✗         |
| 7.  | The compression test is carried on _____ materials.<br>A.Ductile B.brittle C.malleable D. Plastic                                                                                                                                                              | ✓         |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A.10 Kn/mm <sup>2</sup> B.80 Kn/mm <sup>2</sup> C.100 Kn/mm <sup>2</sup> D.210 Kn/mm <sup>2</sup>                                                                                        | ✗         |
| 9.  | The deformation per unit length is called <u>strain</u>                                                                                                                                                                                                        | ✓         |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                            | ✗         |

$$E = \frac{2C}{1+\mu}$$

*Leena*  
**DR. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

## DEPARTMENT OF CIVIL ENGINEERING

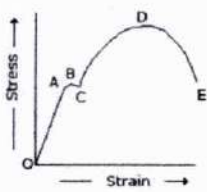

### SEMESTER S6 CE

#### CET308 COMPREHENSIVE COURSE WORK

#### MECHANICS OF SOLIDS QUESTIONS

Sreehanik.k

LSNC19CE021

|     |                                                                                                                                                                                                                                                                 |                 |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1.  | The ratio of change in volume to the original volume is called<br>A.linear strainB.lateral strainC.volumetric strainD.Poisson's ratio                                                                                                                           | ✓               |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A.yield point stressB.breaking stressC.ultimate stressD.elastic limit                                       | 9/10<br>24/5/22 |
| 3.  | Hook's law holds good up to<br>A.yield pointB.elastic limitC.plastic limitD.breaking point                                                                                                                                                                      | ✓               |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical methodB. method of jointsC. method of sectionsD. all the above.                                                                                                                 | ✓               |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress B. tensile stress C. shear stressD. none of these. | ✓               |
| 6.  | The Young's modulus of a material is 125 GPa and Poissons ratio is 0.25. The modulus of rigidity of me material is<br>a.30 GPa B.50 GPa C.80 GPa D.100 GPa                                                                                                      | X               |
| 7.  | The compression test is carried on _____ materials.<br>A.Ductile B.brittle C.malleable D. Plastic                                                                                                                                                               | ✓               |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A.10 Kn/mm <sup>2</sup> B.80 Kn/mm <sup>2</sup> C.100 Kn/mm <sup>2</sup> D.210 Kn/mm <sup>2</sup>                                                                                         | ✓               |
| 9.  | The deformation per unit length is called strain                                                                                                                                                                                                                | ✓               |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                             | ✓               |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



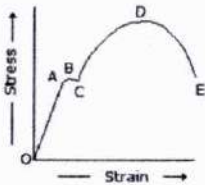

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**DEPARTMENT OF CIVIL ENGINEERING**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

|     |                                                                                                                                                                                                                                                                  |              |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 1.  | The ratio of change in volume to the original volume is called<br>A. linear strain B. lateral strain C. volumetric strain D. Poisson's ratio                                                                                                                     | ✓            |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A. yield point stress B. breaking stress C. ultimate stress D. elastic limit                                 | 6/10<br>24/5 |
| 3.  | Hook's law holds good up to<br>A. yield point B. elastic limit C. plastic limit D. breaking point                                                                                                                                                                | ✗            |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical method B. method of joints C. method of sections D. all the above                                                                                                                | ✓            |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress B. tensile stress C. shear stress D. none of these. | ✗            |
| 6.  | The Young's modulus of a material is 125 GPa and Poisson's ratio is 0.25. The modulus of rigidity of the material is<br>A. 30 GPa B. 50 GPa C. 80 GPa D. 100 GPa                                                                                                 | ✓            |
| 7.  | The compression test is carried on _____ materials.<br>A. Ductile B. brittle C. malleable D. Plastic                                                                                                                                                             | ✓            |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A. 10 Kn/mm <sup>2</sup> B. 80 Kn/mm <sup>2</sup> C. 100 Kn/mm <sup>2</sup> D. 210 Kn/mm <sup>2</sup>                                                                                      | ✗            |
| 9.  | The deformation per unit length is called <u>strain</u>                                                                                                                                                                                                          | ✓            |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                              | ✗            |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

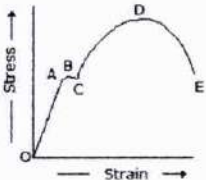
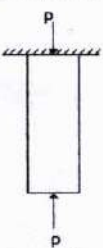
**DEPARTMENT OF CIVIL ENGINEERING**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

7  
10

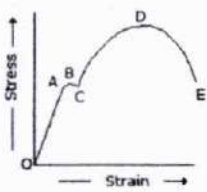

|     |                                                                                                                                                                                                                                                                  |           |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1.  | The ratio of change in volume to the original volume is called<br>A. linear strain B. lateral strain C. volumetric strain D. Poisson's ratio                                                                                                                     | ✓         |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A. yield point stress B. breaking stress C. ultimate stress D. elastic limit                                 | ✓<br>24/5 |
| 3.  | Hook's law holds good up to<br>A. yield point B. elastic limit C. plastic limit D. breaking point                                                                                                                                                                | ✓         |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical method B. method of joints C. method of sections D. all the above.                                                                                                               | ✓         |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress B. tensile stress C. shear stress D. none of these. | ✓         |
| 6.  | The Young's modulus of a material is 125 GPa and Poissons ratio is 0.25. The modulus of rigidity of me material is<br>a. 30 GPa B. 50 GPa C. 80 GPa D. 100 GPa                                                                                                   | ✗         |
| 7.  | The compression test is carried on _____ materials.<br>A. Ductile B. brittle C. malleable D. Plastic                                                                                                                                                             | ✓         |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A. 10 Kn/mm <sup>2</sup> B. 80 Kn/mm <sup>2</sup> C. 100 Kn/mm <sup>2</sup> D. 210 Kn/mm <sup>2</sup>                                                                                      | ✗         |
| 9.  | The deformation per unit length is called <u>strain</u> .                                                                                                                                                                                                        | ✓         |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                              | ✗         |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY****DEPARTMENT OF CIVIL ENGINEERING****SEMESTER S6 CE****CET308 COMPREHENSIVE COURSE WORK****MECHANICS OF SOLIDS QUESTIONS**

6/10

|     |                                                                                                                                                                                                                                                                |   |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1.  | The ratio of change in volume to the original volume is called<br>A.linear strainB.lateral strainC.volumetric strainD.Poisson's ratio                                                                                                                          | ✓ |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A.yield point stressB.breaking stressC.ultimate stressD.elastic limit                                      | ✗ |
| 3.  | Hook's law holds good up to<br>A.yield pointB.elastic limitC.plastic limitD.breaking point                                                                                                                                                                     | ✓ |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical methodB. method of jointsC. method of sectionsD. all the above.                                                                                                                | ✓ |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A.compressive stress B. tensile stress C. shear stressD. none of these. | ✓ |
| 6.  | The Young's modulus of a material is 125 GPa and Poissons ratio is 0.25. The modulus of rigidity of me material is<br>a.30 GPa B.50 GPa C.80 GPa D.100 GPa                                                                                                     | ✗ |
| 7.  | The compression test is carried on _____ materials.<br>A.Ductile B.brittle C.malleable D. Plastic                                                                                                                                                              | ✓ |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A.10 Kn/mm <sup>2</sup> B.80 Kn/mm <sup>2</sup> C.100 Kn/mm <sup>2</sup> D.210 Kn/mm <sup>2</sup>                                                                                        | ✗ |
| 9.  | The deformation per unit length is called _____                                                                                                                                                                                                                | ✗ |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                            | ✓ |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

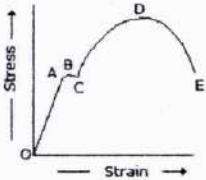
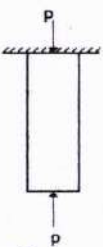
**DEPARTMENT OF CIVIL ENGINEERING**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

7/10  
24/5

|     |                                                                                                                                                                                                                                                                  |   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1.  | The ratio of change in volume to the original volume is called<br>A. linear strain B. lateral strain C. volumetric strain D. Poisson's ratio                                                                                                                     | ✓ |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A. yield point stress B. breaking stress C. ultimate stress D. elastic limit                                 | ✓ |
| 3.  | Hook's law holds good up to<br>A. yield point B. elastic limit C. plastic limit D. breaking point                                                                                                                                                                | ✓ |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical method B. method of joints C. method of sections D. all the above.                                                                                                               | ✓ |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress B. tensile stress C. shear stress D. none of these. | ✓ |
| 6.  | The Young's modulus of a material is 125 GPa and Poissons ratio is 0.25. The modulus of rigidity of me material is<br>a. 30 GPa B. 50 GPa C. 80 GPa D. 100 GPa                                                                                                   | ✗ |
| 7.  | The compression test is carried on _____ materials.<br>A. Ductile B. brittle C. malleable D. Plastic                                                                                                                                                             | ✓ |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A. 10 Kn/mm <sup>2</sup> B. 80 Kn/mm <sup>2</sup> C. 100 Kn/mm <sup>2</sup> D. 210 Kn/mm <sup>2</sup>                                                                                      | ✓ |
| 9.  | The deformation per unit length is called _____                                                                                                                                                                                                                  | ✗ |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                              | ✗ |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**DEPARTMENT OF CIVIL ENGINEERING**

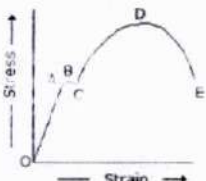

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

Akash.PV

SNC19CE003

|     |                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                    |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | The ratio of change in volume to the original volume is called<br>A.linear strainB.lateral strainC.volumetric strainD.Poisson's ratio                                                                                                                           | ✓                                                                                                                                                                                                                                  |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A.yield point stressB.breaking stressC.ultimate stressD.elastic limit                                       | ✓<br><div style="border: 1px solid red; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 10px;">5<br/>10</div> <div style="margin-top: 10px;">81<br/>24/5</div> |
| 3.  | Hook's law holds good up to<br>A.yield pointB.elastic limitC.plastic limitD.breaking point                                                                                                                                                                      | ✓<br>X                                                                                                                                                                                                                             |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical methodB. method of jointsC. method of sectionsD. all the above.                                                                                                                 | ✓<br>✓                                                                                                                                                                                                                             |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress B. tensile stress C. shear stressD. none of these. | ✓<br>X                                                                                                                                                                                                                             |
| 6.  | The Young's modulus of a material is 125 GPa and Poissons ratio is 0.25. The modulus of rigidity of me material is<br>a.30 GPa B.50 GPa C.80 GPa D.100 GPa                                                                                                      | ✓<br>✓                                                                                                                                                                                                                             |
| 7.  | The compression test is carried on _____ materials.<br>A.Ductile B.brittle C.malleable D. Plastic                                                                                                                                                               | ✓<br>✓                                                                                                                                                                                                                             |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A.10 Kn/mm <sup>2</sup> B.80 Kn/mm <sup>2</sup> C.100 Kn/mm <sup>2</sup> D.210 Kn/mm <sup>2</sup>                                                                                         | X                                                                                                                                                                                                                                  |
| 9.  | The deformation per unit length is called _____                                                                                                                                                                                                                 | X                                                                                                                                                                                                                                  |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                             | X                                                                                                                                                                                                                                  |

*Dr. Leena A V*  
**DR. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR





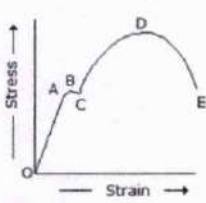

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF CIVIL ENGINEERING**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

8/10

|     |                                                                                                                                                                                                                                                                 |           |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1.  | The ratio of change in volume to the original volume is called<br>A.linear strainB.lateral strainC.volumetric strainD.Poisson's ratio                                                                                                                           | ✓         |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A.yield point stressB.breaking stressC.ultimate stressD.elastic limit                                       | ✓<br>24/5 |
| 3.  | Hook's law holds good up to<br>A.yield pointB.elastic limitC.plastic limitD.breaking point                                                                                                                                                                      | ✓         |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical methodB. method of jointsC. method of sectionsD. all the above.                                                                                                                 | ✓         |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress B. tensile stress C. shear stressD. none of these. | ✓         |
| 6.  | The Young's modulus of a material is 125 GPa and Poissons ratio is 0.25. The modulus of rigidity of me material is<br>A.30 GPa B.50 GPa C.80 GPa D.100 GPa                                                                                                      | ✗         |
| 7.  | The compression test is carried on _____ materials.<br>A.Ductile B.brittle C.malleable D. Plastic                                                                                                                                                               | ✓         |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A.10 Kn/mm <sup>2</sup> B.80 Kn/mm <sup>2</sup> C.100 Kn/mm <sup>2</sup> D.210 Kn/mm <sup>2</sup>                                                                                         | ✓         |
| 9.  | The deformation per unit length is called <u>Strain</u>                                                                                                                                                                                                         | ✓         |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                             | ✗         |

DR. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

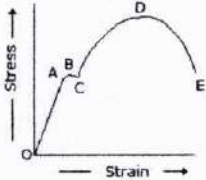

**DEPARTMENT OF CIVIL ENGINEERING**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

9/10

|     |                                                                                                                                                                                                                                                                         |   |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1.  | The ratio of change in volume to the original volume is called<br>A. linear strain B. lateral strain C. <u>volumetric strain</u> D. Poisson's ratio                                                                                                                     | ✓ |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A. yield point stress B. breaking stress C. <u>ultimate stress</u> D. elastic limit                                 | ✓ |
| 3.  | Hook's law holds good up to<br>A. yield point B. <u>elastic limit</u> C. plastic limit D. breaking point                                                                                                                                                                | ✓ |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical method B. method of joints C. method of sections D. <u>all the above.</u>                                                                                                               | ✓ |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. <u>compressive stress</u> B. tensile stress C. shear stress D. none of these. | ✓ |
| 6.  | The Young's modulus of a material is 125 GPa and Poissons ratio is 0.25. The modulus of rigidity of me material is<br>a. 30 GPa B. <u>50 GPa</u> C. 80 GPa D. 100 GPa                                                                                                   | ✓ |
| 7.  | The compression test is carried on _____ materials.<br>A. Ductile B. <u>brittle</u> C. malleable D. Plastic                                                                                                                                                             | ✓ |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A. 10 Kn/mm <sup>2</sup> B. 80 Kn/mm <sup>2</sup> C. 100 Kn/mm <sup>2</sup> D. <u>210 Kn/mm<sup>2</sup></u>                                                                                       | ✓ |
| 9.  | The deformation per unit length is called <u>Strain</u>                                                                                                                                                                                                                 | ✓ |
| 10. | The unit of modulus of elasticity is same as those of<br>A. <u>stress, strain and pressure</u><br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                              | ✗ |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

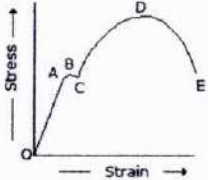
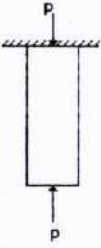
**DEPARTMENT OF CIVIL ENGINEERING**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

3  
10

|     |                                                                                                                                                                                                                                                                  |   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1.  | The ratio of change in volume to the original volume is called<br>A. linear strain B. lateral strain C. volumetric strain D. Poisson's ratio                                                                                                                     | ✓ |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A. yield point stress B. breaking stress C. ultimate stress D. elastic limit                                 | ✗ |
| 3.  | Hook's law holds good up to<br>A. yield point B. elastic limit C. plastic limit D. breaking point                                                                                                                                                                | ✗ |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical method B. method of joints C. method of sections D. all the above.                                                                                                               | ✗ |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress B. tensile stress C. shear stress D. none of these. | ✗ |
| 6.  | The Young's modulus of a material is 125 GPa and Poisson's ratio is 0.25. The modulus of rigidity of the material is<br>A. 30 GPa B. 50 GPa C. 80 GPa D. 100 GPa                                                                                                 | ✗ |
| 7.  | The compression test is carried on _____ materials.<br>A. Ductile B. brittle C. malleable D. Plastic                                                                                                                                                             | ✓ |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A. 10 Kn/mm <sup>2</sup> B. 80 Kn/mm <sup>2</sup> C. 100 Kn/mm <sup>2</sup> D. 210 Kn/mm <sup>2</sup>                                                                                      | ✗ |
| 9.  | The deformation per unit length is called _____                                                                                                                                                                                                                  | ✗ |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                              | ✓ |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

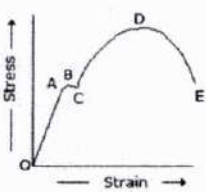
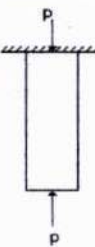
**DEPARTMENT OF CIVIL ENGINEERING**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

7/10

|     |                                                                                                                                                                                                                                                                  |   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1.  | The ratio of change in volume to the original volume is called<br>A. linear strain B. lateral strain C. volumetric strain D. Poisson's ratio                                                                                                                     | ✓ |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A. yield point stress B. breaking stress C. ultimate stress D. elastic limit                                 | ✓ |
| 3.  | Hook's law holds good up to<br>A. yield point B. elastic limit C. plastic limit D. breaking point                                                                                                                                                                | ✓ |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical method B. method of joints C. method of sections D. all the above.                                                                                                               | ✓ |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress B. tensile stress C. shear stress D. none of these. | ✗ |
| 6.  | The Young's modulus of a material is 125 GPa and Poissons ratio is 0.25. The modulus of rigidity of me material is<br>a. 30 GPa B. 50 GPa C. 80 GPa D. 100 GPa                                                                                                   | ✓ |
| 7.  | The compression test is carried on _____ materials.<br>A. Ductile B. brittle C. malleable D. Plastic                                                                                                                                                             | ✓ |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A. 10 Kn/mm <sup>2</sup> B. 80 Kn/mm <sup>2</sup> C. 100 Kn/mm <sup>2</sup> D. 210 Kn/mm <sup>2</sup>                                                                                      | ✗ |
| 9.  | The deformation per unit length is called <u>strain</u>                                                                                                                                                                                                          | ✓ |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                              | ✗ |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

## DEPARTMENT OF CIVIL ENGINEERING

### SEMESTER S6 CE

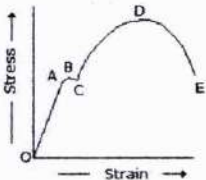
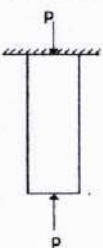
#### CET308 COMPREHENSIVE COURSE WORK

#### MECHANICS OF SOLIDS QUESTIONS

ASLORUA 49/14/2024

SALC19E009.

8/10

|     |                                                                                                                                                                                                                                                                  |           |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1.  | The ratio of change in volume to the original volume is called<br>A. linear strain B. lateral strain C. volumetric strain D. Poisson's ratio                                                                                                                     | ✓         |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A. yield point stress B. breaking stress C. ultimate stress D. elastic limit                                 | ✓<br>24/5 |
| 3.  | Hook's law holds good up to<br>A. yield point B. elastic limit C. plastic limit D. breaking point                                                                                                                                                                | ✓         |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical method B. method of joints C. method of sections D. all the above.                                                                                                               | ✓         |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress B. tensile stress C. shear stress D. none of these. | ✗         |
| 6.  | The Young's modulus of a material is 125 GPa and Poissons ratio is 0.25. The modulus of rigidity of me material is<br>a. 30 GPa B. 50 GPa C. 80 GPa D. 100 GPa                                                                                                   | ✓         |
| 7.  | The compression test is carried on _____ materials.<br>A. Ductile B. brittle C. malleable D. Plastic                                                                                                                                                             | ✓         |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A. 10 Kn/mm <sup>2</sup> B. 80 Kn/mm <sup>2</sup> C. 100 Kn/mm <sup>2</sup> D. 210 Kn/mm <sup>2</sup>                                                                                      | ✓         |
| 9.  | The deformation per unit length is called <u>strain</u>                                                                                                                                                                                                          | ✓         |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                              | ✗         |

DR. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

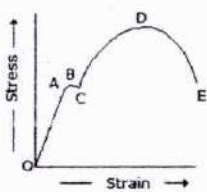
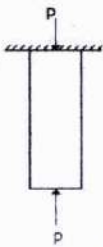
**DEPARTMENT OF CIVIL ENGINEERING**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK**

**MECHANICS OF SOLIDS QUESTIONS**

7/10

|     |                                                                                                                                                                                                                                                                  |           |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1.  | The ratio of change in volume to the original volume is called<br>A. linear strain B. lateral strain C. volumetric strain D. Poisson's ratio                                                                                                                     | ✓         |
| 2.  | In the below figure, the stress corresponding to point D is<br><br>A. yield point stress B. breaking stress C. ultimate stress D. elastic limit                                 | ✓<br>24/5 |
| 3.  | Hook's law holds good up to<br>A. yield point B. elastic limit C. plastic limit D. breaking point                                                                                                                                                                | ✓         |
| 4.  | The forces in the members of simple trusses, may be analysed by<br>A. graphical method B. method of joints C. method of sections D. all the above.                                                                                                               | ✓         |
| 5.  | The forces acting normally on the cross section of a bar shown in the given figure introduce<br><br>A. compressive stress B. tensile stress C. shear stress D. none of these. | ✓         |
| 6.  | The Young's modulus of a material is 125 GPa and Poisson's ratio is 0.25. The modulus of rigidity of the material is<br>a. 30 GPa B. 50 GPa C. 80 GPa D. 100 GPa                                                                                                 | ✗         |
| 7.  | The compression test is carried on _____ materials.<br>A. Ductile B. brittle C. malleable D. Plastic                                                                                                                                                             | ✓         |
| 8.  | The modulus of elasticity for mild steel is approximately equal to<br>A. 10 Kn/mm <sup>2</sup> B. 80 Kn/mm <sup>2</sup> C. 100 Kn/mm <sup>2</sup> D. 210 Kn/mm <sup>2</sup>                                                                                      | ✗         |
| 9.  | The deformation per unit length is called <u>Strain</u>                                                                                                                                                                                                          | ✓         |
| 10. | The unit of modulus of elasticity is same as those of<br>A. stress, strain and pressure<br>B. stress, force and modulus of rigidity<br>C. strain, force and pressure<br>D. stress, pressure and modulus of rigidity                                              | ✗         |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





Akash. P V  
SG CE

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|     |                                                                                                                                                                                                                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres ✓<br>c) Mid span<br>d) Action of loading                                                                                                   |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum ✓<br>c) Zero<br>d) Constant                                                                                                                             |
| 3.  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup> ✓<br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                      |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$<br>b) $w$<br>c) $w/l$ ✓<br>d) $w+l$                                                                                   |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports<br>b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                              |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2m$ ].<br>a) Rectangular b) Trapezoidal c) Triangular d) Square                                                                                                 |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/ m d) -m                                                                                                                                     |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear<br>b) Flexural ✓<br>c) Axial<br>d) Longitudinal                                                                                             |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120 \text{ N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) 162m d) 174m                        |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br>c) Shear and bending ✓<br>d) Compressive and plane stresses                                           |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses ✓<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane |

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|     |                                                                                                                                                                                                                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres<br>c) Mid span<br>d) Action of loading                                                                                                     |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>c) Zero<br>d) Constant                                                                                                                               |
| 3.  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup><br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                        |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                     |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports<br>b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                              |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal c) Triangular d) Square                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/ m d) -m                                                                                                                                     |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear<br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120 \text{ N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) 162m d) 174m                        |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                             |
| 12. | The extremities of any diameter on Mohr's circle represent<br>a) Principal stresses<br>b) Normal stresses on planes at $45^\circ$<br>c) Shear stresses on planes at $45^\circ$<br>d) Normal and shear stresses on a plane       |

**Dr. LEENA A V**

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**SEMESTER S6 CE**

CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2

|     |                                                                                                                                                                                                                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres<br>c) Mid span<br>d) Action of loading                                                                                                     |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>c) Zero<br>d) Constant                                                                                                                               |
| 3.  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup><br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                        |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                     |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports<br>b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                              |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal c) Triangular d) Square                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/ m d) -m                                                                                                                                     |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear<br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120\text{N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) 162m d) 174m                          |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                             |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane   |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|     |                                                                                                                                                                                                                                   |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres ✓<br>c) Mid span<br>d) Action of loading                                                                                                     |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>c) Zero ✓<br>d) Constant                                                                                                                               |
| 3.  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup> ✓<br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                        |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$ ✓<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$ ✓<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                     |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports ✓<br>b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                              |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular ✓ b) Trapezoidal c) Triangular d) Square                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/ m d) -m                                                                                                                                       |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear<br>b) Flexural ✓<br>c) Axial<br>d) Longitudinal                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120\text{N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m ✓ b) 166m c) 162m d) 174m                          |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br>c) Shear and bending ✓<br>d) Compressive and plane stresses                                             |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses ✓<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane   |

*Leena*  
**Dr. LEENA A V**  
**PRINCIPAL**  
**SREE NARAYANA GURU COLLEGE OF**  
**ENGINEERING & TECHNOLOGY**  
**PAYYANUR, KANNUR**



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**SEMESTER S6 CE**

CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2

|     |                                                                                                                                                                                                                                     |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres ✓<br>c) Mid span<br>d) Action of loading                                                                                                       |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum ✓<br>c) Zero<br>d) Constant                                                                                                                                 |
| 3.  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup><br>b) Nm<br>c) N/m ✓<br>d) m/N <sup>3</sup>                                                                                                                          |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$ ✓<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$ ✗<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$<br>b) $w$<br>c) $w/l$ ✓<br>d) $w+l$                                                                                       |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports ✓<br>b) Mid span<br>c) Point of contraflexure ✗<br>d) Point of emergence ✗                                                                            |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal c) Triangular ✓ d) Square ✓                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/ m d) -m                                                                                                                                         |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear<br>b) Flexural ✓<br>c) Axial ✓<br>d) Longitudinal                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120\text{N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) 162m ✓ d) 174m                            |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses ✓<br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                               |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane ✓     |

*Leena*  
**DR. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

## SEMESTER S6 CE

### CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2

|     |                                                                                                                                                                                                                                                         |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres<br>c) Mid span<br>d) Action of loading                                                                                                                             |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>c) Zero<br>d) Constant                                                                                                                                                       |
| 3.  | What are the units of flexural rigidity?<br>a) $Nm^2$<br>b) $Nm$<br>c) $N/m$<br>d) $m/N^3$                                                                                                                                                              |
| 4.  | Calculate the modulus of section of rectangle beam of size $240 \text{ mm} \times 400 \text{ mm}$ .<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                                             |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports<br>b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                                                      |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2m$ ].<br>a) Rectangular b) Trapezoidal c) Triangular d) Square                                                                                                                         |
| 8.  | What are the units of axial stiffness?<br>a) $m^3$ b) $m^2$ c) $N/m$ d) $-m$                                                                                                                                                                            |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear<br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                                                                                       |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120 \text{ N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) 162m d) 174m                                                |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                                                     |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane                           |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**SEMESTER S6 CE**

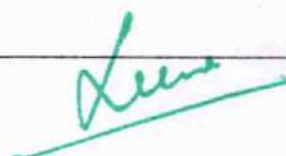
CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2

Arutha Yangidharan

SNCE009

S6 CE

|     |                                                                                                                                                                                                                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres<br>c) Mid span<br>d) Action of loading                                                                                                     |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>c) Zero<br>d) Constant                                                                                                                               |
| 3.  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup><br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                        |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                     |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports<br>b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                              |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal c) Triangular d) Square                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/ m d) -m                                                                                                                                     |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear<br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120\text{N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) 162m d) 174m                          |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                             |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane   |

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



Aadithya krishna.h.c  
Roll No 1  
SNC19CE001

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|     |                                                                                                                                                                                                                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres<br>c) Mid span<br>d) Action of loading ✓                                                                                                   |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>c) Zero<br>d) Constant                                                                                                                               |
| 3.  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup><br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                        |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                     |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports<br>b) Mid span<br>c) Point of contraflexure ✓<br>d) Point of emergence                                                                            |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal c) Triangular d) Square                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/ m d) -m                                                                                                                                     |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear<br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120\text{N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) 162m d) 174m                          |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                             |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane   |

  
**Dr. LEENA A V**  
**PRINCIPAL**

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|     |                                                                                                                                                                                                                                                                                                   |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres<br>c) Mid span<br>d) Action of loading ✓                                                                                                                                                                     |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>c) Zero ✓<br>d) Constant                                                                                                                                                                                               |
| 3.  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup><br>b) Nm ✓<br>c) N/m ✓<br>d) m/N <sup>3</sup>                                                                                                                                                                                      |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ ✓<br>$Z = \frac{2}{3} - \frac{b d^3}{12 d_2}$ $= \frac{b d^3}{6}$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$ ✓<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                                                                                     |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports ✓<br>b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                                                                                              |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal c) Triangular ✓ d) Square                                                                                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/ m d) -m ✓<br><i>Relaxation &amp; strain</i>                                                                                                                                                                   |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear<br>b) Flexural ✓<br>c) Axial<br>d) Longitudinal                                                                                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120 \text{ N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>$\frac{M}{I} = \frac{E}{R} = \frac{f}{y} \quad R = \frac{E \times y}{f}$<br>a) 134m b) 166m ✓ c) 162m d) 174m            |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses ✓<br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                                                                                             |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses ✓<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane                                                                   |

*Leena*  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|     |                                                                                                                                                                                                                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres<br>c) Mid span<br>d) Action of loading                                                                                                     |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>c) Zero<br>d) Constant                                                                                                                               |
| 3.  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup><br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                        |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                     |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports<br>b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                              |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal c) Triangular d) Square                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/ m d) -m                                                                                                                                     |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear<br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120 \text{ N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) 162m d) 174m                        |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                             |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane   |

$$I = \frac{B I^3}{12} = \frac{240 \times 400^3}{12} = 128 \times 10^3$$

$$I_{max} = 120$$

$$Z = \frac{I}{y_{max}}$$

*Leena*  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

Anjana-c  
07



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|     |                                                                                                                                                                                                                                                                     |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres<br>c) Mid span<br><input checked="" type="checkbox"/> d) Action of loading                                                                                                     |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br><input checked="" type="checkbox"/> c) Zero<br>d) Constant                                                                                                                               |
| 3.  | What are the units of flexural rigidity?<br><input checked="" type="checkbox"/> a) Nm <sup>2</sup><br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                        |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br><input checked="" type="checkbox"/> c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br><input checked="" type="checkbox"/> a) $w \times l$<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                     |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports<br>b) Mid span<br><input checked="" type="checkbox"/> c) Point of contraflexure<br>d) Point of emergence                                                                              |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal <input checked="" type="checkbox"/> c) Triangular d) Square                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/ m <input checked="" type="checkbox"/> d) -m                                                                                                                                     |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br><input checked="" type="checkbox"/> a) Shear<br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120\text{N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m <input checked="" type="checkbox"/> b) 166m c) 162m d) 174m                          |
| 11. | Which of these are types of normal stresses?<br><input checked="" type="checkbox"/> a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                             |
| 12. | The extremities of any diameter on Mohr's circle represent<br><input checked="" type="checkbox"/> (A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane   |

*Leena*  
**Dr. LEENA A V**  
**PRINCIPAL**

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|    |                                                                                                                                                                                                                                 |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres<br>c) Mid span<br><input checked="" type="checkbox"/> d) Action of loading                                                                 |
| 2. | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br><input checked="" type="checkbox"/> c) Zero<br>d) Constant                                                                                           |
| 3  | What are the units of flexural rigidity?<br><input checked="" type="checkbox"/> a) Nm <sup>2</sup><br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                    |
| 4  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br><input checked="" type="checkbox"/> a) $w \times l$<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                 |
| 6  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports<br><input checked="" type="checkbox"/> b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                          |
| 7  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal <input checked="" type="checkbox"/> c) Triangular d) Square                                                      |
| 8  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> <input checked="" type="checkbox"/> c) N/ m d) -m                                                                                                 |
| 9  | ____ strength is caused by a moment of resistance offered by a section.<br><input checked="" type="checkbox"/> a) Shear<br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                           |
| 10 | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120\text{N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) 162m d) 174m                          |
| 11 | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses<br>b) Tensile and thermal stresses <input checked="" type="checkbox"/><br>c) Shear and bending<br>d) Compressive and plane stresses         |
| 12 | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane   |

*Leena*  
**DR. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|     |                                                                                                                                                                                                                                   |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres ✓<br>c) Mid span<br>d) Action of loading                                                                                                     |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>c) Zero ✓<br>d) Constant                                                                                                                               |
| 3.  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup> ✓<br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                        |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$ ✓<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$ ✓<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                     |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports ✓<br>b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                              |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal c) Triangular ✓ d) Square                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/ m d) -m                                                                                                                                       |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear ✓<br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120\text{N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) 162m d) 174m ✓                          |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses ✓<br>b) Tensile and thermal stresses<br>c) Shear and bending ✓<br>d) Compressive and plane stresses                                           |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses ✓<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane   |

*Leena*  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|    |                                                                                                                                                                                                                                                                     |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br><input checked="" type="checkbox"/> b) Extreme fibres<br>c) Mid span<br>d) Action of loading                                                                                                     |
| 2  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br><input checked="" type="checkbox"/> c) Zero<br>d) Constant                                                                                                                               |
| 3  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup><br><input checked="" type="checkbox"/> b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                        |
| 4  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br><input checked="" type="checkbox"/> b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br><input checked="" type="checkbox"/> a) $w \times l$<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                     |
| 6  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports<br><input checked="" type="checkbox"/> b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                              |
| 7  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal <input checked="" type="checkbox"/> c) Triangular d) Square                                                                                          |
| 8  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) $\text{N/m}$ <input checked="" type="checkbox"/> d) -m                                                                                                                             |
| 9  | ____ strength is caused by a moment of resistance offered by a section.<br><input checked="" type="checkbox"/> a) Shear<br>b) Flexural<br><input checked="" type="checkbox"/> c) Axial<br>d) Longitudinal                                                           |
| 10 | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120\text{N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m <input checked="" type="checkbox"/> b) 166m c) 162m d) 174m                          |
| 11 | Which of these are types of normal stresses?<br><input checked="" type="checkbox"/> a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br><input checked="" type="checkbox"/> c) Shear and bending<br>d) Compressive and plane stresses         |
| 12 | The extremities of any diameter on Mohr's circle represent<br><input checked="" type="checkbox"/> (A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane   |

*Leena*  
**Dr. LEENA A V**

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|     |                                                                                                                                                                                                                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres<br>c) Mid span<br>d) Action of loading                                                                                                     |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>c) Zero<br>d) Constant                                                                                                                               |
| 3.  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup><br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                        |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                     |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports<br>b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                              |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal c) Triangular d) Square                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/m d) -m                                                                                                                                      |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear<br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120\text{N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) 162m d) 174m                          |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                             |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>c) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane    |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|     |                                                                                                                                                                                                                                                       |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres<br>c) <del>Mid span</del><br>d) Action of loading                                                                                                                |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>c) <del>Zero</del><br>d) Constant                                                                                                                                          |
| 3.  | What are the units of flexural rigidity?<br>a) <del>Nm<sup>2</sup></del><br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                                    |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) <del><math>5.4 \times 10^6 \text{ mm}^3</math></del><br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) <del><math>w \times l</math></del><br>b) w<br>c) w/l<br>d) w+l                                                                                           |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) <del>At supports</del><br>b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                                         |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal c) <del>Triangular</del> d) Square                                                                                                     |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) <del>N/ m</del> d) -m                                                                                                                                                |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) <del>Shear</del><br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                                                                          |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120\text{N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) <del>162m</del> d) 174m                                     |
| 11. | Which of these are types of normal stresses?<br>a) <del>Tensile and compressive stresses</del><br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                                        |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane                         |

Dr. LEENA A V

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**SEMESTER S6 CE**

**CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2**

|     |                                                                                                                                                                                                                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>b) Extreme fibres<br>c) Mid span<br>d) Action of loading                                                                                                     |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>c) Zero<br>d) Constant                                                                                                                               |
| 3.  | What are the units of flexural rigidity?<br>a) Nm <sup>2</sup><br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                        |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>a) $w \times l$<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                     |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>a) At supports<br>b) Midspan<br>c) Point of contraflexure<br>d) Point of emergence                                                                               |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal c) Triangular d) Square                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> c) N/m d) -m                                                                                                                                      |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>a) Shear<br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120 \text{ N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m c) 162m d) 174m                        |
| 11. | Which of these are types of normal stresses?<br>a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                             |
| 12. | The extremities of any diameter on Mohr's circle represent<br>(A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane   |

Dr. LEENA A V  
PRINCIPAL

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**SEMESTER S6 CE**

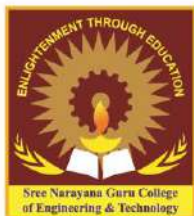
CET308 COMPREHENSIVE COURSE WORK-MECHANICS OF SOLIDS Test 2

|     |                                                                                                                                                                                                                                   |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Maximum Shearing stress in a beam is at ____<br>a) Neutral axis<br>✓ b) Extreme fibres<br>c) Mid span<br>d) Action of loading                                                                                                     |
| 2.  | At the neutral axis, bending stress is ____<br>a) Minimum<br>b) Maximum<br>✓ c) Zero<br>d) Constant                                                                                                                               |
| 3.  | What are the units of flexural rigidity?<br>✓ a) Nm <sup>2</sup><br>b) Nm<br>c) N/m<br>d) m/N <sup>3</sup>                                                                                                                        |
| 4.  | Calculate the modulus of section of rectangle beam of size 240 mm × 400 mm.<br>✓ a) $5.4 \times 10^6 \text{ mm}^3$<br>b) $6.2 \times 10^6 \text{ mm}^3$<br>c) $5.5 \times 10^6 \text{ mm}^3$<br>d) $6.4 \times 10^6 \text{ mm}^3$ |
| 5.  | What is the maximum shear force, when a cantilever beam is loaded with udl throughout?<br>✓ a) $w \times l$<br>b) $w$<br>c) $w/l$<br>d) $w+l$                                                                                     |
| 6.  | Sagging, the bending moment occurs at the ____ of the beam.<br>✓ a) At supports<br>b) Mid span<br>c) Point of contraflexure<br>d) Point of emergence                                                                              |
| 7.  | What will be the variation in BMD for the diagram? [Assume $l = 2\text{m}$ ].<br>a) Rectangular b) Trapezoidal ✓ c) Triangular d) Square                                                                                          |
| 8.  | What are the units of axial stiffness?<br>a) m <sup>3</sup> b) m <sup>2</sup> ✓ c) N/ m d) -m                                                                                                                                     |
| 9.  | ____ strength is caused by a moment of resistance offered by a section.<br>✓ a) Shear<br>b) Flexural<br>c) Axial<br>d) Longitudinal                                                                                               |
| 10. | A Steel rod 200 mm diameter is to be bent into a circular arc section. Find radius of curvature. Take $f = 120\text{N/mm}^2$ & $E = 2 \times 10^5 \text{ N/mm}^2$ .<br>a) 134m b) 166m ✓ c) 162m d) 174m                          |
| 11. | Which of these are types of normal stresses?<br>✓ a) Tensile and compressive stresses<br>b) Tensile and thermal stresses<br>c) Shear and bending<br>d) Compressive and plane stresses                                             |
| 12. | The extremities of any diameter on Mohr's circle represent<br>✓ (A) Principal stresses<br>(B) Normal stresses on planes at $45^\circ$<br>(C) Shear stresses on planes at $45^\circ$<br>(D) Normal and shear stresses on a plane   |

Dr. LEENA A V  
PRINCIPAL

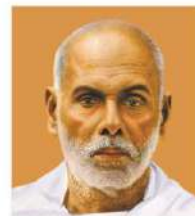
SREE NARAYANA GURU COLLEGE  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





# **Sree Narayana Guru College of Engineering & Technology**

CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307



AY 2020 – 2021  
(PLACEMENT ACTIVITIES, STUDENTS PLACED  
ON AND OFF CAMPUS,  
HIGHER STUDIES)



**Sree Narayana Guru College  
of Engineering & Technology**  
CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307



| Year    | Name of student placed | Program graduated from                     | Name of the employer with contact details | Pay package at appointment (In INR per annum) (applicable for students who got placement) |
|---------|------------------------|--------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------|
| 2020-21 | ANUJA N V              | B TECH IN COMPUTER SCIENCE AND ENGINEERING | Infosys                                   | 3.5 L/Annum                                                                               |
|         | ANIMA M                | B TECH IN COMPUTER SCIENCE AND ENGINEERING | Ziga Ingotech                             | 1.5 L/Annum                                                                               |
|         |                        |                                            | Orion Innovation                          | 1.5 L/Annum                                                                               |
|         |                        |                                            | MPHASIS                                   | 1.5 L/Annum                                                                               |
|         |                        |                                            | ALZONE                                    | 1.5 L/Annum                                                                               |
|         | NIVEDYA P              | B TECH IN COMPUTER SCIENCE AND ENGINEERING | Kannur Vision                             | Stipend-7500                                                                              |
|         | NIMISHA RAJEEV P       | B TECH IN COMPUTER SCIENCE AND ENGINEERING | CYBROSYS                                  | 2 L/Annum                                                                                 |
|         |                        |                                            | Kannur Vision                             | Stipend-7500                                                                              |
|         | LUBNA MUBASHIR         | B TECH IN COMPUTER SCIENCE AND ENGINEERING | CSS Corp                                  |                                                                                           |
|         |                        |                                            | Wipro                                     | 3.5 L/Annum                                                                               |
|         | NAVEEN K P             | B TECH IN COMPUTER SCIENCE AND ENGINEERING | Valorem Reply                             | 3.8 L/Annum                                                                               |
|         |                        |                                            | Buck                                      | 3.5 L/Annum                                                                               |
|         |                        |                                            | CSS Corp                                  | 3.2 L/Annum                                                                               |
|         |                        |                                            | UST Global                                | 3.5 L/Annum                                                                               |
|         |                        | B TECH IN COMPUTER SCIENCE AND ENGINEERING | Buck                                      | 3.5 L/Annum                                                                               |
|         | VYSHNAV RAJENDRAN      | B TECH IN COMPUTER SCIENCE AND ENGINEERING | Buck                                      | 3.5 L/Annum                                                                               |
|         | ALBIN SABU             | B TECH IN COMPUTER SCIENCE AND ENGINEERING | Buck                                      | 3.5 L/Annum                                                                               |
|         | SANGEETH A V           | B TECH IN COMPUTER SCIENCE AND ENGINEERING | Quest Global                              | 3.5 L/Annum                                                                               |
|         |                        |                                            | Buck                                      | 3.5 L/Annum                                                                               |

*Handwritten signature in green ink.*

**TEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

2020-21

|                    |                                                     |                    |             |
|--------------------|-----------------------------------------------------|--------------------|-------------|
| ANASWARA KRISHA    | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | MyCaptain          | 3 L/Annum   |
| ANKETH LOVEJITH    | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | Quest Global       | 3 L/Annum   |
| PRANAV P V         | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | Orion Innovation   |             |
|                    |                                                     | UST Global         | 3.5 L/Annum |
| RAHUL P P          | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | TCS                | 3.5 L/Annum |
| ADISH KUMAR        | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | UST Global         | 3.5 L/Annum |
|                    |                                                     | TCS                | 3.5 L/Annum |
| AVANTHIKA P        | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | QUEST              | 3 L/Annum   |
| AMALDAS            | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | ibsSoftware        | 4 L/Annum   |
| NIVEDYA P          | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | Quest Global       | 3 L/Annum   |
| SAJINA T.V         | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | Techversant        | 5.2L/annum  |
| NABEEL ABDUL NASAR | B TECH IN COMPUTER SCIENCE AND ENGINEERING          | Riafy technologies | 2.5L/annum  |
| ASHNA SHIBURAJ     | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | Technopark         | 5.2L/annum  |
| GOPIKA RAJ NAMBIAR | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | Infosys            | 3.6L/annum  |
| SAYOOJ K           | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | Nethram            | 1L/annum    |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR





# Sree Narayana Guru College of Engineering & Technology

KOROM, PAYYANUR, KANNUR-670 307



5.2.1 Percentage of outgoing students and students progressing to higher education during the last five years

| Year    | Name of students enrolling into higher education and contact details | Program graduated from                           | Name of institution joined                  | Name of program admitted to (applicable for students who progressed to higher education) |
|---------|----------------------------------------------------------------------|--------------------------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------|
| 2020-21 | SREEKANTH T G                                                        | ech Mechanical Engineer                          | Anna University                             | PHD in Variation Based Health Monitoring of Polymer matrix Composites                    |
|         | NIKHIL BABU P                                                        | ech Mechanical Engineer                          | NIT Calicut                                 | PHD in Mechanical Engineering                                                            |
|         | ATHULYA KC                                                           | B.Tech Electronics and Communication Engineering | Cochin University of Science and Technology | M.Tech in Wireless Technology                                                            |

*Leena*  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



## **SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

### **WEBINAR ON "A PLATFORM FOR CAREER BUILDING: WHAT THEY WANT? WHAT WE CAN?"**

Date: June 12, 2021

Venue: Virtual (Conducted via Online Platform)

Organizers: Sree Narayana Guru College of Engineering & Technology

Departments Involved: Department of Electronics and Communication Engineering (ECE) in association with the Department of Electrical and Electronics Engineering (EEE)

Resource Person: Dr. Surekha S Nair, Director-HR (India & Middle East), Eurofins India Pvt. Ltd.

Attendance: Approximately 100 participants

#### **Introduction:**

On June 12, 2021, Sree Narayana Guru College of Engineering & Technology organized a webinar titled "A Platform for Career Building: What They Want? What We Can?" The event aimed to provide insights into the contemporary requirements of the job market and how students can align themselves with these demands for a successful career trajectory. Dr. Surekha S Nair, Director-HR at Eurofins India Pvt. Ltd., graced the session as the esteemed resource person.

#### **Session Overview:**

The webinar commenced with an introduction by the organizing committee, highlighting the importance of understanding industry expectations in shaping one's career. Dr. Surekha S Nair then took the stage, delving into various aspects of career building and the dynamic nature of the professional landscape.

**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



### Key Highlights:

1. **Industry Insights:** Dr. Surekha provided valuable insights into the evolving demands of different industries, emphasizing the significance of staying updated with the latest trends and technologies.
2. **Skills in Demand:** The session shed light on the skills that are currently in high demand in the job market, including technical competencies, soft skills, and adaptability to change.
3. **Career Strategies:** Practical strategies and tips were shared on how students can enhance their employability quotient by acquiring relevant skills, networking, and showcasing their strengths effectively.
4. **Interactive Q&A:** The session was highly interactive, with participants actively engaging in discussions and seeking guidance on various career-related queries.

### Key Takeaways:

- Understanding the pulse of the industry is crucial for career success.
- Continuous learning and upskilling are essential to stay competitive.
- Building a strong professional network can open doors to diverse opportunities.
- Effective communication and interpersonal skills are as important as technical expertise.

### Conclusion:

The webinar on "A Platform for Career Building: What They Want? What We Can?" was a resounding success, thanks to the insightful session delivered by Dr. Surekha S Nair. The event provided students with a valuable platform to gain knowledge and guidance on navigating the complexities of the job market and charting a fulfilling career path. The collaboration between the Department of ECE and EEE in organizing this event underscores the college's commitment to holistic student development.

### Acknowledgment:

Sree Narayana Guru College of Engineering & Technology extends heartfelt gratitude to Dr. Surekha S Nair for sharing her expertise and invaluable insights with the participants. Special thanks to the organizing committee, faculty members, and all the participants for making the webinar a memorable and enriching experience.

DR. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

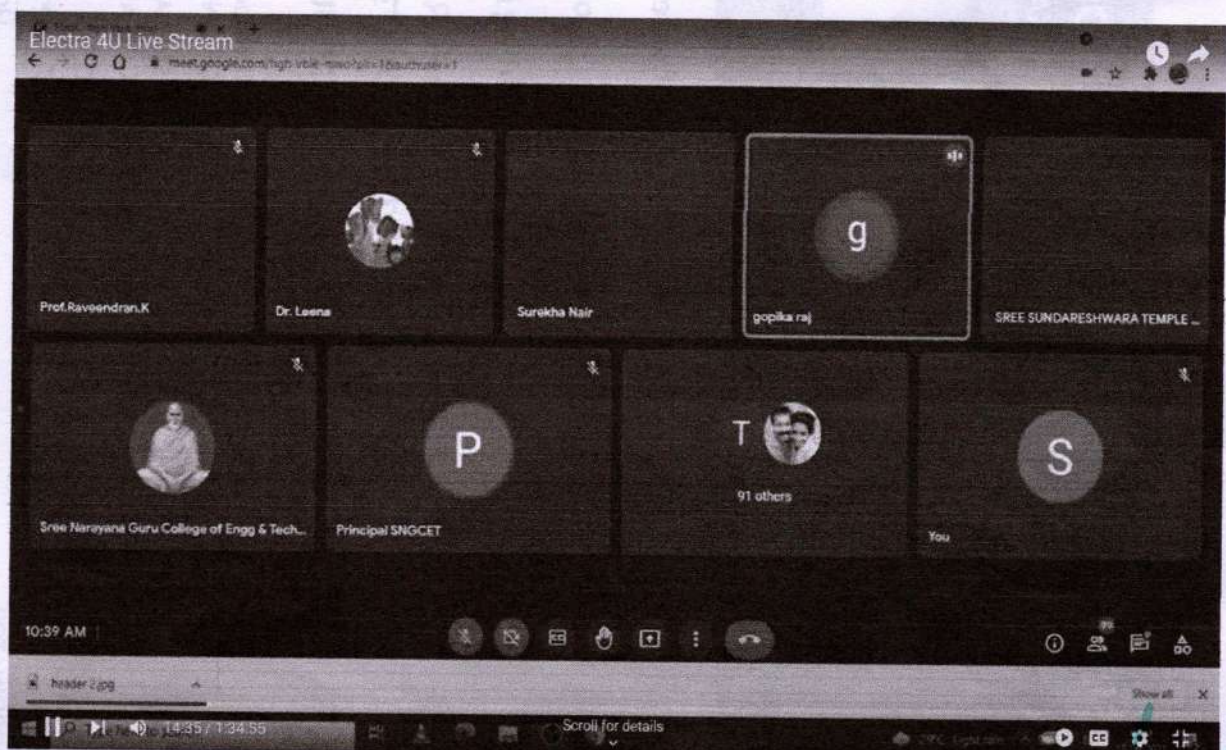
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR





*Leena*





**Dr. LEENA A. V.**  
**PRINCIPAL**  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY, PAYANUR  
 KANNUR




# WEBINAR ON A PLATFORM FOR CAREER BUILDING: WHAT THEY WANT? WHAT WE CAN?"

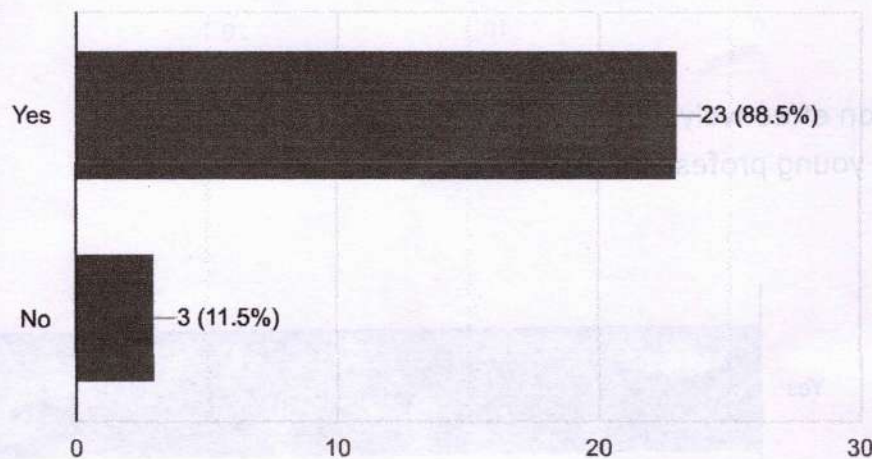
26 responses

Publish analytics


Did the session provide valuable insights into career building strategies?

 Copy

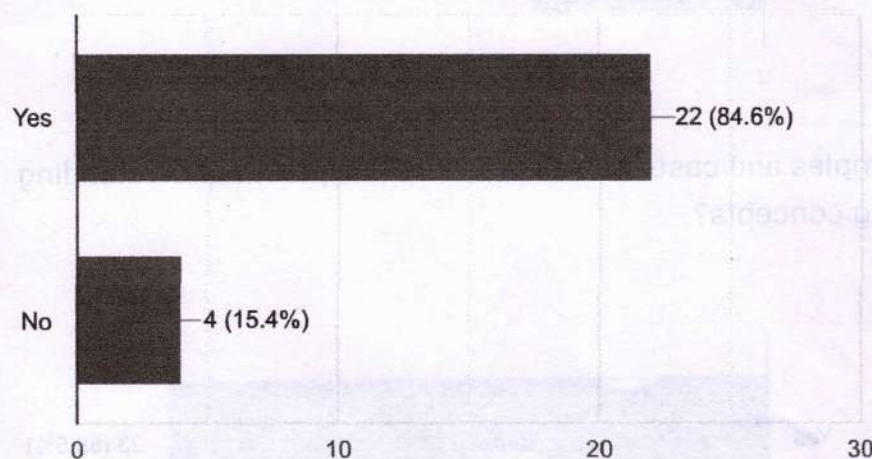
26 responses



Did the session offer actionable steps for career advancement?

 Copy

26 responses






**Dr. LEENA A. V.**  
**PRINCIPAL**

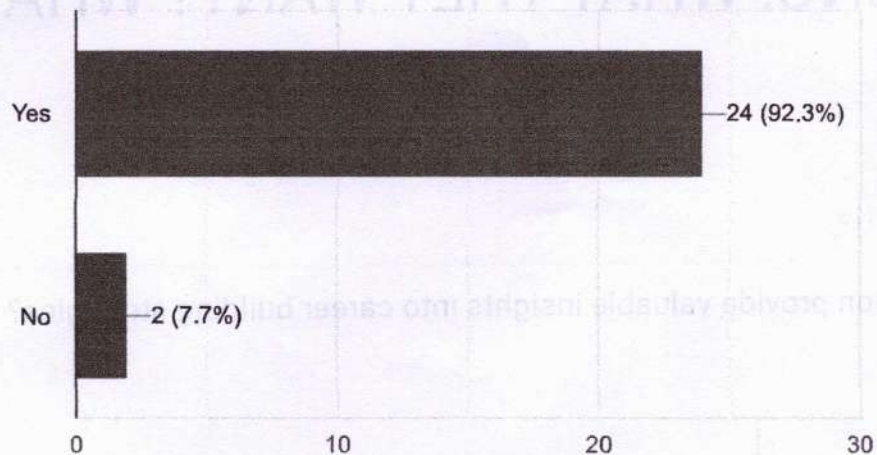
**SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PATTANUR  
KANNUR**




Did you find the speaker's knowledgeable and engaging?

 Copy

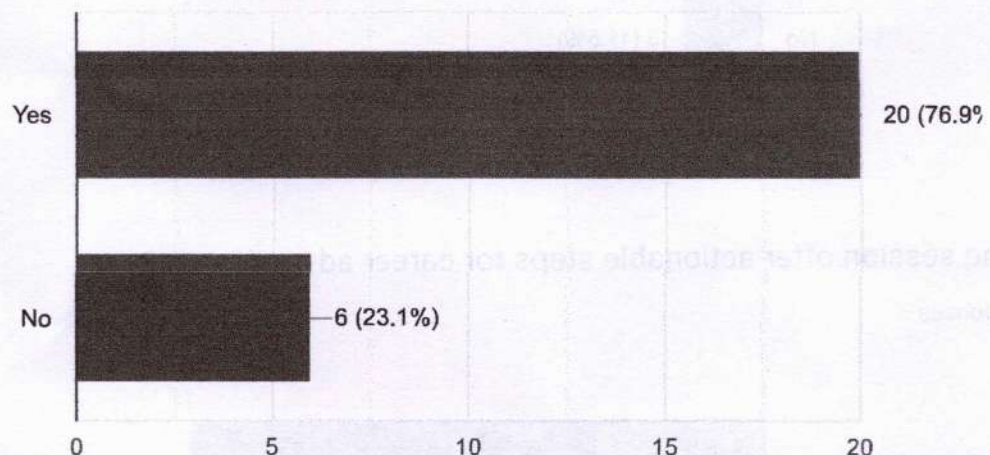
26 responses




Did the session effectively address the needs and expectations of students and young professionals?

 Copy

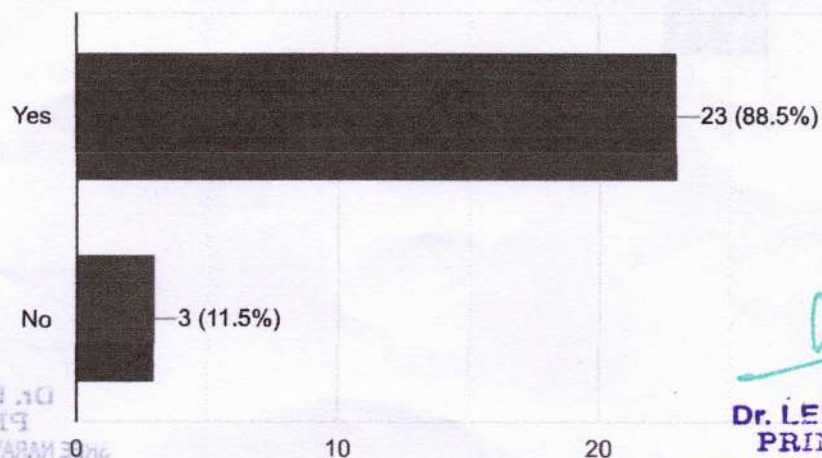
26 responses



Were the examples and case studies presented helpful in understanding career-building concepts?

 Copy

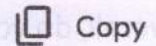
26 responses

DR. LEENA A. V.  
PRINCIPAL

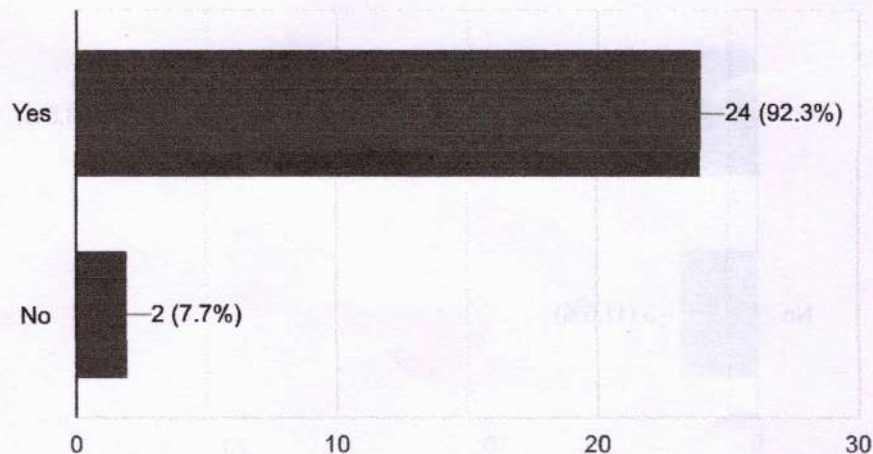
  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY, PAYANUR  
 KANNUR.



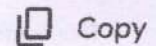
Did the session encourage interaction and participation among attendees?



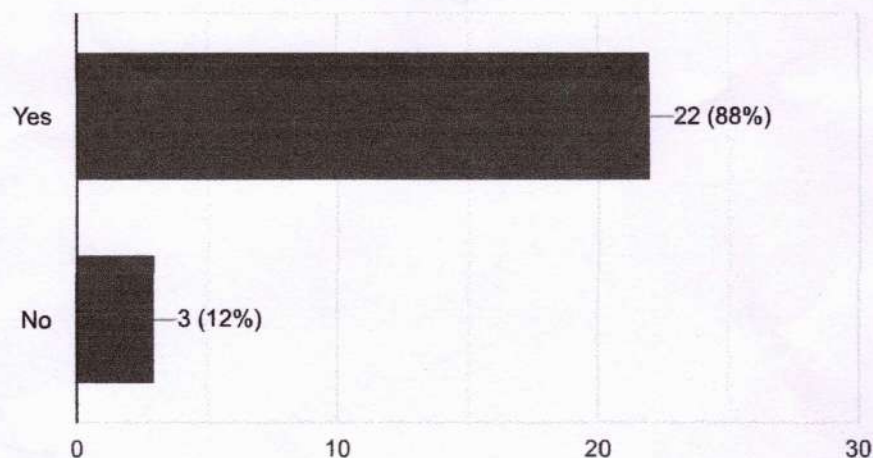
26 responses



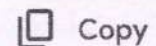
Did the session meet your expectations?



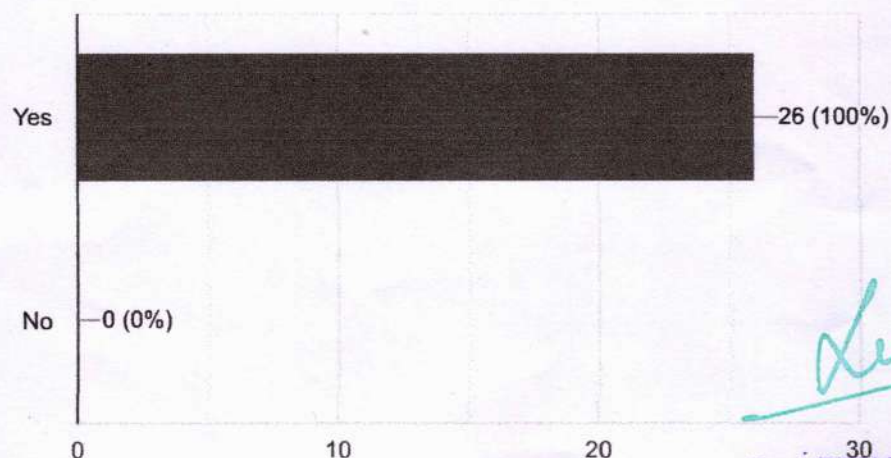
25 responses



Were the topics covered relevant to your career interests and goals?




26 responses



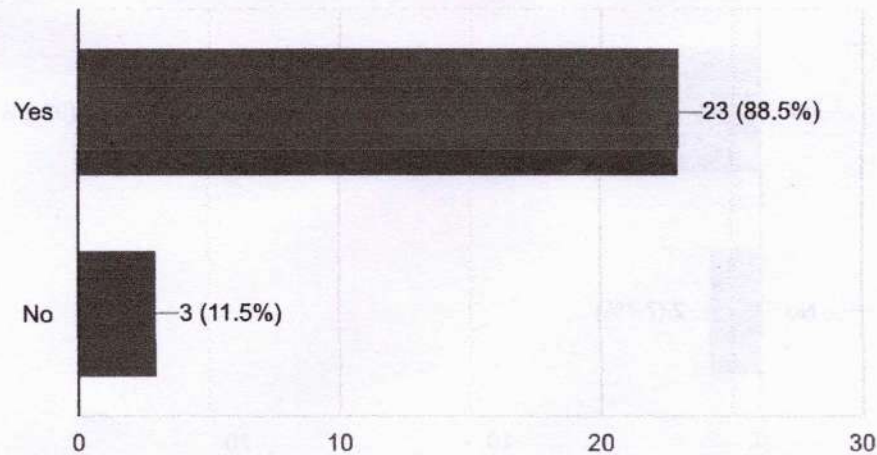
  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



Overall, do you feel more equipped to enhance your career progression after attending this session?

 Copy

26 responses



This content is neither created nor endorsed by Google. [Report Abuse](#) - [Terms of Service](#) - [Privacy Policy](#)

Google Forms



**Dr. LEENA A. V.**  
**PRINCIPAL**  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY, PAYYANUR  
 KANNUR

Dr. LEENA A. V.  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY, PAYYANUR  
 KANNUR







**SREE NARAYANA GURU COLLEGE OF ENGINEERING AND TECHNOLOGY**  
KOROM, PAYYANUR, KANNUR-KERALA 670307



# **CERTIFICATE**

O F P A R T I C I P A T I O N

**This Certificate is presented to**

**SOORAJ SURESH V O of Sree narayana guru college of engineering**  
**and technology**

**for participating in the webinar on**

**" A PLATFORM FOR CAREER BUILDING  
WHAT THEY WANT? WHAT WE CAN? "**

**on 12<sup>th</sup> JUNE 2021**


**CONDUCTED BY  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

**IN ASSOCIATION WITH  
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

  
COORDINATOR

  
HOD

  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

  
PRINCIPAL





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**BATCH (2018-2022)**

| ROLL NO | REGISTER NO | NAME OF STUDENT        |
|---------|-------------|------------------------|
| 1       | SNC18ME001  | ABHIRAM M              |
| 2       | SNC18ME002  | ABHIRAM S              |
| 3       | SNC18ME003  | ABHISHEK DHANARAJ      |
| 4       | SNC18ME005  | AFNAN ABDUL NASAR      |
| 5       | SNC18ME006  | AKASH M                |
| 6       | SNC18ME007  | AMALJITH PUTHUSSERY    |
| 7       | SNC18ME010  | ARJUN P. K             |
| 8       | SNC18ME011  | ARJUN T.P              |
| 9       | SNC18ME012  | ASWIN O                |
| 10      | SNC18ME013  | GANESH K V             |
| 11      | SNC15ME024  | HRISHIKESH VINOD       |
| 12      | SNC18ME015  | JUNAID AHAMED K V      |
| 13      | SNC18ME017  | MOHAMMED YUNUS         |
| 14      | SNC18ME018  | MUHAMMAD SHAMIR K      |
| 15      | SNC18ME019  | MUHAMMED AJMAL ABDULLA |
| 16      | SNC18ME021  | NIKHIL KRISHNA MV      |
| 17      | SNC18ME022  | NIVED . K.             |
| 18      | SNC17ME026  | NIVED KM               |
| 19      | SNC18ME024  | PRAVEEN V V            |
| 20      | SNC18ME025  | RAHUL RAVI P M         |
| 21      | SNC18ME026  | REJIL MANOHARAN        |
| 22      | SNC18ME027  | VIJIL P                |
| 23      | SNC18ME028  | VISHNU JAYENDRAN P V   |
| 24      | SNC18ME029  | VYSHNAV K              |

**Dr. LEENA A. V.**  
**PRINCIPAL**

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**MOCK TEST 1**

1. What is fluid mechanics?
  - a) Study of fluid behaviour at rest
  - b) Study of fluid behaviour in motion
  - ☒ c) Study of fluid behaviour at rest and in motion
  - d) Study of fluid behaviour at rest and in motion
2. Which of the following is the basic principle of fluid mechanics?
  - a) Momentum principle
  - b) Energy equation
  - c) Continuity equation
  - ☒ d) All of the mentioned
3. Stress strain curve for cemented tungsten carbide is:
  - a) Hyperbola
  - b) Parabola
  - c) A curve
  - ☒ d) Straight line
4. Which of the following relation is stated by Hooke's law?
  - ☒ a) Stress is directly proportional to strain
  - b) Stress is inversely proportional to strain
  - c) Stress is directly proportional to square of strain
  - d) Stress is inversely proportional to square of strain
5. Which of the following is an application of thermodynamics?
  - a) Refrigerators
  - b) Gas compressors
  - ☒ c) Power plants
  - d) All of the mentioned
6. Which of the following is a type of thermodynamic system?
  - a) Open system
  - b) Closed system
  - c) Thermally isolated system
  - ☒ d) All of the mentioned
7. Which of the following occurs without a change in the internal energy?
  - ☒ a) Isochoric process
  - b) Isenthalpic process

20  
25

*Leena*  
**Dr. LEENA A. V.  
PRINCIPAL**

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



- c) Steady-state process
- d) Isenthalpic process

8. Which of the following properties must a material possess to be used in mold making?

- a) High refractoriness
- b) Chemical and thermal stability
- c) High permeability
- d) All of the mentioned

9. Which of the following group of material type is used in mold making?

- a) Metallic only
- b) Non-Metallic only
- c) Both metallic as well as non-metallic
- d) Neither metallic nor non-metallic

10. How many types of nucleation process are there and what are they?

- a) 2 and (fusion and fission)
- b) 2 and (Heterogeneous and Homogeneous)
- c) 2 and (Heterogeneous and fusion)
- d) 4 and (fusion, fission, Heterogeneous and Homogeneous)

View Answer

11. What reactions come under supercooling?

- a) Peritectic
- b) Eutectic and Peritectic
- c) Eutectic and Eutectoid
- d) Peritectic and Eutectoid

12. Which is the most important thermodynamic parameter in Homogenous nucleation?

- a) Free energy G
- b) Enthalpy H
- c) Entropy S
- d) Free energy G, Enthalpy H, Entropy S

View Answer

13. What does phase transformation involve?

- a) Transformation rates kinetics
- b) Movement/rearrangement of atoms
- c) Changes in microstructure
- d) Transformation rate kinetics, rearrangement of Atoms, Changes in microstructure

14. What is the full form of ASTM?

- a) American society for testing and materials
- b) African society for testing and materials
- c) American society for torque and momentum forces
- d) American society for tensile motion forces

15. Which of the following is not the structural characteristic of a polycrystalline specimen?

- a) Shape
- b) Average size

- c) Reactivity
- d) Diameter

16. Which of the following refers to the term C.O.P. of refrigeration?

- a) Cooling for Performance
- ☒ b) Coefficient of Performance
- c) Capacity of Performance
- d) Co-efficient of Plant

17. Why sustainable manufacturing is required?

- a) proper maintenance
- b) reuse
- ☒ c) conserving resources
- d) all of the mentioned

18. Which of the following is a thermodynamics law?

- ☒ a) Zeroth law of thermodynamics
- b) Faraday's Law of thermodynamics
- c) Ideal Gas Law of thermodynamics
- d) Boyle's Law of thermodynamics

19. Which of the following systems produce a vibration in the foundation?

- ☒ a) Unbalanced machine
- b) Balanced machine
- c) Coupled machine
- d) Uncoupled machine

20. Which of the following is a type of fluid based on viscosity?

- a) Real Fluid
- b) Ideal Fluid
- ☒ c) Newtonian Fluid
- d) All of the mentioned

21. The viscous force the relative motion between the adjacent layers of a fluid in motion. Which of the following flowing fits best in the sentence?

- ☒ a) never affects
- b) may effect under certain conditions
- c) facilitates
- d) opposes

View Answer

22. Pressure intensity or force due to pressure gradient for fluid at rest is considered as which of the following kind of force?

- ☒ a) Body force
- b) Force due to motion
- c) Surface force
- d) None of the mentioned



23. The enthalpy and internal energy are the function of temperature for

- a) all gases
- b) steam
- c) water
- d) ideal gas

24. In which of the following systems does mass transfer occur across the system boundary?

- a) isolated system
- b) closed system
- c) open system
- d) none of the mentioned

25. When more than one fluid stream enters or leaves the control volume, which of the following type of balance is taken?

- a) ~~mass balance~~
- b) ~~energy balance~~
- c) mass balance and energy balance
- d) none of the mentioned

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAVANUR  
KANNUR

Ganesh k-v  
86



**SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**MOCK TEST 1**

1. What is fluid mechanics?

- a) Study of fluid behaviour at rest
- b) Study of fluid behaviour in motion
- c) Study of fluid behaviour at rest and in motion ✓
- d) Study of fluid behaviour at rest and in motion

2. Which of the following is the basic principle of fluid mechanics?

- a) Momentum principle
- b) Energy equation
- c) Continuity equation ✓
- d) All of the mentioned

3. Stress strain curve for cemented tungsten carbide is:

- a) Hyperbola
- b) Parabola
- c) A curve +
- d) Straight line

4. Which of the following relation is stated by Hooke's law?

- a) Stress is directly proportional to strain
- b) Stress is inversely proportional to strain
- c) Stress is directly proportional to square of strain ✓
- d) Stress is inversely proportional to square of strain

5. Which of the following is an application of thermodynamics?

- a) Refrigerators
- b) Gas compressors
- c) Power plants ✓
- d) All of the mentioned

6. Which of the following is a type of thermodynamic system?

- a) Open system
- b) Closed system ✓
- c) Thermally isolated system
- d) All of the mentioned

7. Which of the following occurs without a change in the internal energy?

- a) Isochoric process +
- b) Isenthalpic process

14  
205

  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



- c) Steady-state process
- d) Isenthalpic process

8. Which of the following properties must a material possess to be used in mold making?

- a) High refractoriness
- b) Chemical and thermal stability
- c) High permeability
- d) All of the mentioned

9. Which of the following group of material type is used in mold making?

- a) Metallic only
- b) Non-Metallic only
- c) Both metallic as well as non-metallic
- d) Neither metallic nor non-metallic

10. How many types of nucleation process are there and what are they?

- a) 2 and (fusion and fission)
- b) 2 and (Heterogeneous and Homogeneous)
- c) 2 and (Heterogeneous and fusion)
- d) 4 and (fusion, fission, Heterogeneous and Homogeneous)

View Answer

11. What reactions come under supercooling?

- a) Peritectic
- b) Eutectic and Peritectic
- c) Eutectic and Eutectoid
- d) Peritectic and Eutectoid

12. Which is the most important thermodynamic parameter in Homogenous nucleation?

- a) Free energy G
- b) Enthalpy H
- c) Entropy S
- d) Free energy G, Enthalpy H, Entropy S

View Answer

13. What does phase transformation involve?

- a) Transformation rates kinetics
- b) Movement/rearrangement of atoms
- c) Changes in microstructure
- d) Transformation rate kinetics, rearrangement of Atoms, Changes in microstructure

14. What is the full form of ASTM?

- a) American society for testing and materials
- b) African society for testing and materials
- c) American society for torque and momentum forces
- d) American society for tensile motion forces

15. Which of the following is not the structural characteristic of a polycrystalline specimen?

- a) Shape
- b) Average size

- c) Reactivity
- d) Diameter

16. Which of the following refers to the term C.O.P. of refrigeration?

- a) ~~Cooling for Performance~~
- b) ~~Coefficient of Performance~~
- c) Capacity of Performance
- d) Co-efficient of Plant

17. Why sustainable manufacturing is required?

- a) proper maintenance
- b) ~~reuse~~
- c) ~~conserving resources~~
- d) all of the mentioned

18. Which of the following is a thermodynamics law?

- a) Zeroth law of thermodynamics
- b) ~~Faraday's Law of thermodynamics~~
- c) ~~Ideal Gas Law of thermodynamics~~
- d) Boyle's Law of thermodynamics

19. Which of the following systems produce a vibration in the foundation?

- a) ~~Unbalanced machine~~
- b) ~~Balanced machine~~
- c) ~~Coupled machine~~
- d) ~~Uncoupled machine~~

20. Which of the following is a type of fluid based on viscosity?

- a) ~~Real Fluid~~
- b) ~~Ideal Fluid~~
- c) ~~Newtonian Fluid~~
- d) All of the mentioned

21. The viscous force the relative motion between the adjacent layers of a fluid in motion. Which of the following flowing fits best in the sentence?

- a) ~~never affects~~
  - b) ~~may effect under certain conditions~~
  - c) ~~facilitates~~
  - d) ~~opposes~~
- View Answer

22. Pressure intensity or force due to pressure gradient for fluid at rest is considered as which of the following kind of force?

- a) ~~Body force~~
- b) ~~Force due to motion~~
- c) ~~Surface force~~
- d) None of the mentioned



23. The enthalpy and internal energy are the function of temperature for

- a) all gases
- b) steam
- c) ~~water~~
- d) ideal gas ✓

24. In which of the following systems does mass transfer occur across the system boundary?

- a) isolated system
- b) closed system
- c) ~~open system~~
- d) none of the mentioned ✗

25. When more than one fluid stream enters or leaves the control volume, which of the following type of balance is taken?

- a) ~~mass balance~~
- b) energy balance ✗
- c) mass balance and energy balance
- d) none of the mentioned



Vijol P  
86

**SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**MOCK TEST 1**

1. What is fluid mechanics?

- a) Study of fluid behaviour at rest
- b) Study of fluid behaviour in motion
- c) Study of fluid behaviour at rest and in motion ✓
- d) Study of fluid behaviour at rest and in motion ✓

13  
-----  
25

2. Which of the following is the basic principle of fluid mechanics?

- a) Momentum principle
- b) Energy equation
- c) Continuity equation
- d) All of the mentioned ✓

3. Stress strain curve for cemented tungsten carbide is:

- a) Hyperbola
- b) Parabola
- c) A curve ✓
- d) Straight line

4. Which of the following relation is stated by Hooke's law?

- a) Stress is directly proportional to strain ✓
- b) Stress is inversely proportional to strain
- c) Stress is directly proportional to square of strain ✓
- d) Stress is inversely proportional to square of strain

5. Which of the following is an application of thermodynamics?

- a) Refrigerators
- b) Gas compressors
- c) Power plants
- d) All of the mentioned ✓

6. Which of the following is a type of thermodynamic system?

- a) Open system
- b) Closed system
- c) Thermally isolated system
- d) All of the mentioned ✓

7. Which of the following occurs without a change in the internal energy?

- a) Isochoric process
- b) Isenthalpic process ✓

**Dr. LEENA A. V.  
PRINCIPAL**

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



- c) Steady-state process
- d) Isenthalpic process

8. Which of the following properties must a material possess to be used in mold making?

- a) High refractoriness
- b) Chemical and thermal stability
- c) High permeability ✓
- d) All of the mentioned +

9. Which of the following group of material type is used in mold making?

- a) Metallic only ✓
- b) Non-Metallic only
- c) Both metallic as well as non-metallic +
- d) Neither metallic nor non-metallic

10. How many types of nucleation process are there and what are they?

- a) 2 and (fusion and fission) ✓
- b) 2 and (Heterogeneous and Homogeneous)
- c) 2 and (Heterogeneous and fusion) +
- d) 4 and (fusion, fission, Heterogeneous and Homogeneous)

View Answer

11. What reactions come under supercooling?

- a) Peritectic
- b) Eutectic and Peritectic ✓
- c) Eutectic and Eutectoid +
- d) Peritectic and Eutectoid

12. Which is the most important thermodynamic parameter in Homogenous nucleation?

- a) Free energy G
- b) Enthalpy H
- c) Entropy S ✓
- d) Free energy G, Enthalpy H, Entropy S +

View Answer

13. What does phase transformation involve?

- a) Transformation rates kinetics
- b) Movement/rearrangement of atoms +
- c) Changes in microstructure ✓
- d) Transformation rate kinetics, rearrangement of Atoms, Changes in microstructure

14. What is the full form of ASTM?

- a) American society for testing and materials ✓
- b) African society for testing and materials
- c) American society for torque and momentum forces ✓
- d) American society for tensile motion forces

15. Which of the following is not the structural characteristic of a polycrystalline specimen?

- a) Shape
- b) Average size

- c) Reactivity ✓
- d) Diameter ✓

16. Which of the following refers to the term C.O.P. of refrigeration?

- a) Cooling for Performance
- b) Coefficient of Performance ✓
- c) Capacity of Performance ✓
- d) Co-efficient of Plant

17. Why sustainable manufacturing is required?

- a) proper maintenance
- b) reuse
- c) conserving resources ✓
- d) all of the mentioned ✗

18. Which of the following is a thermodynamics law?

- a) Zeroth law of thermodynamics ✓
- b) Faraday's Law of thermodynamics ✓
- c) Ideal Gas Law of thermodynamics ✗
- d) Boyle's Law of thermodynamics

19. Which of the following systems produce a vibration in the foundation?

- a) Unbalanced machine ✓
- b) Balanced machine
- c) Coupled machine ✓
- d) Uncoupled machine

20. Which of the following is a type of fluid based on viscosity?

- a) Real Fluid
- b) Ideal Fluid
- c) Newtonian Fluid ✓
- d) All of the mentioned ✓

21. The viscous force the relative motion between the adjacent layers of a fluid in motion. Which of the following flowing fits best in the sentence?

- a) never affects
- b) may effect under certain conditions
- c) facilitates ✓
- d) opposes ✓

View Answer

22. Pressure intensity or force due to pressure gradient for fluid at rest is considered as which of the following kind of force?

- a) Body force
- b) Force due to motion ✗
- c) Surface force
- d) None of the mentioned

  
**Dr. LEENA A. V.**  
**PRINCIPAL**

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



23. The enthalpy and internal energy are the function of temperature for

- a) all gases ✓
- b) steam
- c) water
- d) ideal gas

24. In which of the following systems does mass transfer occur across the system boundary?

- a) isolated system
- b) closed system
- c) open system ✓
- d) none of the mentioned

25. When more than one fluid stream enters or leaves the control volume, which of the following type of balance is taken?

- a) mass balance
- b) energy balance
- c) mass balance and energy balance ✓
- d) none of the mentioned

**Dr. LEENA A. V.**  
**PRINCIPAL**

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



Abhiram S  
S<sub>6</sub>

**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**MOCK TEST 2**

- 16  
20
1. The slope of the surface  $z = xe^{-y} + 5y$  in the x-direction at the point (4,0) is  
a) 0                      b) -1                      c) ~~1~~                      d) 2
  2. The solution of                      is  
a)  $c_1 \cos x + c_2 \sin x$     b)  $c_1 e^x + c_2 e^{-x}$     c)  $(c_1 + c_2 x)e^x$     d)  ~~$(c_1 + c_2 x)e^{-x}$~~
  3. A simple spring mass vibrating system has a natural frequency of N. if the spring stiffness is halved and the mass is doubled then the natural frequency will be  
a) N                      b) 0.5N                      c) 2N                      d) ~~0.25N~~
  4. The proportion of second moment of area about centroidal axis to second moment of area about base of a rectangle will be  
a) ~~0.3~~                      b) 0.1                      c) 0.25                      d) 0.08333
  5. An algorithm for scheduling a set of project activities:  
a) Critical Path Method    b) Crucial Practicing Method    c) ~~Centre Processing Method~~    d) None
  6. The fundamental rethinking and radical redesign of the business process to achieve dramatic improvements in critical contemporary measures of performances such as cost, quality, service and speed:  
a) Recycling    b) ~~Quality engineering~~    c) Contemporary design    d) ~~Re - engineering~~
  7. Composting is  
a) ~~anaerobic degradation~~    b) ~~anaerobic treatment~~    c) aerobic treatment    d) an aerobic degradation process

**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR



process for solid  
waste treatment

for sullage

for sewage

for solid waste  
treatment

8. The rating system of India which is focussed on conservation and efficient energy use is  
a) GRIHA                      b) LEED India                      c) IGBC ✓                      d) ~~BEE~~
9. In orthographic projection, each projection view represents how many dimensions of an object?  
a) 1                      b) 2                      c) ~~3~~ ✓                      d) 0
10. The front view, side view and top view of a cylinder standing on horizontal plane base on horizontal plane.  
a) circle, rectangle and rectangle                      b) ~~rectangle, rectangle and circle~~ ✓                      c) rectangle, circle and rectangle ✓                      d) circle, triangle and triangle

### PART B- CORE COURSES

11. Attractive forces between metal ions and delocalized electrons can be weakened or overcome by  
a) hammer                      b) high temperature                      c) ~~water~~ ✓                      d) All of above
12. Crystalline solids can be recognized by their  
~~a) low boiling point~~ ✓                      b) sharp melting point                      c) ~~colour~~ ✓                      d) moderate melting point
13. Annealing of steel is done to impart which of the following properties to steel?  
a) Hardness                      b) Toughness                      c) ~~Ductility~~ ✓                      d) ~~None of the mentioned~~
14. Major constituent of the gun metal alloy is  
~~a) Copper~~ ✓                      b) Nickel                      c) ~~Iron~~ ✓                      d) Zinc
15. Which ferrous material doesn't show fatigue limit?  
a) Cast iron                      b) Wrought iron                      c) ~~Austenitic stainless steel~~ ✓                      d) Low carbon steel
16. Which of the following methods of melting is not used for melting titanium metal?  
a) Induction method                      b) ~~Vacuum arc method~~ ✓                      c) Electron beam melting                      d) Cupola furnace melting
17. A turbine is called impulse if at the inlet of the turbine  
a) Total energy is only pressure energy                      b) ~~Total energy is only kinetic energy~~ ✓                      c) Total energy is the sum of kinetic energy and pressure energy                      d) None of the above

  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAPPANUR  
KANNUR

18. Find the overall efficiency of a turbine if the mechanical efficiency is 80% and hydraulic efficiency is 90%
- a) 88                      b) 90                      c) 72                      d) 30
19. In a centrifugal pump casing, the flow of water leaving the impeller is
- a) Rectilinear flow      b) Radial flow              c) Forced vortex flow      d) Free vortex flow
20. Hydraulic accumulator is a device used for
- a) Lifting heavy weights      b) Storing the energy of a fluid in the form of pressure energy      c) Increasing pressure intensity of a fluid      d) Transmitting power from one shaft to another shaft



Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PANNANUR  
KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**MOCK TEST 2**

1. The slope of the surface  $z = xe^{-y} + 5y$  in the x-direction at the point (4,0) is  
 a) 0                      b) -1                      ~~c) 1~~ ✓                      d) 2  $\frac{12}{20}$
2. The solution of \_\_\_\_\_ is  
 a)  $c_1 \cos x + c_2 \sin x$     b)  $c_1 e^x + c_2 e^{-x}$     c)  $(c_1 + c_2 x)e^x$  ✓    ~~d)  $(c_1 + c_2 x)e^{-x}$~~
3. A simple spring mass vibrating system has a natural frequency of N. if the spring stiffness is halved and the mass is doubled then the natural frequency will be  
 a) N                      b) 0.5N                      ~~c) 2N~~ ✗                      d) 0.25N
4. The proportion of second moment of area about centroidal axis to second moment of area about base of a rectangle will be  
 a) 0.3 ✓                      b) 0.1                      c) 0.25                      d) 0.08333
5. An algorithm for scheduling a set of project activities:  
 a) Critical Path Method    b) Crucial Practicing Method    c) Centre Processing Method ✗    d) None ✓
6. The fundamental rethinking and radical redesign of the business process to achieve dramatic improvements in critical contemporary measures of performances such as cost, quality, service and speed:  
 a) Recycling    b) Quality engineering    c) Contemporary design ✓    d) Re-engineering ✓
7. Composting is  
 a) anaerobic degradation    b) anaerobic treatment    c) aerobic treatment ✓    d) an aerobic degradation process

*Leena*

- |     | process for solid waste treatment                                                                           | for sullage                        | for sewage                                  | for solid waste treatment                  |
|-----|-------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------------|--------------------------------------------|
| 8.  | The rating system of India which is focussed on conservation and efficient energy use is                    |                                    |                                             |                                            |
|     | a) GRIHA                                                                                                    | b) LEED India                      | <input checked="" type="checkbox"/> c) IGBC | <input checked="" type="checkbox"/> d) BEE |
| 9.  | In orthographic projection, each projection view represents how many dimensions of an object?               |                                    |                                             |                                            |
|     | a) 1                                                                                                        | b) 2                               | <input checked="" type="checkbox"/> c) 3    | d) 0                                       |
| 10. | The front view, side view and top view of a cylinder standing on horizontal plane base on horizontal plane. |                                    |                                             |                                            |
|     | <input checked="" type="checkbox"/> a) circle, rectangle and rectangle                                      | b) rectangle, rectangle and circle | c) rectangle, circle and rectangle          | d) circle, triangle and triangle           |

### PART B- CORE COURSES

11. Attractive forces between metal ions and delocalized electrons can be weakened or overcome by
 

|           |                                                         |                                              |                 |
|-----------|---------------------------------------------------------|----------------------------------------------|-----------------|
| a) hammer | <input checked="" type="checkbox"/> b) high temperature | <input checked="" type="checkbox"/> c) water | d) All of above |
|-----------|---------------------------------------------------------|----------------------------------------------|-----------------|
12. Crystalline solids can be recognized by their
 

|                                                          |                        |                                               |                           |
|----------------------------------------------------------|------------------------|-----------------------------------------------|---------------------------|
| a) <input checked="" type="checkbox"/> low boiling point | b) sharp melting point | <input checked="" type="checkbox"/> c) colour | d) moderate melting point |
|----------------------------------------------------------|------------------------|-----------------------------------------------|---------------------------|
13. Annealing of steel is done to impart which of the following properties to steel?
 

|             |              |                                                  |                                                              |
|-------------|--------------|--------------------------------------------------|--------------------------------------------------------------|
| a) Hardness | b) Toughness | <input checked="" type="checkbox"/> c) Ductility | <input checked="" type="checkbox"/> d) None of the mentioned |
|-------------|--------------|--------------------------------------------------|--------------------------------------------------------------|
14. Major constituent of the gun metal alloy is
 

|           |                                               |                                             |         |
|-----------|-----------------------------------------------|---------------------------------------------|---------|
| a) Copper | <input checked="" type="checkbox"/> b) Nickel | <input checked="" type="checkbox"/> c) Iron | d) Zinc |
|-----------|-----------------------------------------------|---------------------------------------------|---------|
15. Which ferrous material doesn't show fatigue limit?
 

|              |                 |                                                                   |                                                         |
|--------------|-----------------|-------------------------------------------------------------------|---------------------------------------------------------|
| a) Cast iron | b) Wrought iron | <input checked="" type="checkbox"/> c) Austenitic stainless steel | d) <input checked="" type="checkbox"/> Low carbon steel |
|--------------|-----------------|-------------------------------------------------------------------|---------------------------------------------------------|
16. Which of the following methods of melting is not used for melting titanium metal?
 

|                                                         |                      |                                                              |                           |
|---------------------------------------------------------|----------------------|--------------------------------------------------------------|---------------------------|
| <input checked="" type="checkbox"/> a) Induction method | b) Vacuum arc method | <input checked="" type="checkbox"/> c) Electron beam melting | d) Cupola furnace melting |
|---------------------------------------------------------|----------------------|--------------------------------------------------------------|---------------------------|
17. A turbine is called impulse if at the inlet of the turbine
 

|                                         |                                        |                                                                                                      |                      |
|-----------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------|----------------------|
| a) Total energy is only pressure energy | b) Total energy is only kinetic energy | <input checked="" type="checkbox"/> c) Total energy is the sum of kinetic energy and pressure energy | d) None of the above |
|-----------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------|----------------------|



18. Find the overall efficiency of a turbine if the mechanical efficiency is 80% and hydraulic efficiency is 90%
- a) 88                      b) 90                      ~~c) 72~~                      d) 30
19. In a centrifugal pump casing, the flow of water leaving the impeller is
- a) ~~Rectilinear flow~~                      b) Radial flow                      ~~c) Forced vortex flow~~                      d) Free vortex flow
20. Hydraulic accumulator is a device used for
- a) Lifting heavy weights                      b) Storing the energy of a fluid in the form of pressure energy                      ~~c) Increasing pressure intensity of a fluid~~                      d) Transmitting power from one shaft to another shaft

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**MOCK TEST 2**

6  
20

1. The slope of the surface  $z = xe^{-y} + 5y$  in the x-direction at the point (4,0) is  
 a) 0                                      b) 1                                      c) 1                                      d) 2
2. The solution of                                      is  
 a)  $c_1 \cos x + c_2 \sin x$     b)  $c_1 e^x + c_2 e^{-x}$                                       c)  $(c_1 + c_2 x)e^x$                                       d)  $(c_1 + c_2 x)e^{-x}$
3. A simple spring mass vibrating system has a natural frequency of N. if the spring stiffness is halved and the mass is doubled then the natural frequency will be  
 a) N                                      b) 0.5N                                      c) 2N                                      d) 0.25N
4. The proportion of second moment of area about centroidal axis to second moment of area about base of a rectangle will be  
 a) 0.3                                      b) 0.1                                      c) 0.25                                      d) 0.08333
5. An algorithm for scheduling a set of project activities:  
 a) Critical Path Method                                      b) Crucial Practicing Method                                      c) Centre Processing Method                                      d) None
6. The fundamental rethinking and radical redesign of the business process to achieve dramatic improvements in critical contemporary measures of performances such as cost, quality, service and speed:  
 a) Recycling                                      b) Quality engineering                                      c) Contemporary design                                      d) Re - engineering
7. Composting is  
 a) anaerobic degradation                                      b) anaerobic treatment                                      c) aerobic treatment                                      d) an aerobic degradation process

*Leena*  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY, PAYYANIL  
 KANNUR



process for solid  
waste treatment

for sullage

for sewage

for solid waste  
treatment

8. The rating system of India which is focussed on conservation and efficient energy use is  
a) GRIHA                      b) LEED India                      c) IGBC ✓                      d) BEE
9. In orthographic projection, each projection view represents how many dimensions of an object?  
a) 1                      b) 2 ✓                      c) 3 ✓                      d) 0
10. The front view, side view and top view of a cylinder standing on horizontal plane base on horizontal plane.  
a) circle, rectangle and rectangle                      b) rectangle, rectangle and circle ✓                      c) rectangle, circle and rectangle ✓                      d) circle, triangle and triangle

### PART B- CORE COURSES

11. Attractive forces between metal ions and delocalized electrons can be weakened or overcome by  
a) hammer                      b) high temperature                      c) water ✓                      d) All of above
12. Crystalline solids can be recognized by their  
a) low boiling point ✓                      b) sharp melting point ✓                      c) colour                      d) moderate melting point
13. Annealing of steel is done to impart which of the following properties to steel?  
a) Hardness                      b) Toughness ✓                      c) Ductility                      d) None of the mentioned
14. Major constituent of the gun metal alloy is  
a) Copper                      b) Nickel ✓                      c) Iron                      d) Zinc
15. Which ferrous material doesn't show fatigue limit?  
a) Cast iron                      b) Wrought iron ✓                      c) Austenitic stainless steel                      d) Low carbon steel ✓
16. Which of the following methods of melting is not used for melting titanium metal?  
a) Induction method                      b) Vacuum arc method ✓                      c) Electron beam melting ✓                      d) Cupola furnace melting
17. A turbine is called impulse if at the inlet of the turbine  
a) Total energy is only pressure energy                      b) Total energy is only kinetic energy ✓                      c) Total energy is the sum of kinetic energy and pressure energy ✓                      d) None of the above

*Leena*  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

18. Find the overall efficiency of a turbine if the mechanical efficiency is 80% and hydraulic efficiency is 90%

a) 88

b) 90

c) 72

d) 30

19. In a centrifugal pump casing, the flow of water leaving the impeller is

a) Rectilinear flow

b) Radial flow

c) Forced vortex flow

d) Free vortex flow

20. Hydraulic accumulator is a device used for

a) Lifting heavy weights

b) Storing the energy of a fluid in the form of pressure energy

c) Increasing pressure intensity of a fluid

d) Transmitting power from one shaft to another shaft

  
Dr. LEENA A. V.  
PRINCIPAL

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PATTANAM  
KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**MOCK TEST 3**

1) In a ----- system, there is no exchange of matter, but the exchange of energy is possible between system and the surrounding

A. isolated

☒ B. closed

C. adiabatic

D. More than one of the above

2) The efficiency of the Ericsson cycle is ..... Carnot cycle

A. Greater than

☒ B. Less than

C. Equal to

D. None of the above

3) Gas laws are applicable to .....

A. Gases as well as vapours

☒ B. Gases alone and not to vapours

C. Gases and steam

D. Gases and vapours under certain conditions

4). General gas equation is .....

A.  $PV = nRT$

☒ B.  $PV = mRT$

C.  $PV^n = C$

D.  $C_p - C_v = R/J$

5) Which of the following laws is applicable for the behaviour of perfect gas .....

A. Boyle's law

B. Charle's law

C. Gas-Lussac law

☒ D. All of the above

6) When a body floating in a liquid, is displaced slightly, it oscillates about

☒ A. C.G. of body

B. Center of pressure

C. Center of buoyancy

D. Metacentre

14  
20

*Leena*

**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

7) The pressure of the liquid flowing through the divergent portion of a Venturimeter  
A. Remains constant

B. Increases

☒ C. Decreases

D. Depends upon mass of liquid

8) When the Mach number is between \_\_\_\_\_ the flow is called super-sonic flow.  
A. 1 and 2.5

B. 2.5 and 4

☒ C. 4 and 6

D. 1 and 6

9) Steady flow occurs when

A. The direction and magnitude of the velocity at all points are identical

☒ B. The velocity of successive fluid particles, at any point, is the same at successive periods of time

C. The magnitude and direction of the velocity do not change from point to point in the fluid

D. The fluid particles move in plane or parallel planes and the streamline patterns are identical in each plane

10) A fluid which obeys the Newton's law of viscosity is termed as  
A. Real fluid

B. Ideal fluid

☒ C. Newtonian fluid

D. Non-Newtonian fluid

11). Hooke's law essentially defines

A. Stress

B. Strain

C. Yield point

☒ D. Elastic limit

  
Dr. LEENA A. V.  
PRINCIPAL  
SHREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



12) The ratio of the change in dimension at right angles to the applied force to the initial dimension is known as

- A. Youngs' modulus
- B. Poisson's ratio
- ☒ C. Lateral strain
- D. Shearing strain

13) Substances that can be stretched to cause large strains are called

- A. Brittle
- B. Ductile
- ☒ C. Plastic
- D. Elastomer

14) Volumetric Strain is

- (a) Increase in length / original length
- (b) Decrease in length / original length
- ☒ (c) Change in volume / original volume
- (d) All of the above

15) Poisson's ratio is

- ☒ a) Lateral strain / Longitudinal strain
- b. Shear strain / Lateral strain
- c. Longitudinal strain / Lateral strain
- d. Lateral strain / Volumetric strain

16) 5. Pick the composite from the list

- (a) Wood
- ☒ (b) Steel
- (c) Nylon
- (d) Mica

  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

17) Repeatable entity of a crystal structure is known as

a) Crystal

b) Lattice

☒ c) Unit cell

d) Miller indices

18) Coordination number for closest packed crystal structure

a) 16

☒ b) 12

c) 8

d) 4

19) Atomic packing factor is

☒ a) Distance between two adjacent atoms

b) Projected area fraction of atoms on a plane

c) Volume fraction of atoms in cell

d) None


20. Coordination number in simple cubic crystal structure

a) 1

☒ b) 6

c) 3

d) 4

  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR





# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

## DEPARTMENT OF MECHANICAL ENGINEERING

### MOCK TEST 3

1) In a ----- system, there is no exchange of matter, but the exchange of energy is possible between system and the surrounding

A. ~~isolated~~

☒ B. closed

C. adiabatic

D. More than one of the above

2) The efficiency of the Ericsson cycle is ..... Carnot cycle

A. Greater than

☒ B. Less than

C. Equal to

D. None of the above

3) Gas laws are applicable to .....

A. Gases as well as vapours

☒ B. Gases alone and not to vapours

C. Gases and steam

D. Gases and vapours under certain conditions

4) General gas equation is .....

A.  $PV = nRT$

☒ B.  $PV = mRT$

C.  $PV^n = C$

D.  $C_p - C_v = R/J$

5) Which of the following laws is applicable for the behaviour of perfect gas .....

A. Boyle's law

☒ B. Charle's law

C. Gas-Lussac law

D. All of the above

6) When a body floating in a liquid, is displaced slightly, it oscillates about

A. C.G. of body

☒ B. Center of pressure

C. Center of buoyancy

D. Metacentre

9  
20

  
Dr. LEENA A. V.  
PRINCIPAL

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

7) The pressure of the liquid flowing through the divergent portion of a Venturimeter  
A. Remains constant

B. Increases

☒ C. Decreases

D. Depends upon mass of liquid

8) When the Mach number is between \_\_\_\_\_ the flow is called super-sonic flow.

A. 1 and 2.5

☒ B. 2.5 and 4

C. 4 and 6

D. 1 and 6

9) Steady flow occurs when

A. The direction and magnitude of the velocity at all points are identical

☒ B. The velocity of successive fluid particles, at any point, is the same at successive periods of time

C. The magnitude and direction of the velocity do not change from point to point in the fluid

D. The fluid particles move in plane or parallel planes and the streamline patterns are identical in each plane

10) A fluid which obeys the Newton's law of viscosity is termed as

☒ A. Real fluid

B. Ideal fluid

C. Newtonian fluid

D. Non-Newtonian fluid

11). Hooke's law essentially defines

A. Stress

☒ B. Strain

C. Yield point

D. Elastic limit

  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR



12) The ratio of the change in dimension at right angles to the applied force to the initial dimension is known as

- A. Youngs' modulus
- B. Poisson's ratio
- ☒ C. Lateral strain
- D. Shearing strain

13) Substances that can be stretched to cause large strains are called

- A. Brittle
- B. Ductile
- ☒ C. Plastic
- D. Elastomer

14) Volumetric Strain is

- (a) Increase in length / original length
- ☒ (b) Decrease in length / original length
- (c) Change in volume / original volume
- (d) All of the above

15) Poisson's ratio is

- a) Lateral strain / Longitudinal strain
- ☒ b. Shear strain / Lateral strain
- c. Longitudinal strain / Lateral strain
- d. Lateral strain / Volumetric strain

16) 5. Pick the composite from the list

- (a) Wood
- ☒ (b) Steel
- (c) Nylon
- (d) Mica

17) Repeatable entity of a crystal structure is known as

- a) Crystal
- b) Lattice
- c) ~~Unit cell~~
- d) Miller indices

*H*

18) Coordination number for closest packed crystal structure

- a) ~~16~~
- b) 12
- c) 8
- d) 4

*T*

19) Atomic packing factor is

- a) Distance between two adjacent atoms
- b) ~~Projected area fraction of atoms on a plane~~
- c) Volume fraction of atoms in cell
- d) None

*✓*

20. Coordination number in simple cubic crystal structure

- a) ~~1~~
- b) 6
- c) 3
- d) 4

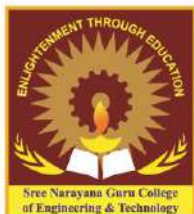
*T*

*Leena*

Dr. LEENA A. V.  
PRINCIPAL

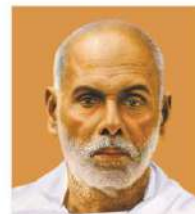
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR





# **Sree Narayana Guru College of Engineering & Technology**

CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307



AY 2019 – 2020  
(PLACEMENT ACTIVITIES, STUDENTS PLACED  
ON AND OFF CAMPUS,  
HIGHER STUDIES)



**Sree Narayana Guru College  
of Engineering & Technology**  
CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307



| Year    | Name of student placed | Program graduated from                              | Name of the employer with contact details | Pay package at appointment (In INR per annum) (applicable for students who got placement) |
|---------|------------------------|-----------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------|
| 2019-20 | ANJALI BABU            | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | UST Global                                | 3.5L/annum                                                                                |
|         | K P ANUPRIYA           | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | Infosys                                   | 3.6L/annum                                                                                |
|         | NAVYA BHASKARAN        | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | TCS                                       | 3.3L/annum                                                                                |
|         | HARSHA SHANKAR         | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | Rein digital                              | 2.8L/annum                                                                                |
|         | ARYASREE VIJAYARAJ D   | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | Congruex Asia Pacific                     | 3.5L/annum                                                                                |
|         | NAVEENA M              | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | IBS software                              | 3L/annum                                                                                  |
|         | VIPIN P V              | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | Infosys                                   | 5L/annum                                                                                  |

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR





# Sree Narayana Guru College of Engineering & Technology

KOROM, PAYYANUR, KANNUR-670 307



5.2.1 Percentage of outgoing students and students progressing to higher education during the last five years

| Year    | Name of students enrolling into higher education and contact details | Program graduated from                           | Name of institution joined | Name of program admitted to (applicable for students who progressed to higher education) |
|---------|----------------------------------------------------------------------|--------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------|
| 2019-20 | ANOOP A V                                                            | B.Tech Electronics and Communication Engineering | NIT Calicut                | PHD in Material Science and Engineering ( Nano Sensors)                                  |

*Leena*  
 Dr. LEENA A V  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



# SREE NARAYANA GURU COLLEGE OF ENGINEERING TECHNOLOGY



## VISION

A knowledge society promoting human excellence and enlightenment through effective education.

## MISSION

To provide technical education of the highest quality and standard of excellence for socio-economic progress embedded in clearly articulated values and supported by commitments.

# CLASS RECORD

Name : **Ms. PRABHA CHANDRAN**

Designation : **ASSISTANT PROFESSOR**

Department : **Electrical and Electronics Engineering**

Academic Year : **2019-2020**

Semester : **EVEN**

Subject name : **Comprehensive Exam (EE352)**

Class : **S6-BTECH-EE**

Batch : **2017-2021**

**SREE NARAYANA GURU COLLEGE OF ENGINEERING AND TECHNOLOGY**  
P.O.CHALAKKODE,PAYYANUR,KANNUR-670307.

APPROVED BY AICTE  
AFFILIATED TO A P J ABDUL KALAM TECHNOLOGICAL UNIVERSITY  
PROMOTED BY : SREE BHAKTHI SAMVARDHINI YOGAM, TALAP, KANNUR

*[Signature]*

**SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR**



459



42. For the differential equation  $\frac{dy}{dt} + 5y = 0$  with  $y(0) = 1$  the general solution is

- A)  $e^{5t}$       B)  $e^{-5t}$       C)  $5e^{-5t}$       D) none of these

43. The radial component of velocity for a particle moving in a circular path is

- A) zero      B) radius itself      C) variable      D) none of the above

44. In which Quadrant the HP comes above XY line and VP comes below XY line for orthographic projection?

- A) First Quadrant      B) Second Quadrant      C) Third Quadrant      D) Fourth Quadrant

45. The force applied on a body of mass 100 kg to produce an acceleration of  $5 \text{ m/s}^2$  is

- A) 20 N      B) 100 N      C) 500 N      D) None of these

46. Which was the major green building rating system developed by TERI

- A) GRIHA      B) LEED      C) BREEAM      D) CASBEE

47. Which stage is directly responsible for the technical functioning of the product

- A) engineering function      B) research function      C) manufacturing function  
D) commercial function

48. The first full-scale and usually fully functional forms of a new design is called

- A) Model      B) prototype      C) rapid prototype      D) design attribute

49. The Air Pollution and Control Act, popularly known as the 'Air Act' was passed for the first time in US in

- A) 1955      B) 1999      C) 2004      D) 2015

50. Probability of a product successfully operation for a specific period of time is called

- A) reliability      B) durability      C) conformance      D) serviceability

\*\*\*\*

  
DR. LECTINA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

NO. OF QUESTIONS :TIME :

(Q1) A coil has a resistance of  $100\ \Omega$  at  $90^\circ\text{C}$ . At  $100^\circ\text{C}$  its resistance is  $101\ \Omega$ . The temperature-coefficient of the wire at  $90^\circ\text{C}$  is

(a) 0.01

(c) 0.0001

(b) 0.1

(d) 0.001

(Q2) If a  $1500\ \Omega$  resistor is to be replaced in a circuit and no  $1500\ \Omega$  resistor is available, then which of the following would you connect, given several  $1000\ \Omega$  resistors

(a) three in parallel

(c) two in parallel and one in series

(b) three in series

(d) two in parallel.

(Q3) When two resistances are connected in series, they have

(a) Same resistance values

(b) Same voltage across them

(c) same current passing through them

(d) different resistance values.

(Q4) In a parallel circuit, all components must

(a) have the same potential difference across them

(b) have same value.

(c) carry equal currents.

(d) carry same current.

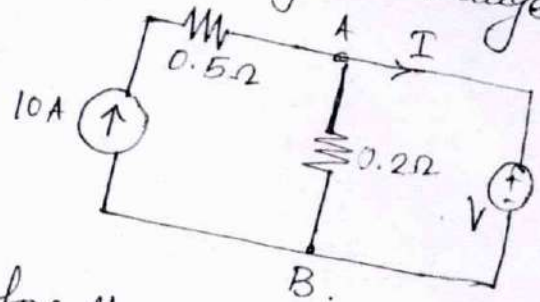
Dr. LEENA A  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



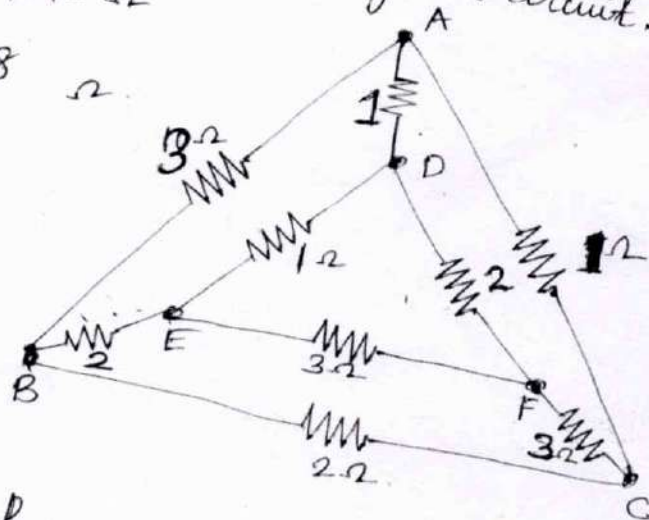
- (Q5) If the diameter of a copper wire is doubled, its current carrying capacity becomes
- (a) twice
  - (b) half.
  - (c) four times
  - (d) none of these

- (Q6) The current rating of a  $1\text{ k}\Omega$ ,  $0.5\text{ watt}$  resistor is
- (a)  $2.23\text{ A}$
  - (b)  $1\text{ A}$
  - (c)  $22.36\text{ mA}$
  - (d) none of these

- (Q7) In the circuit, find the power supplied by the voltage source when  $V = 3\text{ volts}$ .
- (a)  $5\text{ A}$
  - (b)  $0\text{ A}$
  - (c)  $10\text{ A}$
  - (d)  $-5\text{ A}$



- (Q8) Find the equivalent resistance for the given circuit.
- (a)  $5.16\ \Omega$
  - (b)  $6.39\ \Omega$
  - (c)  $4.42\ \Omega$
  - (d)  $8\ \Omega$



- (Q9) Newton-metre is the unit of
- (a) torque
  - (b) energy
  - (c) power
  - (d) work.

*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



(Q10) One kWh equals nearly \_\_\_\_\_ kCals.

(a) 3600

(c) 4200

(b) 860

(d) 9800.

(Q11) The cost of running 2 kW heater for 10 hours at 50 paise/kWh is Rs \_\_\_\_\_.

(a) 5

(c) 4

(b) 10

(d) 2.

(Q12) A torque of 50 Nm. driving a motor at 600 rpm produces a power of \_\_\_\_\_.

(a) 500

(c) 1570

(b) 3140.

(d) 30,000

(Q13) The unit of magnetizing force is

(a) Henry/metre

(c) ampere/metre

(b) Weber/metre<sup>2</sup>

(d) Joule/weber

(Q14) Aluminium can be classified as a \_\_\_\_\_ material

(a) paramagnetic

(c) diamagnetic

(b) ferromagnetic

(d) soft magnetic

(Q15) Permeance of a magnetic circuit is given by the reciprocal of its \_\_\_\_\_.

(a) reluctance

(c) flux density

(b) permeability

(d) reluctivity.

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

(Q16) Magnetic leakage in electric machines leads to their

- (a) increased weight
- (b) increased cost
- (c) reduced efficiency
- (d) all the above
- (e) only (a) and (b)

(Q17) The emf induced in a coil depends on

- (a) the number of its turn
- (b) the change of flux linked with it
- (c) the time taken to change the flux
- (d) all the above

(Q18) The direction of the induced emf in a coil may be found with the help of


- (a) Faraday's Law
- (b) Lenz's Law
- (c) Fleming's left-hand rule
- (d) Steinmetz law

(Q19) The inductance of the coil wound with 200 turns on an iron ring with relatively long air gap and found to produce a flux of  $130 \mu\text{Wb}$ , when a current of 3A is passed through it is given by \_\_\_\_\_ mH.

- (a) 8.67
- (b) 86.7
- (c) 867
- (d) 1

(Q20) The self inductances of two coils are 4mH and 9mH. If the coefficient of coupling is 0.5, the mutual inductance between the coils is \_\_\_\_\_ mH.

- (a) 1
- (b) 2
- (c) 3
- (d) 4

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



(Q21) The armature conductors of a 6 pole, lap wound d.c. generator are divided into, \_\_\_\_\_ parallel paths.

(a) 2

(c) 6

(b) 3

(d) 4

(Q22) In a long-shunt compound-wound generator, the shunt field is connected in parallel with

(a) armature

(c) parallel combination of armature and series field.

(b) series field.

(d) series combination of armature and series field.

(Q23) If the flux/pole of a d.c. generator is halved but its speed is doubled, its generated e.m.f will

(a) be halved

(c) be doubled.

(b) remain the same.

(d) be quadrupled.

(Q24) Stray losses in a d.c. generator consist of \_\_\_\_\_ losses.

(a) magnetic and mechanical

(b) magnetic and electrical

(c) electrical and mechanical.

(d) copper and iron.

(Q25) The overall efficiency of a d.c. shunt generator is maximum when its variable loss equals \_\_\_\_\_ loss.

(a) stray

(c) constant

(b) iron

(d) mechanical.

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

(Q26) The e.m.f generated within the armature of a d.c. generator is given by.

(a)  $E_g = \frac{\phi Z N}{A}$

(b)  $E_g = \frac{\phi Z (P)}{60 (A)}$

(b)  $E_g = \phi Z N \left( \frac{P}{A} \right)$

(c)  $E_g = \frac{\phi Z N}{60} \left( \frac{P}{A} \right)$

(d) both (b) and (c).

(Q27) The O.C.C of a d.c generator is also called its \_\_\_\_\_ characteristics.

(a) internal.

(c) external

(b) magnetic

(d) performance.

(Q28) The line representing the critical resistance of a d.c. generator \_\_\_\_\_ its O.C.C.

(a) intersects

(c) just touches

(b) does not intersect.

(d) runs parallel to

(Q29) Which of the following will NOT prevent a self-excited shunt generator from building up to its full voltage?

(a) wrong direction of rotation

(b) Open field.

(c) no residual magnetism.

(d) speed too high.

(Q30) Which of the following generator provides approximately constant voltage from no load to full load?

(a) series

(c) flat compound

(b) shunt

(d) over compound.

(6)

Leena  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



Q31. When load is removed, \_\_\_\_\_ motor will run at the highest speed.

- (a) shunt (c) cumulative compound  
(b) series (d) differential - compound.

Q32. A d.c. series motor is best suited for driving.

- (a) lathes  
(b) heavy machine tools  
(c) cranes and hoists  
(d) shears and punches.

Q33. Motor starters are essential for

- (a) accelerating the motor  
(b) starting the motor  
(c) avoiding excessive starting current  
(d) preventing fuse blowing.

Q34. The speed of a d.c. motor can be controlled by varying

- (a) its flux.  
(b) armature circuit resistance  
(c) applied voltage.  
(d) all of the above.

Q35. Form factor is defined as 1 for sinusoidal waveform).

- (a)  $\frac{\text{rms value}}{\text{average value}}$  (c)  $\frac{\text{maximum value}}{\text{rms value}}$   
(b)  $\frac{\text{average value}}{\text{rms value}}$  (d)  $\frac{\text{average value}}{\text{maximum value}}$

(7)

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

Q36 Two sinusoidal currents are given by the equations

$$i_1 = 10 \sin t \left( \omega t + \frac{\pi}{3} \right)$$

$$i_2 = 15 \sin \left( \omega t - \frac{\pi}{4} \right)$$

The phase difference between them is \_\_\_\_\_ degrees.

(a) 105

(c) 15

(b) 75

(d) 60.

Q37 An alternator having 20 poles and running at 300 rpm will produce an alternating voltage having a frequency of \_\_\_\_\_ Hz.

(a) 50

(c) 300

(b) 60

(d) 20.

Q38 If a moving coil ammeter is used to measure the value of an alternating sinusoidal current having a peak value of 100 A, it will read \_\_\_\_\_ amperes.

(a) 50

(c) 63.7

(b) 15.7

(d) 70.7.

Q39 An A.C. current is given by  $i = 100 \sin 100\pi t$ . It will achieve a value of 50 A after \_\_\_\_\_ sec.

(a)  $1/600$

(c)  $1/1800$

(b)  $1/300$

(d)  $1/900$ .

*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



DATE : 08.02.2019

NAME: .....

ROLL NO.: .....

**COMPREHENSIVE EXAMINATION**  
**(PART II : OBJECTIVE TYPE QUESTIONS)**  
**TOPICS : TRANSFORMERS AND MEASURING INSTRUMENTS**

**Maximum Marks: 20**

**Exam Duration: 30 mins**

**Instructions:**

- (1) Each question carries one mark. No negative marks for wrong answers
- (2) Total number of questions: 20
- (3) All questions are to be answered. Each question will be followed by 4 possible answers of which only ONE is correct.
- (4) If more than one option is chosen, it will not be considered for valuation.
- (5) Calculators are not permitted

1. The basic function of a transformer is to change
  - a. The level of the voltage
  - b. The power level
  - c. The power factor
  - d. The frequency
2. If rated dc voltage is applied instead of ac to the primary of the transformer,
  - a. Secondary of the transformer will burn
  - b. Primary of the transformer will burn
  - c. Secondary voltage will be excessively high
  - d. There will be no secondary voltage
3. In a transformer operating at a constant voltage, if the input frequency increases, the core loss
  - a. Increases
  - b. Decreases
  - c. Remains constant
  - d. Increases as square of frequency
4. In a 10kVA, 230/1000 V, single phase transformer, the no-load current will be about
  - a. 0.5A
  - b. 3A
  - c. 8A
  - d. 10A

  
**DR. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



NAME: .....

ROLL NO.: .....

5. A 100kVA, transformer has full load copper loss of 1600W and iron loss of 900W. It will have maximum efficiency for a load of
  - a. 100 kVA
  - b. 56.2 kVA
  - c. 75 kVA
  - d. 133.3 kVA
6. The phase relation between secondary current and secondary terminal voltage depends upon
  - a. Primary winding impedance
  - b. Secondary winding impedance
  - c. Load impedance
  - d. None of the above
7. A 5kVA transformer has a turn-ratio ( $N_1/N_2$ )= 10. The impedance of the primary winding is  $3+j5$  ohms while that of secondary winding is  $0.5+j0.8$  ohms. The impedance, in ohms, of the transformer when referred to the primary will be
  - a.  $3.5 + j5.8$
  - b.  $8 + j 13$
  - c.  $53 + j 85$
  - d.  $3.05 + j5.08$
8. Open circuit test on a transformer is usually performed with
  - a. Rated transformer voltage
  - b. Rated transformer current
  - c. Direct current
  - d. High frequency supply
9. Transformer core is made up of
  - a. Silicon sheet steel
  - b. Chromel steel
  - c. Low carbon steel
  - d. High content silicon steel
10. The magnetizing current in a transformer is rich in
  - a. 3<sup>rd</sup> harmonic
  - b. 5<sup>th</sup> harmonic
  - c. 7<sup>th</sup> harmonic
  - d. 13<sup>th</sup> harmonic
11. In parallel operation, load sharing by transformers is according to
  - a. Per unit impedance
  - b. kVA rating
  - c. kW rating
  - d. efficiency
12. if a 500kVA, 200Hz transformer is operated at 50 Hz, its kVA rating will be
  - a. 2000
  - b. 125
  - c. 250
  - d. 1000


*Dr. Leena A V*  
PRINCIPAL  
SREE MARYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



NAME: .....

ROLL NO.: .....

13. The main function of damping torque in an indicating electrical instrument is to
- Bring the pointer to rest quickly
  - Prevent sudden movement of the pointer
  - Make pointer deflection gradual
  - Provide friction
14. If an ammeter is used as a voltmeter, in all probability it will
- Indicate much higher reading
  - Give extremely low reading
  - Indicate no reading at all
  - Burn out
15. A moving coil instrument has a resistance of 0.5 ohms and full-scale deflection of 0.1 A. to convert it into an ammeter of 0-10A, the shunt resistance should be
- 0.004 ohms
  - 0.005 ohms
  - 0.050 ohms
  - 0.1 ohms
16. Frequency can be measured by using
- Maxwell's bridge
  - Schering bridge
  - Heaviside Campbell bridge
  - Wien's bridge
17. The source of emission of electrons in a CRT is
- PN junction
  - A barium and strontium oxide coated cathode
  - Accelerating anodes
  - Post accelerating anodes
18. Creeping in a single phase induction type energy meter may be due to
- Overcompensation for friction
  - Overvoltage
  - Vibrations
  - All the above
19. Electrostatic type instruments are primarily used as
- Ammeters
  - Wattmeters
  - Voltmeters
  - Ohmmeters
20. A 1mA ammeter has a resistance of 100 ohms. It is to be converted to a 1 A ammeter. The value of shunt resistance is
- 0.001 ohms
  - 0.1001 ohms
  - 100000 ohms
  - 100 ohms

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



# COMPREHENSIVE EXAMINATION (Part II – Objective type)

## PATTERN

1. MA101 Calculus – 1 question
2. MA103 Differential Equations – 1 question
3. BE100 Engineering Mechanics – 2 questions
4. BE110 Engineering Graphics – 2 questions
5. BE103 Sustainable Engineering – 2 questions
6. BE102 Design & Engineering – 2 questions
7. 6 Branch specific core courses published in the website – 40 questions (minimum 6 questions from each course)

Maximum marks : 50

Exam Duration : 1 hour

## Instructions:

- (1) Each question carries one mark. No negative marks for wrong answers
- (2) Total number of questions: 50
- (3) All questions are to be answered. Each question will be followed by 4 possible answers of which only ONE is correct.
- (4) If more than one option is chosen, it will not be considered for valuation.
- (5) Calculators are not permitted

## SAMPLE QUESTIONS

(Note: Only 12 sample questions are given here -1 from each course)

## QUESTIONS FROM COMMON COURSES

1.  $y = x \sin \ln x$   $\frac{d}{dx} y =$   
(A) 1 (B) 2 (C) 0 (D)  $\infty$
2. The following partial differential equation used in nonlinear mechanics is  
(A) linear; 3rd order (B) nonlinear; 3rd order  
(C) linear; 1st order (D) nonlinear; 1st order
3. The resultant of two forces equal in magnitude acting at a point has also the same magnitude as each force. The angle between the forces is  
(A) 30° (B) 45° (C) 90° (D) 120°

DR. LEENA A  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANAM KUTTIYUR

4. The front view in orthographic projection of a right circular cone with its base horizontal is  
(A) right angled triangle (B) scalene triangle (C) isosceles triangle (D) Circle

5. Which one of the following is NOT true with respect to sustainability approach in engineering?

- Considers both technical and non-technical issues synergistically
- Strives to solve the problem for infinite future
- Considers the global context
- Considers the object or process

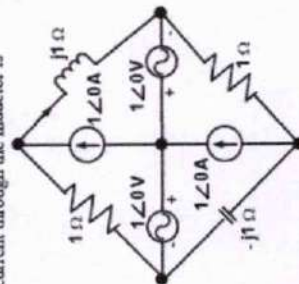
6. A seven-segment display (SSD) is commonly used in electronic calculators. It has seven different illuminating segments arranged in such a way that it can display numbers from 0-9 by displaying different combinations of segments. Normally segments B and C are used to show number 1.

Which one of the seven segments is the most critical one, that if fails, will show maximum erroneous readings.



- A. A B. C C. D D. G

7. In the circuit shown below, the current through the inductor is

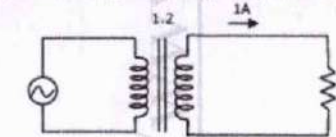


- (A)  $\frac{2}{1+j}$  A (B)  $\frac{-1}{1+j}$  A (C)  $\frac{1}{1+j}$  A (D) 0 A



8.

A single-phase transformer has a turns ratio of 1:2, and is connected to a purely resistive load as shown in the figure. The magnetizing current drawn is 1A, and the secondary current is 1A. If core losses and leakage reactance's are neglected, the primary current is



- (A) 1.41A (B) 2A (C) 2.24 A (D) 3 A

9.

Consider the following Sum of Products expression, F.

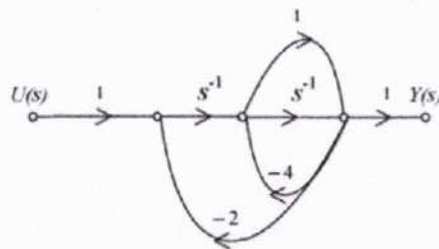
$$F = ABC + \bar{A}\bar{B}C + A\bar{B}C + \bar{A}BC + \bar{A}\bar{B}\bar{C}$$

The equivalent Product of Sums expression is

- (A)  $F = (A + \bar{B} + C)(\bar{A} + B + C)(\bar{A} + \bar{B} + C)$   
 (B)  $F = (A + B + \bar{C})(A + B + C)(\bar{A} + \bar{B} + \bar{C})$   
 (C)  $F = (\bar{A} + B + \bar{C})(A + \bar{B} + \bar{C})(A + B + C)$   
 (D)  $F = (\bar{A} + \bar{B} + C)(A + B + \bar{C})(A + B + C)$

10

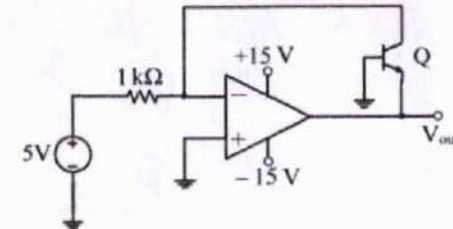
The signal flow graph for a system is given below. The transfer function  $\frac{Y(s)}{U(s)}$  for this system is



- (A)  $\frac{s+1}{5s^2+6s+2}$  (B)  $\frac{s+1}{s^2+6s+2}$   
 (C)  $\frac{s+1}{s^2+4s+2}$  (D)  $\frac{1}{5s^2+6s+2}$

11.

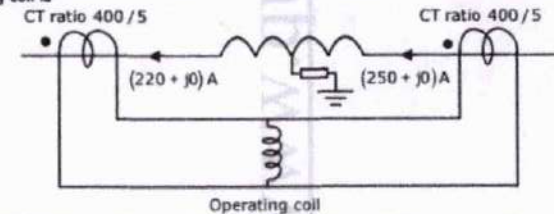
In the circuit shown below what is the output voltage ( $V_{out}$ ) in Volts if a silicon transistor Q and an ideal op-amp are used?



- (A) -15 (B) -0.7 (C) +0.7 (D) +15

12.

Consider a stator winding of an alternator with an internal high-resistance ground fault. The currents under the fault condition are as shown in the figure. The winding is protected using a differential current scheme with current transformers of ratio 400/5 A as shown. The current through the operating coil is



- (A) 0.17875 A (B) 0.2 A (C) 0.375A (D) 60 kA

*Dr. Leena A V*  
 PRINCIPAL  
 SREE MARYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PATTANUR, KANNUR

SNGCMS

SNGCET-DATACENTRE


**SREE NARAYANA GURU COLLEGE OF ENGINEERING AND TECHNOLOGY, PAYYANUR**
**Promoted by Sree Bhakthi Samvardhini Yogam**
**(Affiliated to KTU, Recognised by AICTE)**
**Cumulative attendance of 2017-2021 CS S6 till 2/3/2020-11:16:38 AM**
**Subject : Comprehensive Exam**

| Register No. | Student Name                  | Hour Present | Hour Absent | Percentage |
|--------------|-------------------------------|--------------|-------------|------------|
| SNC17CS004   | ADISH KUMAR                   | 9            | 3           | 75         |
| SNC17CS005   | AJAY.V                        | 10           | 2           | 83.33      |
| SNC17CS006   | ALBIN SABU                    | 9            | 3           | 75         |
| SNC17CS007   | AMALDAS.M.V                   | 12           | 0           | 100        |
| SNC17CS008   | AMANA ASHRAF                  | 8            | 4           | 66.67      |
| SNC17CS009   | ANASWARA KRISHNAN             | 9            | 3           | 75         |
| SNC17CS010   | ANIMA.M                       | 7            | 5           | 58.33      |
| SNC17CS012   | ANKETH LOVEJITH               | 11           | 1           | 91.67      |
| SNC17CS013   | ANUJA.N.V                     | 12           | 0           | 100        |
| SNC17CS014   | ATHIRA.V.V                    | 12           | 0           | 100        |
| SNC17CS015   | ATHIRA MURALIDHARAN.K.V       | 8            | 4           | 66.67      |
| SNC17CS016   | ATHUL NARAYANAN               | 9            | 3           | 75         |
| SNC17CS017   | AVANTHIKA.P                   | 12           | 0           | 100        |
| SNC17CS018   | DEVIKA.K.K                    | 7            | 5           | 58.33      |
| SNC17CS020   | FATHIMA NIFRU.C.H             | 9            | 3           | 75         |
| SNC17CS022   | HEERA MOHAN.K.V               | 12           | 0           | 100        |
| SNC17CS024   | LUBNA MUBASHIR MUBASHIR AHMED | 11           | 1           | 91.67      |
| SNC17CS026   | NABEEL ABDUL NASAR MUSTAFA    | 8            | 4           | 66.67      |
| SNC17CS027   | NAVEEN.K.P                    | 10           | 2           | 83.33      |
| SNC17CS028   | NEERAJ.T.M                    | 10           | 2           | 83.33      |
| SNC17CS029   | NIMISHA RAJEEV.P              | 9            | 3           | 75         |
| SNC17CS030   | NIVED RAJAN                   | 9            | 3           | 75         |
| SNC17CS032   | NIVEDYA.P                     | 9            | 3           | 75         |
| SNC17CS034   | PRANAV.P.V                    | 9            | 3           | 75         |
| SNC17CS035   | RAHUL.P.P                     | 8            | 4           | 66.67      |
| SNC17CS036   | SAJINA.T.V                    | 11           | 1           | 91.67      |
| SNC17CS037   | SANGEETHA.V                   | 9            | 3           | 75         |
| SNC17CS038   | SAURAV RITHIN.P.M             | 7            | 5           | 58.33      |
| SNC17CS039   | VAISHNAV.M.M                  | 12           | 0           | 100        |
| SNC17CS040   | VYDURYA PRAKASH               | 11           | 1           | 91.67      |
| SNC17CS041   | VYSHNAV RAJENDRAN             | 9            | 3           | 75         |
| SNC16CS006   | AISWARYA BHASKARAN            | 6            | 6           | 50         |

*Prithika*  
2/3/20

*Dr. Leena A V*  
2/3/2020  
*Leena*

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



1. Which of the following is NOT a valid deadlock prevention scheme?

- (a) Release all resources before requesting a new resource
- (b) Number the resources uniquely and never request a lower numbered resource than the last one requested.
- (c) Never request a resource after releasing any resource
- (d) Request and all required resources be allocated before execution.

2) Which of the following requires a device driver?

- a) Register
- b) Cache
- c) Main memory
- d) Disk

3) Which of the following scheduling algorithms is non-preemptive? (GATE CS 2002)

- a) Round Robin
- b) First-In First-Out
- c) Multilevel Queue Scheduling
- d) Multilevel Queue Scheduling with Feedback

4) PC Program Counter is also called

- a. instruction pointer
- b. memory pointer
- c. file pointer
- d. data counter

5) SPEC stands for:

- a. Standard Performance Evaluation Code.
- b. System Processing Enhancing Code.
- c. System Performance Evaluation Corporation.
- d. Standard Processing Enhancement Corporation.

6) To access the services of operating system, the interface is provided by the

- a) System calls
- b) API
- c) Library
- d) Assembly instructions

7) A set of processes is deadlock if \_\_\_\_\_

- a) each process is blocked and will remain so forever
- b) each process is terminated
- c) all processes are trying to kill each other
- d) none of the above

8) Which one of the following is a synchronization tool?

10  
11

Shubha

X → Answer not here.

Leena

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

- a) thread
- b) pipe
- ☒ c) semaphore
- d) socket

9) When does the `ArrayIndexOutOfBoundsException` occur?

- ☒ a) Compile-time
- ☒ b) Run-time
- c) Not an error
- d) Not an exception at all

10) The data structure required for Breadth First Traversal on a graph is?

- ☒ a) Stack
- ☒ b) Array
- ☒ c) Queue
- ☒ d) Tree

11) A queue follows \_\_\_\_\_

- ☒ a) FIFO (First In First Out) principle
- ☒ b) LIFO (Last In First Out) principle
- c) Ordered array
- d) Linear tree

12) A data structure in which elements can be inserted or deleted at/from both the ends but not in the middle is?

- a) Queue
- b) Circular queue
- ☒ c) Dequeue
- d) Priority queue

Dr. L. LEENA A V  
PRINCIPAL OF  
ISREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



## VIVA QUESTIONS

13. \_\_\_\_\_ are algorithms that learn from their more complex environments (hence eco) to generalize, approximate and simplify solution logic.

a) Fuzzy Relational DB

b) Ecorithms

c) Fuzzy Set

d) None of the mentioned

View Answer

Answer: c

Explanation: Local structure is usually associated with linear rather than exponential growth in complexity

14. Commutativity Property of Classical set is

A.  $A \cup B = B \cup A$   $A \cap B = B \cap A$

B.  $A \cup (B \cap C) = (A \cup B) \cap C$   $A \cap (B \cup C) = (A \cap B) \cup C$

C.  $A \cup (B \cap C) = (A \cup B) \cap C$   $A \cap (B \cup C) = (A \cap B) \cup C$

D.  $A \cup A = A$   $A \cap A = A$

ANS: OPTION A

15. A problem is first connected to its proposed solution during the \_\_\_\_\_ stage

A. conceptualization

B. identification

C. formalization

D. implementation

ANS: OPTION C



Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYYANUR  
KANNUR

d) None of the mentioned

**View Answer**

**Answer: b**

**Explanation:** Fuzzy set theory defines fuzzy operators on fuzzy sets. The problem in applying this is that the appropriate fuzzy operator may not be known. For this reason, fuzzy logic usually uses IF-THEN rules, or constructs that are equivalent, such as fuzzy associative matrices.

Rules are usually expressed in the form:

**IF variable IS property THEN action**

**advertisement**

**11. Like relational databases there does exists fuzzy relational databases.**

a) True

b) False

**View Answer**

**Answer: a**

**Explanation:** Once fuzzy relations are defined, it is possible to develop fuzzy relational databases. The first fuzzy relational database, FRDB, appeared in Maria Zemankova dissertation.

**12. \_\_\_\_\_ is/are the way/s to represent uncertainty.**

a) Fuzzy Logic

b) Probability

c) Entropy

d) All of the mentioned

**View Answer**

**Answer: d**

**Explanation:** Entropy is amount of uncertainty involved in data. Represented by  $H(\text{data})$ .

Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY,  
PAYYANUR, KANNUR

  
Dr. LEENA A. V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY,  
PAYYANUR, KANNUR



b) False

**View Answer**

**Answer: a**

**Explanation: None.**

8. Fuzzy Set theory defines fuzzy operators. Choose the fuzzy operators from the following.

a) AND

b) OR

c) NOT

d) All of the mentioned

**View Answer**

**Answer: d**

**Explanation: The AND, OR, and NOT operators of Boolean logic exist in fuzzy logic, usually defined as the minimum, maximum, and complement;**

9. There are also other operators, more linguistic in nature, called \_\_\_\_\_ that can be applied to fuzzy set theory.

a) Hedges

b) Lingual Variable

c) Fuzz Variable

d) None of the mentioned

**View Answer**

**Answer: a**

**Explanation: None.**

10. Fuzzy logic is usually represented as \_\_\_\_\_

a) IF-THEN-ELSE rules

b) IF-THEN rules

c) Both IF-THEN-ELSE rules & IF-THEN rules

  
**Dr. LEENA A. V.**  
**PRINCIPAL**  
**SREE NARAYANA GURU COLLEGE OF**  
**ENGINEERING & TECHNOLOGY, PAYANUR**  
**KANNUR**

4. Fuzzy logic is extension of Crisp set with an extension of handling the concept of Partial Truth.

a) True

b) False

View Answer

Answer: a

Explanation: None.

5. The room temperature is hot. Here the hot (use of linguistic variable is used) can be represented by \_\_\_\_\_

a) Fuzzy Set

b) Crisp Set

c) Fuzzy & Crisp Set

d) None of the mentioned

View Answer

Answer: a

Explanation: Fuzzy logic deals with linguistic variables.

6. The values of the set membership is represented by \_\_\_\_\_

a) Discrete Set

b) Degree of truth

c) Probabilities

d) Both Degree of truth & Probabilities

View Answer

Answer: b

Explanation: Both Probabilities and degree of truth ranges between 0 – 1.

7. Japanese were the first to utilize fuzzy logic practically on high-speed trains in Sendai.

a) True

Dr. LEENA A.V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAVANUR  
KANNUR

Dr. LEENA A.V.  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAVANUR  
KANNUR



1. What is the form of Fuzzy logic?

- a) Two-valued logic
- b) Crisp set logic
- c) Many-valued logic
- d) Binary set logic

[View Answer](#)

Answer: c

Explanation: With fuzzy logic set membership is defined by certain value. Hence it could have many values to be in the set.

2. Traditional set theory is also known as Crisp Set theory.

- a) True
- b) False

[View Answer](#)

Answer: a

Explanation: Traditional set theory set membership is fixed or exact either the member is in the set or not. There is only two crisp values true or false. In case of fuzzy logic there are many values. With weight say  $x$  the member is in the set.

3. The truth values of traditional set theory is \_\_\_\_\_ and that of fuzzy set is \_\_\_\_\_


- a) Either 0 or 1, between 0 & 1
- b) Between 0 & 1, either 0 or 1
- c) Between 0 & 1, between 0 & 1
- d) Either 0 or 1, either 0 or 1

[View Answer](#)

Answer: a

Explanation: Refer the definition of Fuzzy set and Crisp set.

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY, PAYANUR  
KANNUR

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

1. Which of the following is NOT a valid deadlock prevention scheme?

- (a) Release all resources before requesting a new resource
- (b) Number the resources uniquely and never request a lower numbered resource than the last one requested.
- ☒ (c) Never request a resource after releasing any resource
- (d) Request and all required resources be allocated before execution.

2. Which of the following requires a device driver?

- a) Register
- b) Cache
- c) Main memory
- ☒ d) Disk

3. Which of the following scheduling algorithms is non-preemptive? (GATE CS 2002)

- a) Round Robin
- ☒ b) First-In First-Out
- c) Multilevel Queue Scheduling
- d) Multilevel Queue Scheduling with Feedback

4. PC Program Counter is also called

- a. instruction pointer
- ☒ b. memory pointer
- c. file pointer
- d. data counter

5. SPEC stands for:

- a. Standard Performance Evaluation Code.
- b. System Processing Enhancing Code.
- ☒ c. System Performance Evaluation Corporation.
- d. Standard Processing Enhancement Corporation.

6. To access the services of operating system, the interface is provided by the

- ☒ a) System calls
- b) API
- c) Library
- d) Assembly instructions

7. A set of processes is deadlock if \_\_\_\_\_

- ☒ a) each process is blocked and will remain so forever
- b) each process is terminated
- c) all processes are trying to kill each other
- d) none of the above

8. Which one of the following is a synchronization tool?



Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



- a) thread
- b) pipe
- c) semaphore
- d) socket

9) When does the `ArrayIndexOutOfBoundsException` occur?

- a) Compile-time
- b) Run-time
- c) Not an error
- d) Not an exception at all

10) The data structure required for Breadth First Traversal on a graph is?

- a) Stack
- b) Array
- c) Queue
- d) Tree

11) A queue follows \_\_\_\_\_

- a) FIFO (First In First Out) principle
- b) LIFO (Last In First Out) principle
- c) Ordered array
- d) Linear tree

12) A data structure in which elements can be inserted or deleted at/from both the ends but not in the middle is?

- a) Queue
- b) Circular queue
- c) Dequeue
- d) Priority queue

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

1. Which of the following is NOT a valid deadlock prevention scheme?

- (a) Release all resources before requesting a new resource
- (b) Number the resources uniquely and never request a lower numbered resource than the last one requested.
- ☒ (c) Never request a resource after releasing any resource
- (d) Request and all required resources be allocated before execution.

2) Which of the following requires a device driver?

- a) Register
- b) Cache
- ☒ c) Main memory
- d) Disk

3) Which of the following scheduling algorithms is non-preemptive? (GATE CS 2002)

- a) Round Robin
- ☒ b) First-In First-Out
- c) Multilevel Queue Scheduling
- d) Multilevel Queue Scheduling with Feedback

4) PC Program Counter is also called

- ☒ a. instruction pointer
- b. memory pointer
- c. file pointer
- d. data counter

5) SPEC stands for:

- ☒ a. Standard Performance Evaluation Code.
- b. System Processing Enhancing Code.
- ☒ c. System Performance Evaluation Corporation.
- d. Standard Processing Enhancement Corporation.


6) To access the services of operating system, the interface is provided by the

- ☒ a) System calls
- b) API
- c) Library
- d) Assembly instructions

7) A set of processes is deadlock if \_\_\_\_\_

- ☒ a) each process is blocked and will remain so forever
- b) each process is terminated
- c) all processes are trying to kill each other
- d) none of the above

8) Which one of the following is a synchronization tool?

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



- a) thread
- b) pipe
- ☒ c) semaphore
- d) socket

9) When does the `ArrayIndexOutOfBoundsException` occur?

- a) Compile-time
- ☒ b) Run-time
- c) Not an error
- d) Not an exception at all

10) The data structure required for Breadth First Traversal on a graph is?


- a) Stack
- b) Array
- ☒ c) Queue
- d) Tree

11) A queue follows \_\_\_\_\_

- ☒ a) FIFO (First In First Out) principle
- b) LIFO (Last In First Out) principle
- c) Ordered array
- d) Linear tree

12) A data structure in which elements can be inserted or deleted at/from both the ends but not in the middle is?

- a) Queue
- b) Circular queue
- ☒ c) Dequeue
- d) Priority queue

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

1. Which of the following is NOT a valid deadlock prevention scheme?

- (a) Release all resources before requesting a new resource
- (b) Number the resources uniquely and never request a lower numbered resource than the last one requested.
- (c) Never request a resource after releasing any resource
- ☒ (d) Request and all required resources be allocated before execution.

2) Which of the following requires a device driver?

- a) Register
- b) Cache
- c) Main memory
- ☒ d) Disk

3) Which of the following scheduling algorithms is non-preemptive? (GATE CS 2002)

- a) Round Robin
- ☒ b) First-In First-Out
- c) Multilevel Queue Scheduling
- d) Multilevel Queue Scheduling with Feedback

4) PC Program Counter is also called

- ☒ a) instruction pointer
- b. memory pointer
- c. file pointer
- d. data counter

5) SPEC stands for:

- a. Standard Performance Evaluation Code.
- b. System Processing Enhancing Code.
- ☒ c. System Performance Evaluation Corporation.
- d. Standard Processing Enhancement Corporation.

6) To access the services of operating system, the interface is provided by the

- ☒ a) System calls
- b) API
- c) Library
- d) Assembly instructions

7) A set of processes is deadlock if \_\_\_\_\_

- ☒ a) each process is blocked and will remain so forever
- b) each process is terminated
- c) all processes are trying to kill each other
- d) none of the above

8) Which one of the following is a synchronization tool?

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



- a) thread
- b) pipe
- c) semaphore
- d) socket

9) When does the `ArrayIndexOutOfBoundsException` occur?

- a) Compile-time
- b) Run-time
- c) Not an error
- d) Not an exception at all

10) The data structure required for Breadth First Traversal on a graph is?


- a) Stack
- b) Array
- c) Queue
- d) Tree

11) A queue follows \_\_\_\_\_

- a) FIFO (First In First Out) principle
- b) LIFO (Last In First Out) principle
- c) Ordered array
- d) Linear tree

12) A data structure in which elements can be inserted or deleted at/from both the ends but not in the middle is?

- a) Queue
- b) Circular queue
- c) Dequeue
- d) Priority queue

  
Dr. LEENA A V

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

1. Which of the following is NOT a valid deadlock prevention scheme?

- (a) Release all resources before requesting a new resource
- (b) Number the resources uniquely and never request a lower numbered resource than the last one requested.
- ✓ (c) Never request a resource after releasing any resource
- (d) Request and all required resources be allocated before execution.

2) Which of the following requires a device driver?

- a) Register
- b) Cache
- c) Main memory
- ✓ d) Disk

3) Which of the following scheduling algorithms is non-preemptive? (GATE CS 2002)

- ✗ a) Round Robin
- b) First-In First-Out
- c) Multilevel Queue Scheduling
- d) Multilevel Queue Scheduling with Feedback

4) PC Program Counter is also called

- ✓ a) instruction pointer
- b. memory pointer
- c. file pointer
- d. data counter

5) SPEC stands for:

- ✓ a. Standard Performance Evaluation Code.
- b. System Processing Enhancing Code.
- ✗ c. System Performance Evaluation Corporation.
- d. Standard Processing Enhancement Corporation.

6) To access the services of operating system, the interface is provided by the

- ✗ a) System calls
- ✓ b) API
- c) Library
- d) Assembly instructions

7) A set of processes is deadlock if \_\_\_\_\_

- ✓ a) each process is blocked and will remain so forever
- b) each process is terminated
- c) all processes are trying to kill each other
- d) none of the above

8) Which one of the following is a synchronization tool?

Dr. LEENA A V  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR



- a) thread
- b) pipe
- c) semaphore
- d) socket

9) When does the `ArrayIndexOutOfBoundsException` occur?

- a) Compile-time
- b) Run-time
- c) Not an error
- d) Not an exception at all

10) The data structure required for Breadth First Traversal on a graph is?

- a) Stack
- b) Array
- c) Queue
- d) Tree

11) A queue follows \_\_\_\_\_

- a) FIFO (First In First Out) principle
- b) LIFO (Last In First Out) principle
- c) Ordered array
- d) Linear tree

12) A data structure in which elements can be inserted or deleted at/from both the ends but not in the middle is?

- a) Queue
- b) Circular queue
- c) Dequeue
- d) Priority queue

*Leena*  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR

Group-4  
Anketh Lovejith -  
Athiva V.V  
Devika K.K  
Nived Bajan

1. Which of the following is NOT a valid deadlock prevention scheme?

- (a) Release all resources before requesting a new resource
- (b) Number the resources uniquely and never request a lower numbered resource than the last one requested.
- (c) Never request a resource after releasing any resource
- (d) Request and all required resources be allocated before execution. ✓

2) Which of the following requires a device driver?

- a) Register
- b) Cache
- c) Main memory
- d) Disk ✓

3) Which of the following scheduling algorithms is non-preemptive? (GATE CS 2002)

- a) Round Robin
- b) First-In First-Out ✓
- c) Multilevel Queue Scheduling
- d) Multilevel Queue Scheduling with Feedback

4) PC Program Counter is also called

- a. instruction pointer ✓
- b. memory pointer
- c. file pointer
- d. data counter

5) SPEC stands for:

- a. Standard Performance Evaluation Code.
- b. System Processing Enhancing Code.
- c. System Performance Evaluation Corporation. ✓
- d. Standard Processing Enhancement Corporation.


6) To access the services of operating system, the interface is provided by the

- a) System calls ✓
- b) API
- c) Library
- d) Assembly instructions

7) A set of processes is deadlock if \_\_\_\_\_

- a) each process is blocked and will remain so forever ✓
- b) each process is terminated
- c) all processes are trying to kill each other
- d) none of the above

8) Which one of the following is a synchronization tool?

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



- a) thread
- b) pipe
- ☒ c) semaphore
- d) socket

9) When does the `ArrayIndexOutOfBoundsException` occur?

- a) Compile-time
- ☒ b) Run-time
- c) Not an error
- d) Not an exception at all

10) The data structure required for Breadth First Traversal on a graph is?

- ☒ a) Stack
- ☒ b) Array
- c) Queue
- d) Tree

11) A queue follows \_\_\_\_\_

- ☒ a) FIFO (First In First Out) principle
- ☒ b) LIFO (Last In First Out) principle
- c) Ordered array
- d) Linear tree

12) A data structure in which elements can be inserted or deleted at/from both the ends but not in the middle is?

- a) Queue
- ☒ b) Circular queue
- c) Dequeue
- d) Priority queue

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

1. Which of the following is NOT a valid deadlock prevention scheme?

- (a) Release all resources before requesting a new resource
- ✓ (b) Number the resources uniquely and never request a lower numbered resource than the last one requested.
- (c) Never request a resource after releasing any resource
- (d) Request and all required resources be allocated before execution.

2) Which of the following requires a device driver?

- a) Register
- b) Cache
- c) Main memory
- ✓ d) Disk

3) Which of the following scheduling algorithms is non-preemptive? (GATE CS 2002)

- ✓ a) Round Robin
- b) First-In First-Out
- c) Multilevel Queue Scheduling
- d) Multilevel Queue Scheduling with Feedback

4) PC Program Counter is also called

- ✓ a. instruction pointer
- b. memory pointer
- c. file pointer
- d. data counter

5) SPEC stands for:

- ✓ a. Standard Performance Evaluation Code.
- b. System Processing Enhancing Code.
- ✓ c. System Performance Evaluation Corporation.
- d. Standard Processing Enhancement Corporation.

6) To access the services of operating system, the interface is provided by the

- ✓ a) System calls
- b) API
- c) Library
- d) Assembly instructions

7) A set of processes is deadlock if \_\_\_\_\_

- ✓ a) each process is blocked and will remain so forever
- b) each process is terminated
- c) all processes are trying to kill each other
- d) none of the above

8) Which one of the following is a synchronization tool?

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



- a) thread
- b) pipe
- ☒ c) semaphore
- d) socket

9) When does the `ArrayIndexOutOfBoundsException` occur?

- a) Compile-time
- ☒ b) Run-time
- c) Not an error
- d) Not an exception at all

10) The data structure required for Breadth First Traversal on a graph is?

- ☒ a) Stack
- b) Array
- c) Queue
- d) Tree

11) A queue follows \_\_\_\_\_

- ☒ a) FIFO (First In First Out) principle
- b) LIFO (Last In First Out) principle
- c) Ordered array
- d) Linear tree

12) A data structure in which elements can be inserted or deleted at/from both the ends but not in the middle is?

- a) Queue
- ☒ b) Circular queue
- c) Dequeue
- d) Priority queue

  
Dr. LEENA A V

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

1) Which of the following is NOT a valid deadlock prevention scheme?

- ☐ (a) Release all resources before requesting a new resource
- ☒ (b) Number the resources uniquely and never request a lower numbered resource than the last one requested.
- ☐ (c) Never request a resource after releasing any resource
- ☐ (d) Request and all required resources be allocated before execution.

2) Which of the following requires a device driver?

- ☐ a) Register
- ☐ b) Cache
- ☐ c) Main memory
- ☒ d) Disk

3) Which of the following scheduling algorithms is non-preemptive? (GATE CS 2002)

- ☒ a) Round Robin
- ☐ b) First-In First-Out
- ☐ c) Multilevel Queue Scheduling
- ☐ d) Multilevel Queue Scheduling with Feedback

4) PC Program Counter is also called

- ☒ a. instruction pointer
- ☐ b. memory pointer
- ☐ c. file pointer
- ☐ d. data counter

5) SPEC stands for:

- ☒ a. Standard Performance Evaluation Code.
- ☐ b. System Processing Enhancing Code.
- ☐ c. System Performance Evaluation Corporation.
- ☐ d. Standard Processing Enhancement Corporation.

6) To access the services of operating system, the interface is provided by the

- ☒ a) System calls
- ☐ b) API
- ☐ c) Library
- ☐ d) Assembly instructions

7) A set of processes is deadlock if

- ☒ a) each process is blocked and will remain so forever
- ☐ b) each process is terminated
- ☐ c) all processes are trying to kill each other
- ☐ d) none of the above

8) Which one of the following is a synchronization tool?

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



- a) thread
- b) pipe
- ☒ c) semaphore
- d) socket

9) When does the `ArrayIndexOutOfBoundsException` occur?

- a) Compile-time
- ☒ b) Run-time
- c) Not an error
- d) Not an exception at all

10) The data structure required for Breadth First Traversal on a graph is?

- ☒ a) Stack
- b) Array
- c) Queue
- d) Tree

11) A queue follows \_\_\_\_\_

- ☒ a) FIFO (First In First Out) principle
- b) LIFO (Last In First Out) principle
- c) Ordered array
- d) Linear tree

12) A data structure in which elements can be inserted or deleted at/from both the ends but not in the middle is?

- a) Queue
- ☒ b) Circular queue
- c) Dequeue
- d) Priority queue

Dr. LEENA A V

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

Ajay . V  
Adish . Kumar  
Vaishnav . m.m  
Sangeeth . AV

1. A six side die is rolled twice. What is the probability that the sum is 9.

- a)  $1/6$
- ☒ b)  $1/9$
- c)  $2/9$
- d)  $1/8$

2. Which of the following traversal gives nodes in non-decreasing order in a Binary Search Tree

- ☒ a) Inorder
- b) Preorder
- c) Postorder
- (d) None of the above

3. Regular expression for all strings starts with 'ab' and ends with 'aa' is

- a)  $ab(a+b)^*aa^*$
- ☒ b)  $ab(a+b)^*aa$
- c)  $ab^*aa$
- (d)  $a^*b^*aa$

4. The language accepted by Push down Automaton:

- a) Recursive Language
- ☒ b) Context free language
- c) Linearly Bounded language
- (d) All of the mentioned

5. Pigeonhole principle is the underlying principle of

- ☒ a) Pumping lemma
- (b) Turing machine
- c) Context free grammar
- (d) Push down automata

6. A process executes the code

```
fork();  
fork();  
fork();
```

The total number of child processes created is

- ☒ a) 3
- b) 4
- c) 7
- d) 8

7. Which disk scheduling algorithm is known as 'elevator' algorithm

- a) LOOK
- ☒ b) SCAN
- c) CSCAN
- (d) CLOOK

8. The basic principle underlying behind the concept of cache memory is

- ☒ a) Stored program concept
- ☒ b) Locality of reference
- c) Divide and conquer
- (d) None of the above

13/15

Leena

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, TANNUR



9. Dependency preservation is not guaranteed in

- a) 3NF
- ☒ b) BCNF
- c) 1NF
- (d) 2NF

10. Ensuring isolation property is the responsibility of the

- a) Recovery management component of the DBMS
- ☒ b) Concurrency control component of the DBMS
- c) Transaction management component of the DBMS
- (d) Buffer management component in DBMS

11. Computer general-purpose software is basically a

- ☒ A) system software
- B) data base software
- C) package software
- D) application software

12. A part of a computer system that consists of data or computer instructions is called

- ☒ 1. software
- 2. chip
- 3. hardware
- 4. DOS

13. Which of the following is not a process state?

- ☒ A Blocked
- B Terminated
- C Running
- ☒ D Execution

14. What do you call a program in execution?

- ☒ A Process
- B Task
- C Command
- D Instruction

15. Which of the following is not an example of system software?

- A Word Processors
- B Language Translator
- C Utility Software
- ☒ D Communication Software

*Leena*

Dr. LEENA A V

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

1. A six side die is rolled twice. What is the probability that the sum is 9.

- a)  $1/6$
- b)  $1/9$
- c)  $2/9$
- d)  $1/8$

2. Which of the following traversal gives nodes in non-decreasing order in a Binary Search Tree

- a) Inorder
- b) Preorder
- c) Postorder
- d) None of the above

3. Regular expression for all strings starts with 'ab' and ends with 'aa' is

- a)  $ab(a+b)^*aa^*$
- b)  $ab(a+b)^*aa$
- c)  $ab^*aa$
- d)  $a^*b^*aa$

4. The language accepted by Push down Automaton:

- a) Recursive Language
- b) Context free language
- c) Linearly Bounded language
- d) All of the mentioned

5. Pigeonhole principle is the underlying principle of

- a) Pumping lemma
- b) Turing machine
- c) Context free grammar
- d) Push down automata

6. A process executes the code

```
fork();  
fork();  
fork();
```

The total number of child processes created is

- a) 3
- b) 4
- c) 7
- d) 8

7. Which disk scheduling algorithm is known as 'elevator' algorithm

- a) LOOK
- b) SCAN
- c) CSCAN
- d) CLOOK

8. The basic principle underlying behind the concept of cache memory is

- a) Stored program concept
- b) Locality of reference
- c) Divide and conquer
- d) None of the above



9. Dependency preservation is not guaranteed in

- ☒ a) 3NF
- ☐ (b) BCNF
- ☐ c) 1NF
- ☐ (d) 2NF

10. Ensuring isolation property is the responsibility of the

- ☒ a) Recovery management component of the DBMS
- ☐ (b) Concurrency control component of the DBMS
- ☐ c) Transaction management component of the DBMS
- ☐ (d) Buffer management component in DBMS

11. Computer general-purpose software is basically a

- ☒ A) system software
- ☐ B) data base software
- ☐ C) package software
- ☐ D) application software

12. A part of a computer system that consists of data or computer instructions is called

- ☒ 1. software
- ☐ 2. chip
- ☐ 3. hardware
- ☐ 4. DOS

13. Which of the following is not a process state?

- ☒ A Blocked
- ☐ B Terminated
- ☐ C Running
- ☒ D Execution

14. What do you call a program in execution?

- ☒ A Process
- ☐ B Task
- ☐ C Command
- ☐ D Instruction

15. Which of the following is not an example of system software?

- ☒ A Word Processors
- ☐ B Language Translator
- ☐ C Utility Software
- ☒ D Communication Software

Dr. LEENA A V

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

1. A six side die is rolled twice. What is the probability that the sum is 9.

- a)  $1/6$
- ☒ b)  $1/9$
- c)  $2/9$
- d)  $1/8$

2. Which of the following traversal gives nodes in non-decreasing order in a Binary Search Tree

- a) Inorder
- ☒ b) Preorder
- c) Postorder
- (d) None of the above

3. Regular expression for all strings starts with 'ab' and ends with 'aa' is

- a)  $ab(a+b)^*aa^*$
- ☒ b)  $ab(a+b)^*aa$
- c)  $ab^*aa$
- (d)  $a^*b^*aa$

4. The language accepted by Push down Automaton:

- a) Recursive Language
- ☒ b) Context free language
- c) Linearly Bounded language
- (d) All of the mentioned

5. Pigeonhole principle is the underlying principle of

- ☒ a) Pumping lemma
- (b) Turing machine
- c) Context free grammar
- (d) Push down automata

6. A process executes the code

```
fork();  
fork();  
fork();
```

The total number of child processes created is

- ☒ a) 3
- b) 4
- c) 7
- (d) 8

7. Which disk scheduling algorithm is known as 'elevator' algorithm

- a) LOOK
- ☒ b) SCAN
- c) CSCAN
- (d) CLOOK

8. The basic principle underlying behind the concept of cache memory is

- a) Stored program concept
- ☒ b) Locality of reference
- c) Divide and conquer
- (d) None of the above

*Leena*



9. Dependency preservation is not guaranteed in

- a) 3NF
- ☒ (b) BCNF
- c) 1NF
- (d) 2NF

10. Ensuring isolation property is the responsibility of the

- a) Recovery management component of the DBMS
- (b) Concurrency control component of the DBMS
- ☒ c) Transaction management component of the DBMS
- (d) Buffer management component in DBMS

11. Computer general-purpose software is basically a

- ☒ A) system software
- B) data base software
- C) package software
- D) application software

12. A part of a computer system that consists of data or computer instructions is called

- 1. software
- 2. chip
- 3. hardware
- ☒ 4. DOS

13. Which of the following is not a process state?

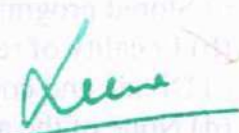
- A Blocked
- B Terminated
- C Running
- ☒ D Execution

14. What do you call a program in execution?

- ☒ A Process
- B Task
- C Command
- D Instruction

15. Which of the following is not an example of system software?

- A Word Processors
- B Language Translator
- C Utility Software
- ☒ D Communication Software

  
Dr. LEENA A V

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

1. A six side die is rolled twice. What is the probability that the sum is 9.

- ☒ a)  $1/6$   
☐ b)  $1/9$   
☐ c)  $2/9$   
☐ d)  $1/8$

2. Which of the following traversal gives nodes in non-decreasing order in a Binary Search Tree

- ☒ a) Inorder  
☐ b) Preorder  
☐ c) Postorder  
☐ (d) None of the above

3. Regular expression for all strings starts with 'ab' and ends with 'aa' is

- ☐ a)  $ab(a+b)^*aa^*$   
☒ (b)  $ab(a+b)^*aa$   
☐ c)  $ab^*aa$   
☐ (d)  $a^*b^*aa$

4. The language accepted by Push down Automaton:

- ☒ a) Recursive Language  
☐ (b) Context free language  
☐ c) Linearly Bounded language  
☐ (d) All of the mentioned

5. Pigeonhole principle is the underlying principle of

- ☒ a) Pumping lemma  
☐ (b) Turing machine  
☐ c) Context free grammar  
☐ (d) Push down automata

6. A process executes the code

```
fork ();
fork ();
fork ();
```

The total number of child processes created is

- ☒ a) 3  
☐ b) 4  
☐ c) 7  
☐ d) 8

7. Which disk scheduling algorithm is known as 'elevator' algorithm

- ☒ a) LOOK  
☐ (b) SCAN  
☐ c) CSCAN  
☐ (d) CLOOK

8. The basic principle underlying behind the concept of cache memory is

- ☒ a) Stored program concept  
☐ (b) Locality of reference  
☐ c) Divide and conquer  
☐ (d) None of the above

7/15

*Leena*

Dr. LEENA A V  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR



9. Dependency preservation is not guaranteed in

- a) 3NF
- ☒ (b) BCNF
- c) 1NF
- (d) 2NF

10. Ensuring isolation property is the responsibility of the

- ☒ a) Recovery management component of the DBMS
- (b) Concurrency control component of the DBMS
- c) Transaction management component of the DBMS
- (d) Buffer management component in DBMS

11. Computer general-purpose software is basically a

- ☒ A) system software
- B) data base software
- C) package software
- D) application software

12. A part of a computer system that consists of data or computer instructions is called

- ☒ 1. software
- 2. chip
- 3. hardware
- 4. DOS

13. Which of the following is not a process state?

- ☒ A Blocked
- B Terminated
- C Running
- D Execution

14. What do you call a program in execution?

- ☒ A Process
- B Task
- C Command
- D Instruction

15. Which of the following is not an example of system software?

- ☒ A Word Processors
- B Language Translator
- C Utility Software
- D Communication Software



Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

1. A six side die is rolled twice. What is the probability that the sum is 9.

- a)  $1/6$
- ✓b)  $1/9$
- c)  $2/9$
- d)  $1/8$

2. Which of the following traversal gives nodes in non-decreasing order in a Binary Search Tree

- ✓a) Inorder
- b) Preorder
- c) Postorder
- (d) None of the above

3. Regular expression for all strings starts with 'ab' and ends with 'aa' is

- a)  $ab(a+b)^*aa^*$
- ✓b)  $ab(a+b)^*aa$
- c)  $ab^*aa$
- (d)  $a^*b^*aa$

4. The language accepted by Push down Automaton:

- a) Recursive Language
- ✓b) Context free language
- c) Linearly Bounded language
- (d) All of the mentioned

5. Pigeonhole principle is the underlying principle of

- ✓a) Pumping lemma
- (b) Turing machine
- c) Context free grammar
- (d) Push down automata

6. A process executes the code

```
fork();  
fork();  
fork();
```

The total number of child processes created is

- ✓a) 3
- ✓b) 4
- e) 7
- d) 8

7. Which disk scheduling algorithm is known as 'elevator' algorithm

- a) LOOK
- ✓b) SCAN
- c) CSCAN
- (d) CLOOK

8. The basic principle underlying behind the concept of cache memory is

- a) Stored program concept
- (b) Locality of reference
- ✓c) Divide and conquer
- (d) None of the above

*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



9. Dependency preservation is not guaranteed in

- a) 3NF
- ✓ (b) BCNF
- ✗ c) 1NF
- (d) 2NF

10. Ensuring isolation property is the responsibility of the

- a) Recovery management component of the DBMS
- ✓ (b) Concurrency control component of the DBMS
- c) Transaction management component of the DBMS
- (d) Buffer management component in DBMS

11. Computer general-purpose software is basically a

- ✓ A) system software
- B) data base software
- C) package software
- D) application software

12. A part of a computer system that consists of data or computer instructions is called

- ✓ 1. software
- 2. chip
- 3. hardware
- 4. DOS

13. Which of the following is not a process state?

- A Blocked
- ✗ B Terminated
- C Running
- ✓ D Execution

14. What do you call a program in execution?

- ✓ A Process
- B Task
- C Command
- D Instruction

15. Which of the following is not an example of system software?

- A Word Processors
- ✗ B Language Translator
- C Utility Software
- ✓ D Communication Software

B- AVANTHIKA . P  
11 - ATHIRA . M  
23 - QUINEDYA . P  
32 - AISWARYA . B

1. A six side die is rolled twice. What is the probability that the sum is 9.

- a) 1/6
- b) 1/9
- c) 2/9
- d) 1/8

2. Which of the following traversal gives nodes in non-decreasing order in a Binary Search Tree

- a) Inorder
- b) Preorder
- c) Postorder
- (d) None of the above

3. Regular expression for all strings starts with 'ab' and ends with 'aa' is

- a)  $ab(a+b)^*aa^*$
- (b)  $ab(a+b)^*aa$
- c)  $ab^*aa$
- (d)  $a^*b^*aa$

4. The language accepted by Push down Automaton:

- a) Recursive Language
- (b) Context free language
- c) Linearly Bounded language
- (d) All of the mentioned

5. Pigeonhole principle is the underlying principle of

- (a) Pumping lemma
- (b) Turing machine
- c) Context free grammar
- (d) Push down automata

6. A process executes the code

```
fork ();
fork ();
fork ();
```

The total number of child processes created is

- (a) 3
- b) 4
- c) 7
- d) 8

7. Which disk scheduling algorithm is known as 'elevator' algorithm

- a) LOOK
- (b) SCAN
- c) CSCAN
- (d) CLOOK

8. The basic principle underlying behind the concept of cache memory is

- a) Stored program concept
- (b) Locality of reference
- (c) Divide and conquer
- (d) None of the above

*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



9. Dependency preservation is not guaranteed in

- a) 3NF
- ☒ (b) BCNF
- c) 1NF
- (d) 2NF

10. Ensuring isolation property is the responsibility of the

- ☒ a) Recovery management component of the DBMS
- (b) Concurrency control component of the DBMS
- (c) Transaction management component of the DBMS
- (d) Buffer management component in DBMS

11. Computer general-purpose software is basically a

- ☒ A) system software
- B) data base software
- C) package software
- D) application software

12. A part of a computer system that consists of data or computer instructions is called

- ☒ 1. software
- 2. chip
- 3. hardware
- 4. DOS

13. Which of the following is not a process state?

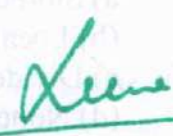
- ☒ A Blocked
- B Terminated
- C Running
- ☒ D Execution

14. What do you call a program in execution?

- ☒ A Process
- B Task
- C Command
- D Instruction

15. Which of the following is not an example of system software?

- ☒ A Word Processors
- B Language Translator
- C Utility Software
- ☒ D Communication Software

  
Dr. LEENA A V

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

1. A six side die is rolled twice. What is the probability that the sum is 9.

- a)  $1/6$
- ☒ b)  $1/9$
- c)  $2/9$
- d)  $1/8$

2. Which of the following traversal gives nodes in non-decreasing order in a Binary Search Tree

- a) Inorder
- ☒ b) Preorder
- c) Postorder
- (d) None of the above

3. Regular expression for all strings starts with 'ab' and ends with 'aa' is

- a)  $ab(a+b)^*aa^*$
- ☒ (b)  $ab(a+b)^*aa$
- c)  $ab^*aa$
- (d)  $a^*b^*aa$

4. The language accepted by Push down Automaton:

- a) Recursive Language
- (b) Context free language
- ☒ c) Linearly Bounded language
- (d) All of the mentioned

5. Pigeonhole principle is the underlying principle of

- ☒ a) Pumping lemma
- (b) Turing machine
- c) Context free grammar
- (d) Push down automata

6. A process executes the code

```
fork();  
fork();  
fork();
```

The total number of child processes created is

- ☒ a) 3
- b) 4
- c) 7
- d) 8

7. Which disk scheduling algorithm is known as 'elevator' algorithm

- a) LOOK
- ☒ (b) SCAN
- c) CSCAN
- (d) CLOOK

8. The basic principle underlying behind the concept of cache memory is

- a) Stored program concept
- ☒ (b) Locality of reference
- c) Divide and conquer
- (d) None of the above

11/15

*Leena*



9. Dependency preservation is not guaranteed in

- a) 3NF
- ☒ (b) BCNF
- c) 1NF
- (d) 2NF

10. Ensuring isolation property is the responsibility of the

- a) Recovery management component of the DBMS
- ☒ (b) Concurrency control component of the DBMS
- c) Transaction management component of the DBMS
- (d) Buffer management component in DBMS

11. Computer general-purpose software is basically a

- A) system software
- B) data base software
- C) package software
- ☒ D) application software

12. A part of a computer system that consists of data or computer instructions is called

- ☒ 1. software
- 2. chip
- 3. hardware
- 4. DOS

13. Which of the following is not a process state?

- A Blocked
- B Terminated
- C Running
- ☒ D Execution

14. What do you call a program in execution?

- ☒ A Process
- B Task
- C Command
- D Instruction

15. Which of the following is not an example of system software?

- A Word Processors
- B Language Translator
- ☒ C Utility Software
- D Communication Software

  
Dr. LEENA A V

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

Anketh.  
Athira VV  
Devika K.K  
Nived.

1. A six side die is rolled twice. What is the probability that the sum is 9.

- a)  $1/6$
- b)  $1/9$  ✓
- c)  $2/9$
- d)  $1/8$

2. Which of the following traversal gives nodes in non-decreasing order in a Binary Search Tree

- a) Inorder
- b) Preorder
- c) Postorder
- (d) None of the above ✓

3. Regular expression for all strings starts with 'ab' and ends with 'aa' is

- a)  $ab(a+b)^*aa^*$
- (b)  $ab(a+b)^*aa$  ✓
- c)  $ab^*aa$
- (d)  $a^*b^*aa$

4. The language accepted by Push down Automaton:

- a) Recursive Language
- (b) Context free language ✓
- c) Linearly Bounded language
- (d) All of the mentioned

5. Pigeonhole principle is the underlying principle of

- (a) Pumping lemma ✓
- (b) Turing machine
- (c) Context free grammar
- (d) Push down automata

6. A process executes the code

```
fork();  
fork();  
fork();
```

The total number of child processes created is


- a) 3 ✓
- b) 4
- c) 7
- d) 8

7. Which disk scheduling algorithm is known as 'elevator' algorithm

- a) LOOK
- (b) SCAN ✓
- c) CSCAN
- (d) CLOOK

8. The basic principle underlying behind the concept of cache memory is

- a) Stored program concept
- (b) Locality of reference
- c) Divide and conquer
- (d) None of the above ✓

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



9. Dependency preservation is not guaranteed in

- a) 3NF
- (b) BCNF ✓
- c) 1NF
- (d) 2NF

10. Ensuring isolation property is the responsibility of the

- a) Recovery management component of the DBMS
- (b) Concurrency control component of the DBMS ✓
- c) Transaction management component of the DBMS
- (d) Buffer management component in DBMS

11. Computer general-purpose software is basically a

- A) system software ✓
- B) data base software
- C) package software
- D) application software

12. A part of a computer system that consists of data or computer instructions is called

- 1. software ✓
- 2. chip
- 3. hardware
- 4. DOS

13. Which of the following is not a process state?

- ~~A Blocked~~
- ~~B Terminated~~
- ~~C Running~~
- D Execution ✓

14. What do you call a program in execution?

- A Process ✓
- B Task
- C Command
- D Instruction

15. Which of the following is not an example of system software?

- ~~A Word Processors~~
- ~~B Language Translator~~
- ~~C Utility Software~~
- D Communication Software ✓

## ANSWER KEY

1. b
2. a
3. b
4. b
5. a
6. c
7. b
8. b
9. b
10. b
11. a
12. a
13. ~~a~~ b
14. a
15. c



Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR






# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING  
STUDENTS LIST 2017-2021

| S.No. | Register No. | Student Name                  |
|-------|--------------|-------------------------------|
| 1     | SNC17CE001   | ABDUL MUSAVVIR KASIM          |
| 2     | SNC17CE004   | AISHWARYA PRAKASH             |
| 3     | SNC17CE005   | AISWARYA.P.P                  |
| 4     | SNC17CE006   | AJEEBA                        |
| 5     | SNC17CE008   | AKSHATHA KRISHNAN             |
| 6     | SNC17CE010   | AMEGH.P                       |
| 7     | SNC17CE011   | AMITHA SASIDHARAN             |
| 8     | SNC17CE013   | ANAGHA.P                      |
| 9     | SNC17CE014   | ANAGHA SREEVALSAN.U.M         |
| 10    | SNC17CE015   | ANAGHA.T                      |
| 11    | SNC17CE016   | ANJALI.K                      |
| 12    | SNC17CE018   | ANULAKSHMI.P.V                |
| 13    | SNC17CE019   | APARNA B PREM                 |
| 14    | SNC17CE020   | APSARA.E.K                    |
| 15    | SNC17CE024   | GOKUL AMBILOTH                |
| 16    | SNC17CE026   | HARITHA.C.V                   |
| 17    | SNC17CE027   | HRISHIKA.M                    |
| 18    | SNC17CE028   | IRINGAKARAN RHISHI SASIDHARAN |
| 19    | SNC17CE029   | KEERTHI RAJAN                 |
| 20    | SNC17CE031   | MAHDIYA.K.V                   |
| 21    | SNC17CE032   | MALAVIKA JAYAKUMAR            |
| 22    | SNC17CE033   | MANEESHA.K.V                  |
| 23    | SNC17CE035   | MUHAMMED WASEEM ALI           |
| 24    | SNC17CE036   | MUHSIN MUTTOON                |
| 25    | SNC17CE037   | RAHID P V                     |
| 26    | SNC17CE038   | SAFEERA.K                     |
| 27    | SNC17CE039   | SAYOOJYA SADANANDAN.P         |
| 28    | SNC17CE041   | SIDHIN.K                      |
| 29    | SNC17CE042   | SNEHA.P.V                     |
| 30    | SNC17CE043   | SREERAG.E.N                   |
| 31    | SNC17CE044   | SREERAG.M                     |
| 33    | SNC16CE010   | ARJUN M V                     |
| 34    | SNC16CE024   | NASHATH JALEEL                |
| 35    | SNC16CE026   | NEERAJA S                     |


Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY

|                                                                                  |                                                                                                                          |            |           |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | <b>CE</b> |
|                                                                                  | Test 1                                                                                                                   |            |           |
| Programme & Branch :                                                             | <b>BTECH- Civil Engineering</b>                                                                                          | Semester : | <b>06</b> |
| Course Code & Name :                                                             | <b>CE352- Comprehensive exam</b>                                                                                         | Date :     |           |

Maximum Marks : 10

Duration: 15 Minutes


- Which of the following materials is commonly used as a binder in concrete?  
 a) Sand b) Cement c) Gravel d) Steel
- What is the purpose of a footing in a building's foundation?  
 a) To provide insulation  
 b) To support the weight of the structure  
 c) To improve ventilation  
 d) To enhance aesthetic appeal
- Which of the following is NOT a type of roofing material commonly used in construction?  
 a) Asphalt shingle  
 b) Metal panels  
 c) Concrete blocks  
 d) Clay tiles
- Which of the following is NOT a type of roofing material commonly used in construction?  
 a) Asphalt shingles  
 b) Metal panels  
 c) Concrete blocks  
 d) Clay tiles
- What is the purpose of a vapor barrier in building construction?  
 a) To prevent heat loss  
 b) To control moisture diffusion  
 c) To enhance structural stability  
 d) To improve acoustic insulation
- Which construction method involves assembling pre-fabricated sections on-site?  
 a) Cast-in-place  
 b) Post-and-beam  
 c) Modular construction  
 d) Timber framing
- What is the function of a retaining wall in construction?  
 a) To support soil and prevent erosion

  
**DR. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



- b) To enhance architectural aesthetics
  - c) To provide natural ventilation
  - d) To facilitate rainwater harvesting
8. What is the purpose of a lintel in building construction?
- a) To provide structural support above openings ✓
  - b) To increase thermal insulation ✓
  - c) To improve indoor air quality
  - d) To enhance visual appeal
9. Which of the following is a common application of geotechnical engineering in construction?
- a) Interior decoration
  - b) Foundation design ✓
  - c) Window installation ✓
  - d) Roof repair
10. What is the primary function of flashing in building construction?
- a) To provide structural support
  - b) To improve energy efficiency
  - c) To prevent water intrusion ✓
  - d) To enhance soundproofing ✓

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

|                                                                                  |                                                                                                                                |            |           |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | <b>CE</b> |
|                                                                                  | <b>Test 1</b>                                                                                                                  |            |           |
| Programme & Branch :                                                             | <b>BTECH- Civil Engineering</b>                                                                                                | Semester : | <b>06</b> |
| Course Code & Name :                                                             | <b>CE352- Comprehensive exam</b>                                                                                               | Date :     |           |

Maximum Marks :10


Duration: 15 Minutes


- Which of the following materials is commonly used as a binder in concrete?  
 a) Sand b) Cement c) Gravel d) Steel ✓
- What is the purpose of a footing in a building's foundation? 7/10  
 a) To provide insulation  
 b) To support the weight of the structure ✗  
 c) To improve ventilation ✓  
 d) To enhance aesthetic appeal
- Which of the following is NOT a type of roofing material commonly used in construction?  
 a) Asphalt shingle  
 b) Metal panels ✓  
 c) Concrete blocks ✓  
 d) Clay tiles
- Which of the following is NOT a type of roofing material commonly used in construction?  
 a) Asphalt shingles ✗  
 b) Metal panels ✓  
 c) Concrete blocks  
 d) Clay tiles
- What is the purpose of a vapor barrier in building construction?  
 a) To prevent heat loss  
 b) To control moisture diffusion ✓  
 c) To enhance structural stability ✓  
 d) To improve acoustic insulation
- Which construction method involves assembling pre-fabricated sections on-site?  
 a) Cast-in-place  
 b) Post-and-beam  
 c) Modular construction ✓  
 d) Timber framing ✓
- What is the function of a retaining wall in construction? ✓  
 a) To support soil and prevent erosion

  
**DR. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR



- b) To enhance architectural aesthetics
  - c) To provide natural ventilation
  - d) To facilitate rainwater harvesting
8. What is the purpose of a lintel in building construction?
- a) To provide structural support above openings ✓
  - b) To increase thermal insulation
  - c) To improve indoor air quality
  - d) To enhance visual appeal
9. Which of the following is a common application of geotechnical engineering in construction?
- a) Interior decoration
  - b) Foundation design ✓
  - c) Window installation
  - d) Roof repair
10. What is the primary function of flashing in building construction?
- a) To provide structural support
  - b) To improve energy efficiency
  - c) To prevent water intrusion ✓
  - d) To enhance soundproofing

  
Dr. LEENA A V  
PRINCIPAL  
SRI NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR


|                                                                                  |                                                                                                                                |            |           |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | <b>CE</b> |
|                                                                                  | <b>Test 1</b>                                                                                                                  |            |           |
| Programme & Branch :                                                             | <b>BTECH- Civil Engineering</b>                                                                                                | Semester : | <b>06</b> |
| Course Code & Name :                                                             | <b>CE352- Comprehensive exam</b>                                                                                               | Date :     |           |

Maximum Marks : 10

Duration: 15 Minutes

- Which of the following materials is commonly used as a binder in concrete?  
a) Sand b) ~~Cement~~ ✓ c) Gravel d) Steel
- What is the purpose of a footing in a building's foundation?  
a) To provide insulation  
b) To support the weight of the structure ✓  
c) To improve ventilation  
d) To enhance aesthetic appeal
- Which of the following is NOT a type of roofing material commonly used in construction?  
a) Asphalt shingle  
b) Metal panels  
c) ~~Concrete blocks~~ ✓  
d) Clay tiles
- Which of the following is NOT a type of roofing material commonly used in construction?  
a) Asphalt shingles  
b) Metal panels  
c) ~~Concrete blocks~~ ✓  
d) Clay tiles
- What is the purpose of a vapor barrier in building construction?  
a) To prevent heat loss  
b) To control moisture diffusion  
c) To enhance structural stability ✓  
d) To improve acoustic insulation
- Which construction method involves assembling pre-fabricated sections on-site?  
a) Cast-in-place  
b) Post-and-beam  
c) ~~Modular construction~~ ✓  
d) Timber framing
- What is the function of a retaining wall in construction?  
a) To support soil and prevent erosion ✓


8/10

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



- b) To enhance architectural aesthetics
  - c) To provide natural ventilation
  - d) To facilitate rainwater harvesting
8. What is the purpose of a lintel in building construction?
- a) To provide structural support above openings ✓
  - b) To increase thermal insulation
  - c) To improve indoor air quality
  - d) To enhance visual appeal
9. Which of the following is a common application of geotechnical engineering in construction? ✓
- a) Interior decoration ✓
  - b) Foundation design
  - c) Window installation
  - d) Roof repair
10. What is the primary function of flashing in building construction?
- a) To provide structural support
  - b) To improve energy efficiency
  - c) To prevent water intrusion ✓
  - d) To enhance soundproofing

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

|                                                                                  |                                                                                                                                |            |           |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | <b>CE</b> |
|                                                                                  | <i>Test 1</i>                                                                                                                  |            |           |
| Programme & Branch :                                                             | <b>BTECH- Civil Engineering</b>                                                                                                | Semester : | <b>06</b> |
| Course Code & Name :                                                             | <b>CE352- Comprehensive exam</b>                                                                                               | Date :     |           |

Maximum Marks : 10

Duration: 15 Minutes


- Which of the following materials is commonly used as a binder in concrete?  
a) Sand b) Cement ✓ c) Gravel d) Steel
- What is the purpose of a footing in a building's foundation? *4/10*  
a) To provide insulation  
b) To support the weight of the structure  
c) To improve ventilation  
d) To enhance aesthetic appeal ✓
- Which of the following is NOT a type of roofing material commonly used in construction?  
a) Asphalt shingle  
b) Metal panels  
c) Concrete blocks ✓  
d) Clay tiles
- Which of the following is NOT a type of roofing material commonly used in construction?  
a) Asphalt shingles  
b) Metal panels ✓  
c) Concrete blocks  
d) Clay tiles
- What is the purpose of a vapor barrier in building construction?  
a) To prevent heat loss  
b) To control moisture diffusion ✓  
c) To enhance structural stability  
d) To improve acoustic insulation
- Which construction method involves assembling pre-fabricated sections on-site?  
a) Cast-in-place  
b) Post-and-beam  
c) Modular construction ✓  
d) Timber framing
- What is the function of a retaining wall in construction?  
a) To support soil and prevent erosion

*Leena*  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



- b) To enhance architectural aesthetics
  - c) To provide natural ventilation
  - d) To facilitate rainwater harvesting ✓
8. What is the purpose of a lintel in building construction?
- a) To provide structural support above openings ✓
  - b) To increase thermal insulation
  - c) To improve indoor air quality
  - d) To enhance visual appeal
9. Which of the following is a common application of geotechnical engineering in construction?
- a) Interior decoration ✓
  - b) Foundation design ✓
  - c) Window installation
  - d) Roof repair
10. What is the primary function of flashing in building construction?
- a) To provide structural support
  - b) To improve energy efficiency
  - c) To prevent water intrusion ✓
  - d) To enhance soundproofing ✓

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

|                                                                                  |                                                                                                                                |            |           |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | <b>CE</b> |
|                                                                                  | <i>Test 1</i>                                                                                                                  |            |           |
| Programme & Branch :                                                             | <b>BTECH- Civil Engineering</b>                                                                                                | Semester : | <b>06</b> |
| Course Code & Name :                                                             | <b>CE352- Comprehensive exam</b>                                                                                               | Date :     |           |

Maximum Marks :10

Duration: 15 Minutes

- Which of the following materials is commonly used as a binder in concrete?  
a) Sand b) Cement c) Gravel d) Steel ✓
- What is the purpose of a footing in a building's foundation?  
a) To provide insulation  
b) To support the weight of the structure ✓  
c) To improve ventilation  
d) To enhance aesthetic appeal
- Which of the following is NOT a type of roofing material commonly used in construction?  
a) Asphalt shingle  
b) Metal panels  
c) Concrete blocks ✓  
d) Clay tiles
- Which of the following is NOT a type of roofing material commonly used in construction?  
a) Asphalt shingles ✓  
b) Metal panels  
c) Concrete blocks ✓  
d) Clay tiles ✓
- What is the purpose of a vapor barrier in building construction?  
a) To prevent heat loss  
b) To control moisture diffusion  
c) To enhance structural stability  
d) To improve acoustic insulation ✓
- Which construction method involves assembling pre-fabricated sections on-site?  
a) Cast-in-place  
b) Post-and-beam  
c) Modular construction ✓  
d) Timber framing
- What is the function of a retaining wall in construction?  
a) To support soil and prevent erosion ✓


7/10

*Leena*

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR




- b) To enhance architectural aesthetics
  - c) To provide natural ventilation
  - d) To facilitate rainwater harvesting
8. What is the purpose of a lintel in building construction?
- a) To provide structural support above openings
  - b) To increase thermal insulation
  - c) To improve indoor air quality ✓
  - d) To enhance visual appeal
9. Which of the following is a common application of geotechnical engineering in construction?
- a) Interior decoration
  - b) Foundation design ✓
  - c) Window installation
  - d) Roof repair
10. What is the primary function of flashing in building construction?
- a) To provide structural support
  - b) To improve energy efficiency
  - c) To prevent water intrusion ✓
  - d) To enhance soundproofing

|                                                                                  |                                                                                                                              |                      |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING<br/>TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) | CE                   |
| <b>Test 3</b>                                                                    |                                                                                                                              |                      |
| Programme & Branch :                                                             | <b>BTECH- Civil Engineering</b>                                                                                              | Semester : <b>06</b> |
| Course Code & Name :                                                             | <b>CE352- Comprehensive exam</b>                                                                                             | Date :               |

Maximum Marks : 10

Duration: 15 Minutes

1. What is the primary ingredient in concrete?
  - a) Sand
  - b) Water
  - ✓ c) Cement
  - d) Gravel
2. What is the purpose of adding aggregates to concrete mixtures?
  - a) To increase workability
  - ✓ b) To improve compressive strength
  - c) To reduce shrinkage
  - d) To enhance bonding with steel reinforcement
3. What role does water play in the concrete mixture?
  - a) Provides adhesion
  - ✓ b) Activates the cement
  - ✓ c) Enhances insulation
  - d) Adds color
4. Which admixture is commonly used to accelerate the setting time of concrete?
  - a) Retarder
  - b) Superplasticizer
  - c) Accelerator
  - ✓ d) Air-entraining agent
5. What is the typical water-cement ratio for normal concrete?
  - a) 0.2
  - ✓ b) 0.5
  - c) 1.0
  - d) 2.0
6. Which type of cement is suitable for use in marine environments due to its resistance to sulfate attack?
  - a) Portland cement
  - b) Rapid hardening cement
  - c) Low-heat cement
  - ✓ d) Sulphate-resistant cement
7. What is the purpose of curing concrete after placement?
  - a) To increase strength
  - b) To prevent shrinkage cracks
  - ✓ c) To improve durability
  - d) All of the above
8. Which test is commonly performed to determine the compressive strength of concrete?
  - a) Sieve analysis

  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



- b) Slump test
- c) Cube test
- ✓d) Vee-Bee test


9. What is the term used to describe the process of removing excess water from freshly placed concrete?

- ✓a) Compaction
- b) Curing
- c) Consolidation
- d) Finishing

10 Which factor does NOT influence the setting time of concrete?

- a) Ambient temperature
- b) Cement type
- c) Humidity
- ✓d) Aggregate size

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

|                                                                                  |                                                                                                                                      |            |           |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING .</b><br><b>TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | <b>CE</b> |
|                                                                                  | <b>Test 3</b>                                                                                                                        |            |           |
|                                                                                  |                                                                                                                                      |            |           |
| Programme& Branch :                                                              | <b>BTECH– Civil Engineering</b>                                                                                                      | Semester : | <b>06</b> |
| Course Code & Name :                                                             | <b>CE352– Comprehensive exam</b>                                                                                                     | Date :     |           |

Maximum Marks : 10

Duration: 15 Minutes

1. What is the primary ingredient in concrete?

- a) Sand
- b) Water
- ☒ c) Cement
- d) Gravel

2. What is the purpose of adding aggregates to concrete mixtures?

- a) To increase workability
- ☒ b) To improve compressive strength
- c) To reduce shrinkage
- d) To enhance bonding with steel reinforcement

3. What role does water play in the concrete mixture?

- a) Provides adhesion
- ☒ b) Activates the cement
- c) Enhances insulation
- d) Adds color

4. Which admixture is commonly used to accelerate the setting time of concrete?

- a) Retarder
- b) Superplasticizer
- ☒ c) Accelerator
- d) Air-entraining agent

5. What is the typical water-cement ratio for normal concrete?

- ☒ a) 0.2
- b) 0.5
- c) 1.0
- d) 2.0

6. Which type of cement is suitable for use in marine environments due to its resistance to sulfate attack?

- a) Portland cement
- b) Rapid hardening cement
- c) Low-heat cement
- ☒ d) Sulphate-resistant cement

7. What is the purpose of curing concrete after placement?

- a) To increase strength
- b) To prevent shrinkage cracks
- c) To improve durability
- ☒ d) All of the above

8. Which test is commonly performed to determine the compressive strength of concrete?

- a) Sieve analysis

*Leena*

**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



b) Slump test

c) Cube test

☒ d) Vee-Bee test

9. What is the term used to describe the process of removing excess water from freshly placed concrete?

a) Compaction

b) Curing

☒ c) Consolidation

d) Finishing


10 Which factor does NOT influence the setting time of concrete?


a) Ambient temperature

☒ b) Cement type

c) Humidity

d) Aggregate size

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

|                                                                                  |                                                                                                                                |                                  |            |           |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |                                  |            | <b>CE</b> |
|                                                                                  | <b>Test 3</b>                                                                                                                  |                                  |            |           |
|                                                                                  |                                                                                                                                |                                  |            |           |
| Programme & Branch :                                                             |                                                                                                                                | <b>BTECH– Civil Engineering</b>  | Semester : | <b>06</b> |
| Course Code & Name :                                                             |                                                                                                                                | <b>CE352– Comprehensive exam</b> | Date :     |           |

Maximum Marks : 10

Duration: 15 Minutes

1. What is the primary ingredient in concrete?

- a) Sand
- ☒ b) Water
- c) Cement
- d) Gravel

2. What is the purpose of adding aggregates to concrete mixtures?

- a) To increase workability
- ☒ b) To improve compressive strength
- c) To reduce shrinkage
- d) To enhance bonding with steel reinforcement

3. What role does water play in the concrete mixture?

- a) Provides adhesion
- ☒ b) Activates the cement
- c) Enhances insulation
- d) Adds color

4. Which admixture is commonly used to accelerate the setting time of concrete?

- a) Retarder
- b) Superplasticizer
- ☒ c) Accelerator
- d) Air-entraining agent

5. What is the typical water-cement ratio for normal concrete?

- a) 0.2
- ☒ b) 0.5
- c) 1.0
- d) 2.0

6. Which type of cement is suitable for use in marine environments due to its resistance to sulfate attack?

- a) Portland cement
- b) Rapid hardening cement
- c) Low-heat cement
- ☒ d) Sulphate-resistant cement

7. What is the purpose of curing concrete after placement?

- a) To increase strength
- b) To prevent shrinkage cracks
- c) To improve durability
- ☒ d) All of the above

8. Which test is commonly performed to determine the compressive strength of concrete?

- a) Sieve analysis

*Leena*  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



☒ a) Slump test

c) Cube test

d) Vee-Bee test

9. What is the term used to describe the process of removing excess water from freshly placed concrete?

a) Compaction

☒ b) Curing

c) Consolidation

d) Finishing

10 Which factor does NOT influence the setting time of concrete?


a) Ambient temperature

☒ b) Cement type

c) Humidity

d) Aggregate size

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

|                                                                                  |                                                                                                                              |                      |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING<br/>TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) | <b>CE</b>            |
|                                                                                  | <b>Test 3</b>                                                                                                                |                      |
| <b>Programme &amp; Branch :</b>                                                  | <b>BTECH- Civil Engineering</b>                                                                                              | <b>Semester : 06</b> |
| <b>Course Code &amp; Name :</b>                                                  | <b>CE352- Comprehensive exam</b>                                                                                             | <b>Date :</b>        |

Maximum Marks : 10

Duration: 15 Minutes

1. What is the primary ingredient in concrete?
  - a) Sand
  - b) Water
  - ☒ c) Cement
  - d) Gravel
2. What is the purpose of adding aggregates to concrete mixtures?
  - a) To increase workability
  - ☒ b) To improve compressive strength
  - c) To reduce shrinkage
  - d) To enhance bonding with steel reinforcement
3. What role does water play in the concrete mixture?
  - a) Provides adhesion
  - b) Activates the cement
  - c) Enhances insulation
  - ☒ d) Adds color
4. Which admixture is commonly used to accelerate the setting time of concrete?
  - a) Retarder
  - b) Superplasticizer
  - ☒ c) Accelerator
  - d) Air-entraining agent
5. What is the typical water-cement ratio for normal concrete?
  - a) 0.2
  - b) 0.5
  - ☒ c) 1.0
  - d) 2.0
6. Which type of cement is suitable for use in marine environments due to its resistance to sulfate attack?
  - a) Portland cement
  - b) Rapid hardening cement
  - c) Low-heat cement
  - ☒ d) Sulphate-resistant cement
7. What is the purpose of curing concrete after placement?
  - a) To increase strength
  - b) To prevent shrinkage cracks
  - c) To improve durability
  - ☒ d) All of the above
8. Which test is commonly performed to determine the compressive strength of concrete?
  - a) Sieve analysis

  
**DR. LEENA A V**  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



- b) Slump test
- c) Cube test
- ☒ d) Vee-Bee test


9. What is the term used to describe the process of removing excess water from freshly placed concrete?

- a) Compaction
- b) Curing
- ☒ c) Consolidation
- d) Finishing

10 Which factor does NOT influence the setting time of concrete?

- ☒ a) Ambient temperature
- b) Cement type
- c) Humidity
- d) Aggregate size

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

|                                                                                  |                                                                                                                          |            |           |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | <b>CE</b> |
|                                                                                  | <b>Test 3</b>                                                                                                            |            |           |
|                                                                                  |                                                                                                                          |            |           |
| Programme& Branch :                                                              | <b>BTECH- Civil Engineering</b>                                                                                          | Semester : | <b>06</b> |
| Course Code & Name :                                                             | <b>CE352- Comprehensive exam</b>                                                                                         | Date :     |           |

Maximum Marks : 10

Duration: 15 Minutes

1. What is the primary ingredient in concrete?

- a) Sand
- b) Water
- ☒ c) Cement
- d) Gravel

2. What is the purpose of adding aggregates to concrete mixtures?

- a) To increase workability
- b) To improve compressive strength
- ☒ c) To reduce shrinkage
- d) To enhance bonding with steel reinforcement

3. What role does water play in the concrete mixture?

- a) Provides adhesion
- ☒ b) Activates the cement
- ☒ c) Enhances insulation
- d) Adds color

4. Which admixture is commonly used to accelerate the setting time of concrete?

- a) Retarder
- b) Superplasticizer
- ☒ c) Accelerator
- d) Air-entraining agent

5. What is the typical water-cement ratio for normal concrete?

- a) 0.2
- b) 0.5
- ☒ c) 1.0
- d) 2.0

6. Which type of cement is suitable for use in marine environments due to its resistance to sulfate attack?


- a) Portland cement
- ☒ b) Rapid hardening cement
- c) Low-heat cement
- d) Sulphate-resistant cement

7. What is the purpose of curing concrete after placement?

- a) To increase strength
- ☒ b) To prevent shrinkage cracks
- c) To improve durability
- d) All of the above

8. Which test is commonly performed to determine the compressive strength of concrete?

- a) Sieve analysis

  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR



b) Slump test ✓

c) Cube test

d) Vee-Bee test

9. What is the term used to describe the process of removing excess water from freshly placed concrete?

a) Compaction

b) Curing

c) Consolidation ✓

d) Finishing

10 Which factor does NOT influence the setting time of concrete?


a) Ambient temperature

b) Cement type

c) Humidity

d) Aggregate size ✓


Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

|                                                                                  |                                                                                                                              |                           |            |    |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------|----|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING<br/>TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |                           |            | CE |
|                                                                                  | Test 2                                                                                                                       |                           |            |    |
|                                                                                  |                                                                                                                              |                           |            |    |
| Programme& Branch :                                                              |                                                                                                                              | BTECH– Civil Engineering  | Semester : | 06 |
| Course Code & Name :                                                             |                                                                                                                              | CE352– Comprehensive exam | Date :     |    |

Maximum Marks :10


Duration: 15 Minutes


- Which of the following is NOT a constituent of concrete?
  - Aggregate
  - Cement
  - Sand
  - ~~Steel~~
- What is the primary function of cement in concrete?
  - Provides strength
  - ~~Provides color~~
  - Increases workability
  - Acts as a binder
- What is the term for the process by which concrete hardens over time?
  - Setting
  - Curing
  - ~~Hydration~~
  - Condensation
- Which type of admixture is commonly used to reduce the water content in concrete mixtures without affecting workability?
  - Retarder
  - ~~Superplasticizer~~
  - Accelerator
  - Air-entraining agent
- What is the primary role of aggregates in concrete mixtures?
  - Increase density
  - Provide strength
  - ~~Improve workability~~
  - Enhance adhesion
- Which type of cement is commonly used in situations where the risk of thermal cracking is high?
  - Portland cement
  - Blast furnace slag cement
  - ~~Low-heat cement~~
  - White cement
- Which test is used to assess the workability of fresh concrete?
  - Cube test
  - Slump test
  - ~~Compressive strength test~~

  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR



- d) Flexural strength test
8. What is the primary purpose of adding air-entraining agents to concrete mixtures?
- a) Increase strength
  - ☒ b) Improve workability
  - c) Reduce bleeding
  - d) Enhance freeze-thaw resistance
9. Which factor does NOT affect the strength development of concrete?
- a) Water-cement ratio
  - ☒ b) Curing conditions
  - c) Aggregate size
  - d) Ambient temperature
10. What is the term for the phenomenon in which freshly placed concrete loses water to the surrounding environment, resulting in a reduction in volume?
- a) Segregation
  - b) Bleeding
  - ☒ c) Shrinkage
  - d) Creep


  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

|                                                                                  |                                                                                                                     |            |    |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------|----|
|  | SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY,<br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | CE |
|                                                                                  | TEST - 2                                                                                                            |            |    |
|                                                                                  |                                                                                                                     |            |    |
| Programme& Branch :                                                              | BTECH- Civil Engineering                                                                                            | Semester : | 06 |
| Course Code & Name :                                                             | CE352- Comprehensive exam                                                                                           | Date :     |    |

Maximum Marks : 10

Duration: 15 Minutes


- Which of the following is NOT a constituent of concrete?
  - Aggregate
  - Cement
  - Sand
  - ~~Steel~~ ✓
- What is the primary function of cement in concrete?
  - Provides strength
  - Provides color
  - Increases workability ✓
  - ~~Acts as a binder~~
- What is the term for the process by which concrete hardens over time?
  - Setting
  - ~~Curing~~ ✓
  - Hydration
  - Condensation
- Which type of admixture is commonly used to reduce the water content in concrete mixtures without affecting workability?
  - Retarder
  - ~~Superplasticizer~~ ✓
  - Accelerator
  - Air-entraining agent
- What is the primary role of aggregates in concrete mixtures?
  - Increase density
  - ~~Provide strength~~ ✓
  - Improve workability
  - Enhance adhesion
- Which type of cement is commonly used in situations where the risk of thermal cracking is high?
  - Portland cement
  - Blast furnace slag cement ✓
  - ~~Low-heat cement~~
  - White cement
- Which test is used to assess the workability of fresh concrete?
  - Cube test
  - ~~Slump test~~ ✓
  - Compressive strength test

  
 Dr. LEENA A V  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



- d) Flexural strength test
8. What is the primary purpose of adding air-entraining agents to concrete mixtures?
- a) Increase strength
  - b) Improve workability
  - ☒ c) Reduce bleeding
  - d) Enhance freeze-thaw resistance
9. Which factor does NOT affect the strength development of concrete?
- a) Water-cement ratio
  - ☒ b) Curing conditions
  - c) Aggregate size
  - d) Ambient temperature
10. What is the term for the phenomenon in which freshly placed concrete loses water to the surrounding environment, resulting in a reduction in volume?
- a) Segregation
  - b) Bleeding
  - ☒ c) Shrinkage
  - d) Creep

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

|                                                                                  |                                                                                                                              |  |            |           |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING<br/>TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |  |            | <b>CE</b> |
|                                                                                  | <i>Test - 2</i>                                                                                                              |  |            |           |
|                                                                                  |                                                                                                                              |  |            |           |
| Programme& Branch :                                                              | <b>BTECH– Civil Engineering</b>                                                                                              |  | Semester : | <b>06</b> |
| Course Code & Name :                                                             | <b>CE352– Comprehensive exam</b>                                                                                             |  | Date :     |           |

Maximum Marks :10

Duration: 15 Minutes


- Which of the following is NOT a constituent of concrete?
  - Aggregate
  - Cement
  - Sand
  - ☒ Steel
- What is the primary function of cement in concrete?
  - Provides strength
  - Provides color
  - Increases workability
  - ☒ Acts as a binder
- What is the term for the process by which concrete hardens over time?
  - Setting
  - ☒ Curing
  - Hydration
  - Condensation
- Which type of admixture is commonly used to reduce the water content in concrete mixtures without affecting workability?
  - Retarder
  - ☒ Superplasticizer
  - Accelerator
  - Air-entraining agent
- What is the primary role of aggregates in concrete mixtures?
  - Increase density
  - ☒ Provide strength
  - Improve workability
  - Enhance adhesion
- Which type of cement is commonly used in situations where the risk of thermal cracking is high?
  - Portland cement
  - Blast furnace slag cement
  - ☒ Low-heat cement
  - White cement
- Which test is used to assess the workability of fresh concrete?
  - Cube test
  - ☒ Slump test
  - Compressive strength test

*Leena*  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR



- d) Flexural strength test
8. What is the primary purpose of adding air-entraining agents to concrete mixtures?
- a) ☒ Increase strength
  - b) ☐ Improve workability
  - c) ☐ Reduce bleeding
  - d) ☐ Enhance freeze-thaw resistance
9. Which factor does NOT affect the strength development of concrete?
- a) ☐ Water-cement ratio
  - b) ☒ Curing conditions
  - c) ☐ Aggregate size
  - d) ☐ Ambient temperature
10. What is the term for the phenomenon in which freshly placed concrete loses water to the surrounding environment, resulting in a reduction in volume?
- a) ☐ Segregation
  - b) ☐ Bleeding
  - c) ☒ Shrinkage
  - d) ☐ Creep

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

|                                                                                  |                                                                                                                                |            |           |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | <b>CE</b> |
|                                                                                  | <b>Test - 2</b>                                                                                                                |            |           |
|                                                                                  |                                                                                                                                |            |           |
| Programme& Branch :                                                              | <b>BTECH- Civil Engineering</b>                                                                                                | Semester : | <b>06</b> |
| Course Code & Name :                                                             | <b>CE352- Comprehensive exam</b>                                                                                               | Date :     |           |

Maximum Marks :10

Duration: 15 Minutes


- Which of the following is NOT a constituent of concrete?
  - Aggregate
  - Cement
  - Sand
  - Steel
- What is the primary function of cement in concrete?
  - Provides strength
  - Provides color
  - Increases workability
  - Acts as a binder
- What is the term for the process by which concrete hardens over time?
  - Setting
  - Curing
  - Hydration
  - Condensation
- Which type of admixture is commonly used to reduce the water content in concrete mixtures without affecting workability?
  - Retarder
  - Superplasticizer
  - Accelerator
  - Air-entraining agent
- What is the primary role of aggregates in concrete mixtures?
  - Increase density
  - Provide strength
  - Improve workability
  - Enhance adhesion
- Which type of cement is commonly used in situations where the risk of thermal cracking is high?
  - Portland cement
  - Blast furnace slag cement
  - Low-heat cement
  - White cement
- Which test is used to assess the workability of fresh concrete?
  - Cube test
  - Slump test
  - Compressive strength test

  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR



- d) Flexural strength test
8. What is the primary purpose of adding air-entraining agents to concrete mixtures?
- a) Increase strength
  - b) Improve workability
  - c) Reduce bleeding
  - ✓d) Enhance freeze-thaw resistance
9. Which factor does NOT affect the strength development of concrete?
- a) Water-cement ratio
  - b) Curing conditions
  - ✓c) Aggregate size
  - d) Ambient temperature
10. What is the term for the phenomenon in which freshly placed concrete loses water to the surrounding environment, resulting in a reduction in volume?
- ✓a) Segregation
  - b) Bleeding
  - c) Shrinkage
  - d) Creep

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

|                                                                                  |                                                                                                                                |  |            |    |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--|------------|----|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY,</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |  |            | CE |
|                                                                                  | Test 2                                                                                                                         |  |            |    |
|                                                                                  |                                                                                                                                |  |            |    |
| Programme& Branch :                                                              | BTECH– Civil Engineering                                                                                                       |  | Semester : | 06 |
| Course Code & Name :                                                             | CE352– Comprehensive exam                                                                                                      |  | Date :     |    |

Maximum Marks :10

Duration: 15 Minutes

- Which of the following is NOT a constituent of concrete?
  - Aggregate
  - Cement
  - Sand
  - ☒ Steel
- What is the primary function of cement in concrete?
  - Provides strength
  - ☒ Provides color
  - Increases workability
  - Acts as a binder
- What is the term for the process by which concrete hardens over time?
  - Setting
  - Curing
  - ☒ Hydration
  - Condensation
- Which type of admixture is commonly used to reduce the water content in concrete mixtures without affecting workability?
  - Retarder
  - ☒ Superplasticizer
  - Accelerator
  - Air-entraining agent
- What is the primary role of aggregates in concrete mixtures?
  - Increase density
  - Provide strength
  - ☒ Improve workability
  - Enhance adhesion
- Which type of cement is commonly used in situations where the risk of thermal cracking is high?
  - Portland cement
  - Blast furnace slag cement
  - Low-heat cement
  - ☒ White cement
- Which test is used to assess the workability of fresh concrete?
  - Cube test
  - ☒ Slump test
  - Compressive strength test

Dr. LEENA A V  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



- d) Flexural strength test
8. What is the primary purpose of adding air-entraining agents to concrete mixtures?
- a) Increase strength
  - ☒ b) Improve workability
  - c) Reduce bleeding
  - d) Enhance freeze-thaw resistance
9. Which factor does NOT affect the strength development of concrete?
- a) Water-cement ratio
  - ☒ b) Curing conditions
  - ☒ c) Aggregate size
  - d) Ambient temperature
10. What is the term for the phenomenon in which freshly placed concrete loses water to the surrounding environment, resulting in a reduction in volume?
- a) Segregation
  - b) Bleeding
  - ☒ c) Shrinkage
  - ☒ d) Creep

  
DR. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



# SREE NARAYANA GURU COLLEGE OF ENGINEERING TECHNOLOGY



## VISION

A knowledge society promoting human excellence and enlightenment through effective education.

## MISSION

To provide technical education of the highest quality and standard of excellence for socio-economic progress embedded in clearly articulated values and supported by commitments.

# CLASS RECORD

Name : **Ms. SRINDHUNA M**  
Designation : **ASSISTANT PROFESSOR**  
Department : **Electronics and Communication Engineering**  
Academic Year : **2019-2020**  
Semester : **EVEN**  
Subject name : **Comprehensive Exam (EC352)**  
Class : **S6-BTECH-EC**  
Batch : **2017-2021**

*Dr. Leena A V*  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

**SREE NARAYANA GURU COLLEGE OF ENGINEERING AND TECHNOLOGY**  
**P.O.CHALAKKODE,PAYYANUR,KANNUR-670307.**

APPROVED BY AICTE  
AFFILIATED TO A P J ABDUL KALAM TECHNOLOGICAL UNIVERSITY  
PROMOTED BY : SREE BHAKTHI SAMVARDHINI YOGAM, TALAP, KANNUR.



### Class Attendance

[illegible]



- A. stray loss only, B. Stray loss and moment of inertia,  
C. Temperature rise. D. effect of flux distortion on iron loss
19. The resistance of the transformer referred to low voltage side of a 240/120 V 1-phase transformer with  $R_1=0.1$  ohm and  $R_2=0.03$  ohm is  
A. 0.055 ohm B. 0.43 ohm C. 0.22 ohm D. 0.1075 ohm
20. For a 1-phase transformer the maximum regulation occurs at 0.5 pf lagging, then the zero regulation occurs at a power factor equals to.....  
A. upf B. 0.5 lead C. 0.707 lead D. 0.866 lead
21. Which among the following statement regarding a star-delta 3 phase transformer is not true  
A. no problem with third harmonic components  
B. unbalanced loads can be handled  
C. can operate this connection in parallel with delta-delta  
D. there is a 30 Degree phase shift between Secondary to Primary phase voltages
22. A 4 bit pattern that will produce the same pattern when 2's complement is taken.  
A. 0001 B. 0010 C. 0100 D. 1000
23. The logical expression  $F=A+\bar{A}B$  can be simplified to  
A.  $F=AB$ , B.  $F=A+B$  C.  $F=1$  D.  $F=\bar{A}+B$
24. In a one-digit BCD adder, the number of bits in the output is  
A. 3 B. 4 C. 5 D. 6
25. If D-FF is modified with switch-tail ring counter connection, the circuit becomes  
A. SR FF, B. D FF C. JK FF D. T FF
26. The number of Flip Flops required to build Mod-13 counter is  
A. 2 B. 3 C. 4 D. 5
27. The capacity of a Memory chip is 8192 Bytes. The number of address lines required are  
A. 11 B. 12 C. 13 D. 14
28. The resistor corresponding to the LSB of a 4-bit Weighted resistor DAC is 64 K ohms. Then the value of resistor assigned to MSB will be  
A. 512 k ohm B. 64 k ohm C. 16 k ohm D. 8 k ohm
29. The usual spans with R.C.C. poles are  
A. 30-50 m, B. 50-80 m, C. 80-100 m, D. 300-500 m
30. Which one is not an advantage of bundle conductors in transmission lines:  
A. Increased surface area  
B. Inductance reduces and capacitance increases

- C. Improvement in SIL and reduction in corona loss  
D. Increase in surrounding voltage gradient
31. The surge impedance of a 100 km long underground cable is 100 ohms. For a 50 km long cable it will be  
A. 25 ohms B. 50 ohms C. 100 ohms D. 200 ohms
32. Bulk power transfer is done through HVDC line because of  
A. reduced line power losses B. reduced harmonics  
C. low cost of devices, D. simple and cheaper protection
33. Buchholz relay is commonly used for protection of  
A. Feeders B. Transformers C. Generators D. bus bars
34. Mho relay is normally used for the protection of  
A. Long transmission line B. short line C. Generators D. Transformer
35. In a simple series mass-damper-spring (M-B-K) system the natural frequency is given by  
A.  $\sqrt{(K/M)}$  B.  $K/M$  C.  $\sqrt{(M/K)}$  D.  $\sqrt{(B/M)}$
36. For a second order system with damping factor  $\xi=0$ , the maximum overshoot ( $M_p$ ) and resonance peak ( $M_r$ ) will be  
A.  $M_p = 100\%$ ,  $M_r = 100\%$  B.  $M_p = 100\%$ ,  $M_r = \text{infinity}$ ,  
C.  $M_p = 0$ ,  $M_r = 100\%$  D.  $M_p = 0\%$ ,  $M_r = 100\%$
37. The steady state error for unit step input applied to ufb system with  $G(s)=5/[s^2(s+2)]$  is  
A. infinity B. 40 C. 0.825 D. 0
38. The breakaway point in the root locus of the given transfer function  $G(s)H(s)=k(s+3)/s(s+2)$  will be at  
A. Complex conjugates B. two -ve real axis points  
C. Only one break away point D. one in RHP and one in LHP
39. For a stable system GM in dB and PM in degrees should be  
A. both +ve B. GM +ve, PM -ve C. GM -ve, PM +ve D. both -ve
40. Phase angle of the system with  $G(s)=e^{-s}/(s+1)$ , at  $\omega=1$  rad/s will be...  
A.  $+12^\circ$  B.  $-45^\circ$  C.  $-102^\circ$  D.  $-180^\circ$
41. The total derivative of the function 'xy' is  
A.  $xdy+ ydx$  B.  $xdx+ ydy$  C.  $dx+ dy$  D.  $dx dy$



Reg. No.....

Name:.....

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
SIXTH SEMESTER B.TECH DEGREE EXAMINATION, APRIL 2018

Course Code: EE 352

Course Name: COMPREHENSIVE EXAMINATION (EE)

Maximum marks: 50

Duration : 1 hours

**Instructions:**

1. Each question carries one mark. No negative marks for wrong answers
  2. Total number of questions: 50
  3. All questions are to be answered. Each question will be followed by 4 possible answers of which only ONE is correct. Mark the most appropriate answer
  4. If more than one option is chosen, it will not be considered for valuation.
  5. Calculators are not permitted.
1. Superposition theorem cannot be applied in linear circuits to find out the following variable  
A. voltage      B. current      C. power      D. none of these
  2. The source impedance of a non-ideal voltage source is  $Z_s = 6 + j8 \Omega$  and is connected to a resistive load. What should be the load for maximum power transfer.  
A.  $6 \Omega$       B.  $8 \Omega$       C.  $10 \Omega$       D.  $14 \Omega$
  3. If there are 4 branches and 3 nodes then number of links in a co-tree are?  
A. 2      B. 4      C. 6      D. 8
  4. A three element RLC-series circuit is changed to a parallel combination in which all elements are in parallel. As compared to series mode, the natural frequency ( $\omega_n$ ) and damping factor ( $\xi$ ) for the parallel model will have:  
A. same  $\omega_n$  and same  $\xi$       B. different  $\omega_n$  and same  $\xi$   
C. same  $\omega_n$  and different  $\xi$       D. different  $\omega_n$  and different  $\xi$ .
  5. The Laplace transform of a circuit current is  $I(s) = (5s^2 + 2s + 6) / [s(s^2 + 3s + 3)]$ . The initial value  $i(0)$  is  
A. 2 A      B. 5 A      C. 6 A      D. infinity
  6. A two-port network is represented by the following equations,  
 $I_1 = V_1 - 0.5V_2$ ,  $I_2 = -V_1 + V_2$ , Z parameters are given by  $Z =$   
A.  $Z = \begin{bmatrix} 1 & -0.5 \\ -1 & 1 \end{bmatrix}$ , B.  $Z = \begin{bmatrix} 1 & 2 \\ 2 & 1 \end{bmatrix}$ , C.  $Z = \begin{bmatrix} 1 & -2 \\ -1 & 1 \end{bmatrix}$       D.  $Z = \begin{bmatrix} 2 & 1 \\ 2 & 2 \end{bmatrix}$
  7. The degree of the numerator polynomial and denominator polynomial in a driving point function may differ by?

- A. 0      B. 1      C. 0 or 1      D. 2
8. Which statement is true for a voltage divider self-biasing circuit?  
A. improvement in Stability factors,      B. used for both BJT & JFET  
C. can be modified for bias compensation of BJT,      D. All the above
  9. The drain current  $I_D$  for an n-channel JFET at a gate to source voltage  $V_{GS} = -1V$  is 16mA. The pinch off voltage  $V_p = 5V$ . Determine  $I_D$  at  $V_{GS} = -2V$ .  
A. 4 mA      B. 9 mA      C. 6.4mA      D. 32 mA
  10. Which statement is FALSE for a Class B- push pull amplifier  
A. Maximum efficiency is 78.5%,      B. No even harmonic distortion,  
C. Eliminates cross over distortion,      D. None of the above
  11. The feedback exists in a common emitter amplifier system with  $R_E$  unbypassed (Emitter bypass capacitor is removed) is  
A. Current series FB      B. Voltage series FB  
C. Current shunt FB      D. Voltage shunt FB
  12. The input offset current of an OPAMP is in the range of  
A. nA      B.  $\mu A$       C. (0.1-1)mA      D. 100mA
  13. Which statement given below is true for a Schmitt trigger  
i) converts sine wave to rectangular wave,      ii) used as memory      iii) used as amplifier  
iv) acts as regenerative comparator  
A. i & ii only,      B. All,      C. i, ii & iv      D. ii & iii only
  14. Which statement is NOT applicable to slew rate limitation in OPAMPS  
A. restriction on signal frequency      B. restriction on signal magnitude  
C. affects the nonlinear distortion      D. affects offset voltages and bias currents
  15. A 4-pole dc machine is having double layer lap winding arranged in 80 slots. Winding resistance is  $0.2 \Omega$  per conductor. Determine the armature resistance ( $R_a$ ).  
A. 8 ohms      B. 4 ohms      C. 2 ohms      D. 1 ohm
  16. The equalizer connections are used for  
A. Lap winding      B. Wave winding  
C. Wave winding with dummy coils      D. Not for dc windings
  17. DC Series generator is used for  
A. charging batteries,      B. booster in distribution systems,  
C. Arc welding      D. Lamp loads
  18. Retardation test on dc shunt motor is conducted to determine

# FIRST MOCK TEST

Course Code: EC352

Course Name: COMPREHENSIVE EXAM (EC)

Max. Marks: 50

Duration: 1 hour

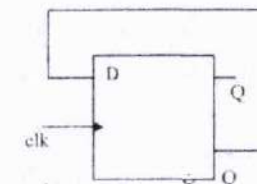
## Instructions:

Each question carries one mark. No negative marks for wrong answers.  
All questions are to be answered.  
If more than one option is chosen, it will not be considered for valuation.  
Calculators are not permitted

- Maxwell's divergence equation for the magnetic field is given by
  - $\nabla \times B = 0$
  - $\nabla \cdot B = 0$
  - $\nabla \times B = \rho$
  - $\nabla \cdot B = \rho$
- Which of the following statements is correct with regard to the directions of  $E$  and  $H$  in TEM mode of propagation
  - Both  $E$  and  $H$  are entirely transverse to the direction of propagation.
  - $E$  is entirely transverse to  $H$  and  $H$  has component in the direction of propagation.
  - $E$  has a component in the direction of propagation.
  - Both  $E$  and  $H$  has a component in the direction of propagation.
- If VSWR is 3, then magnitude of reflection coefficient will be
  - 1/4
  - 1/3
  - 1/2
  - 1
- An air filter rectangular waveguide has dimensions  $6 \times 4$  cm, the cutoff frequency for  $TE_{10}$  is
  - 2.5 GHz
  - 25 GHz
  - 25 MHz
  - 5 GHz
- Phase velocity  $V_p$  and group velocity  $V_g$  in a waveguide ( $C$  is velocity of light) are related as
  - $V_g V_p = C^2$
  - $V_g V_p = C$
  - $V_g / V_p = C$
  - $V_g V_p = \sqrt{C}$
- The dominant mode in TE wave
  - $TE_{11}$
  - $TE_{01}$
  - $TE_{10}$
  - $TE_{12}$

15/2/19

- The depth of penetration of a wave in a lossy dielectric increase with increasing
  - Conductivity
  - Wavelength
  - Permeability
  - Permittivity
- For a dominant mode in a rectangular waveguide with breadth 10 cm, guide wavelength for a signal of 2.5 GHz will be
  - 12 cm
  - 15 cm
  - 18 cm
  - 20 cm
- The logic expression  $Y = A + A B$  is equivalent to
  - $Y = AB$
  - $AB$
  - $A B$
  - $A+B$
- Minterms corresponding to decimal number 15 is
  - ABCD
  - ABCD
  - $A+B+C+D$
  - $A+B+C+D$
- A carry look ahead adder is frequently used for addition because it is
  - Faster
  - more accurate
  - use fewer gates
  - costs less
- The output  $Q_n$  of a JK flipflop is zero. If it changes to 1 when a clock pulse is applied. Then the input  $J_n$  and  $K_n$  are respectively
  - 0 and X
  - 1 and X
  - X and 0
  - X and 1
- How many flipflops are required to build a binary counter circuit from 0 to 1023?
  - 5
  - 6
  - 10
  - 12
- For a circuit shown in figure below what is the frequency of the output Q



- Twice the input clock frequency.
  - Half the input clock frequency.
  - Same as the input clock frequency.
  - None of these.
- In a sequential circuit the output at any instant of time depends on
    - Only on the inputs present at that instant of time
    - On the past output as well as present inputs
    - Only on past inputs
    - Only on present outputs



16. A pulse train can be delayed by a finite number of periods using clocks in  
 a) PISO      b) SIPO      c) PIPO      d) SISO
17. A 1000 KHz carrier is simultaneously modulated with 300 Hz and 200 Hz audio sine waves. The frequency which will not be present in output is  
 a) 998 KHz      b) 999.7 KHz      c) 1000.3 KHz      d) 700 KHz
18. If modulation index of AM wave is changed from 0 to 1, the transmitted power  
 a) Increases by 50%      b) Increases by 75%  
 c) Increases by 100%      d) Remains unaffected
19. In a superheterodyne receiver IF is 455KHz, if it is tuned to 1200KHz, the image frequency will be  
 a) 1655 KHz      b) 745 KHz      c) 2110 KHz      d) 910 KHz
20. In the generation of a modulated signal, a varactor diode can be used for  
 a) FM generation only.      b) AM generation only.  
 c) PM generation only.      d) Both (b) and (c).
21. Which of the following statements is NOT correct regarding the signal  $x(t) = 5 \sin(2\pi \times 10^3 t) \sin(2\pi \times 10^6 t)$ ?  
 a) Upper sideband frequency is 1001000.  
 b) Lower sideband frequency is 999000.  
 c)  $x(t)$  is a DSB-SC signal.  
 d)  $x(t)$  is an AM signal.
22. If an angle modulated signal is given by  $f_a(t) = \cos(2 \times 10^9 \pi t + 75 \sin 2 \times 10^3 \pi t)$  then peak frequency deviation of the carrier is  
 a) 1 KHz      b) 7.5 KHz      c) 75 KHz      d) 100 MHz
23. The fundamental period of the signal  $e^{j\omega_0 t}$  is  
 a)  $1/\omega_0$       b)  $2\pi\omega_0$       c)  $2\pi/\omega_0$       d)  $\omega_0/2$
24. Energy of a signal  $A\delta[n] + A\delta[n-1]$  is  
 a)  $2A^2$       b)  $A^2/2$       c)  $A^2/4$       d)  $A^2$
25.  $\int_{-\infty}^{\infty} \sin(t) \delta(t) dt$  is equal to  
 a)  $\infty$       b)  $\pi/2$       c) 0      d)  $1/2$
26. The Nyquist sampling rate of the continuous time signal  $\text{Sinc}(500t)$  is  
 a) 1000 Hz.      b) 100 Hz.      c) 500 Hz      d) 250 Hz
27. If  $x(t)$  has the Fourier transform  $X(f)$ , the Fourier transform of  $x(-t)$  is  
 a)  $X(f)$       b)  $|X(f)|$       c)  $-X(f)$       d)  $X(-f)$

28. If  $x(t)$  is a real signal, then  
 a) Magnitude response and phase response are even  
 b) Magnitude response and phase response are odd.  
 c) Magnitude response is even and phase response is odd.  
 d) Magnitude response is odd and phase response is even.
29. Consider the network graph shown in the figure below. Which one of the following is 'NOT' a tree of the group?



a)

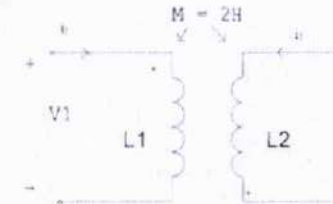
b)

c)

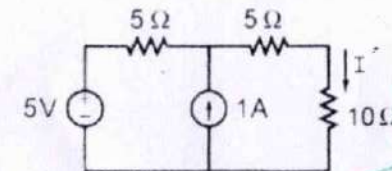
d)



30. For the circuit shown, determine  $V_1$  if  $i_2 = 5 \sin(45t)$  and  $i_1 = 0$



- a)  $450 \cos(45t)$  v      b)  $450 \sin(45t)$  v      c)  $-450 \cos(45t)$  v      d)  $45 \sin(45t)$  v
31. Find the current  $I$  (in amperes) in the following circuit



- a) 0.75A      b) 0.5A      c) 1A      d) 1.5A

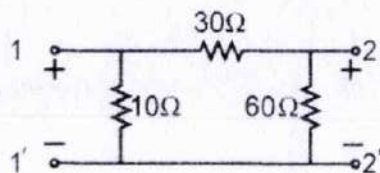
32. The average power delivered to an impedance  $(4 - j3)\Omega$  by a current  $5 \cos(100\pi t + 100)$  A is

- a) 44.2 W      b) 50 W      c) 62.5 W      d) 125 W

33. A two port device is defined by the following pair of equations  $i_1 = 2v_1 + v_2$  and  $i_2 = 2v_1 + v_2$ , its admittance parameters are  $(Y_{11}, Y_{12}, Y_{21}, Y_{22})$  are given by

- a) [2, 1, 2, 1]      b) [1, 2, 2, 1]      c) [2, 1, 1, 1]      d) [1, 2, 1, 2]

34. For the two port network shown in the figure, the impedance (Z) matrix (in  $\Omega$ ) is



- a)  $\begin{bmatrix} 6 & 24 \\ 42 & 9 \end{bmatrix}$       b)  $\begin{bmatrix} 9 & 8 \\ 8 & 24 \end{bmatrix}$       c)  $\begin{bmatrix} 9 & 6 \\ 6 & 24 \end{bmatrix}$       d)  $\begin{bmatrix} 42 & 6 \\ 6 & 60 \end{bmatrix}$

35. An integrator circuit is

- a) Low pass filter      b) high pass filter      c) band pass filter      d) all pass filter

36. If a transistor is in saturation

- a)  $I_C = \beta I_B$       b)  $I_C > \beta I_B$       c)  $I_C < \beta I_B$       d)  $I_C = I_B$

37. Zener breakdown diodes have breakdown voltage which has

- a) Has positive temperature coefficient.      b) Has negative temperature coefficient.  
c) is independent of temperature      d) None of the above.

38. The type of negative feedback in a RC coupled amplifier without bypass capacitor is

- a) Voltage series feedback.      b) Current series feedback.  
c) Voltage shunt feedback.      d) Current shunt feedback.

39. The phase shift produced by feedback network in a Weinbridge oscillator is

- a)  $180^\circ$       b)  $0^\circ$       c)  $90^\circ$       d)  $270^\circ$

40. The dissipation at the collector is zero in the quiescent state and increases with excitation in the case of a

- a) Class A series fed amplifier      b) Class A transistor coupled amplifier  
c) Class AB amplifier      d) Class B amplifier

41. The total derivative of the function 'xy' is

- a)  $x dy + y dx$       b)  $x dx + y dy$       c)  $dx + dy$       d)  $dx dy$

42. For the differential equation  $\frac{dy}{dt} + 5y = 0$  with  $y(0) = 1$  the general solution is

- a)  $e^{5t}$       b)  $e^{-5t}$       c)  $5e^{-5t}$       d) none of these

43. The radial component of velocity for a particle moving in a circular path is

- a) zero      b) radius itself      c) variable      d) none of the above

44. In which Quadrant the HP comes above XY line and VP comes below XY line for orthographic projection?

- a) First Quadrant      b) Second Quadrant      c) Third Quadrant      d) Fourth Quadrant

45. The force applied on a body of mass 100 kg to produce an acceleration of  $5 \text{ m/s}^2$  is

- a) 20 N      b) 100 N      c) 500 N      d) None of these

46. Which was the major green building rating system developed by TERI

- a) GRIHA      b) LEED      c) BREEAM      d) CASBEE

47. Which stage is directly responsible for the technical functioning of the product

- a) engineering function      b) research function      c) manufacturing function  
d) commercial function

48. The first full-scale and usually fully functional forms of a new design is called

- a) Model      b) prototype      c) rapid prototype      d) design attribute

49. The Air Pollution and Control Act, popularly known as the 'Air Act' was passed for the first time in US in

- a) 1955      b) 1999      c) 2004      d) 2015

50. Probability of a product successfully operation for a specific period of time is called

- a) reliability      b) durability      c) conformance      d) serviceability

\*\*\*\*

*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



## FIRST MOCK TEST ANSWER KEY

| Course Code: EC352                          |        |                  |   |
|---------------------------------------------|--------|------------------|---|
| Course Name: Comprehensive Examination (EC) |        |                  |   |
| Max. Marks: 50                              |        | Duration: 1 Hour |   |
| ANSWER KEY                                  |        |                  |   |
| 1                                           | B      | 26               | C |
| 2                                           | A      | 27               | D |
| 3                                           | C      | 28               | C |
| 4                                           | A      | 29               | B |
| 5                                           | A      | 30               | C |
| 6                                           | C      | 31               | B |
| 7                                           | B      | 32               | B |
| 8                                           | B      | 33               | A |
| 9                                           | D      | 34               | C |
| 10                                          | A      | 35               | A |
| 11                                          | A      | 36               | B |
| 12                                          | B      | 37               | B |
| 13                                          | C      | 38               | B |
| 14                                          | B      | 39               | B |
| 15                                          | B      | 40               | D |
| 16                                          | D      | 41               | A |
| 17                                          | A or D | 42               | B |
| 18                                          | A      | 43               | A |
| 19                                          | C      | 44               | C |
| 20                                          | A      | 45               | C |
| 21                                          | D      | 46               | A |
| 22                                          | C      | 47               | B |
| 23                                          | C      | 48               | A |
| 24                                          | A      | 49               | A |
| 25                                          | C      | 50               | A |

15/3/19

*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE MATHA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

## SECOND COMPREHENSIVE WRITTEN EXAMINATION

1. Determine the order and degree of the differential equation.

$$2x \frac{d^4 y}{dy^4} + 5x^2 \left( \frac{dy}{dx} \right)^3 - xy = 0$$

- a) Fourth order, first degree
- b) Third order, first degree
- c) First order, Fourth degree
- d) First order, third degree

2. Maclaurin's expansion of  $e^x$  is

a.  $x - \frac{x^2}{2} + \frac{x^3}{3} + \dots$

c.  $1 - x + x^2 + \dots$

b.  $1 - \frac{x^2}{2!} + \frac{x^4}{4!} + \dots$

d.  $1 + \frac{x}{1!} + \frac{x^2}{2!} + \dots$

3. Identify which statements are true to Copyright law

- a) Copyright law, unlike other Intellectual Property Rights (IPR), is global in nature.
- b) Copy right gives protection for Expression of an Idea and not for the idea itself.
- c) Statement a is right and b is wrong
- d) Both statements are right

4. Touch pad of a Laptop is an example for the following concept

- a. Complex is simple
- b. Design for Assembly
- c. Design for Reliability
- d. Part reduction

5.

D'Alembert's principle is used for

- (a) reducing the problem of kinetics to equivalent statics problem
- (b) determining stresses in the truss
- (c) stability of floating bodies
- (d) designing safe structures
- (e) solving kinematic problems.

  
 29/3/17  
**DR. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANAGURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PATTANUR, KANNUR



2

6. The center of gravity of a uniform lamina lies at
- (a) the center of heavy portion
  - (b) the bottom surface
  - (c) the mid point of its axis
  - (d) all of the above
  - (e) none of the above.

7. The development of cylinder is a
- (a) Rectangle
  - (b) Circle
  - (c) Ellipse
  - (d) None of the above

8. Which state grid is use to design perspective
- (a) Parametric
  - (b) Isometric
  - (c) Pro-optic
  - (d) Rectangular

9. The pathogenic bacteria do not last long at a pH
- a)  $>11$
  - b)  $<11$
  - c)  $<8$
  - d)  $>8$

10. What is the dose of lime required in the excess lime treatment?
- a) 10-20ppm
  - b) 0-10ppm
  - c) 5-10ppm
  - d) 5-20ppm

11. Function of frequency mixer in super heterodyne receiver is

- a. Amplification
- b. Filtering
- c. Multiplication of incoming signal and the locally generated carrier
- d. None of the above

*Handwritten signature*

*Handwritten signature*  
DR. LEEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

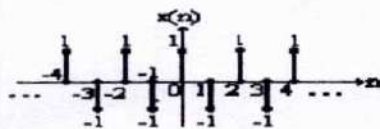
(3)

12. Calculate the modulation index when the un modulated carrier power is 15KW, and after modulation, carrier power is 17KW.
- 68%
  - 51.63%
  - 82.58%
  - 34.66%
13. Determine the Bandwidth of a FM wave when the maximum deviation allowed is 75KHz and the modulating signal has a frequency of 10KHz.
- 170 KHz
  - 200 KHz
  - 100 KHz
  - 1000 KHz
14. Frequency components of an AM wave ( $m$  = modulation index) are
- Carrier frequency ( $\omega_c$ ) with amplitude  $A$
  - Upper side band ( $\omega_c + \omega_m$ ) having amplitude  $mA/2$
  - Lower side band ( $\omega_c - \omega_m$ ) having amplitude  $mA/2$
  - All of the above
15. The modulation index of FM is given by
- $\mu$  = frequency deviation / modulating frequency
  - $\mu$  = modulating frequency / frequency deviation
  - $\mu$  = modulating frequency / carrier frequency
  - $\mu$  = carrier frequency / modulating frequency
16. What is the maximum transmission efficiency of an AM signal?
- 64.44%
  - 33.33%
  - 56.66%
  - 75.55%

17. The discrete-time signal  $x(n] = (-1)^n$  is periodic with fundamental period

(A) 6  
(C) 2

(B) 4  
(D) 0



*Leena*  
DR. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



4

18. The Fourier transform of the exponential signal  $e^{j\omega t}$  is

- (A) a constant. (B) a rectangular gate.  
(C) an impulse. (D) a series of impulses.

19. The unit impulse response of a linear time invariant system is the unit step function  $u(t)$ . For  $t > 0$ , the response of the system to an excitation

$e^{-at} u(t)$ ,  $a > 0$ , will be

- (A)  $ae^{-at}$ . (B)  $\frac{1-e^{-at}}{a}$ .  
(C)  $a(1-e^{-at})$ . (D)  $1-e^{-at}$ .

20. Inverse Fourier transform of  $u(\omega)$  is

- (A)  $\frac{1}{2}\delta(t) + \frac{1}{\pi t}$ . (B)  $\frac{1}{2}\delta(t)$ .  
(C)  $2\delta(t) + \frac{1}{\pi t}$ . (D)  $\delta(t) + \text{sgn}(t)$ .

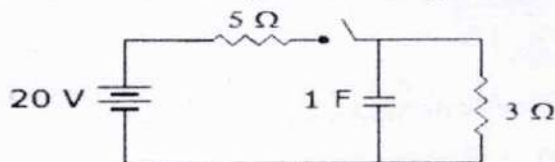
21. If  $G(f)$  represents the Fourier Transform of a signal  $g(t)$  which is real and odd symmetric in time, then  $G(f)$  is

- (A) complex. (B) imaginary.  
(C) real. (D) real and non-negative.

22. Inverse Fourier transform of  $u(\omega)$  is

- (A)  $\frac{1}{2}\delta(t) + \frac{1}{\pi t}$ . (B)  $\frac{1}{2}\delta(t)$ .  
(C)  $2\delta(t) + \frac{1}{\pi t}$ . (D)  $\delta(t) + \text{sgn}(t)$ .

23. In the circuit of figure the voltage across capacitor when switch is closed at  $t = \infty$  is

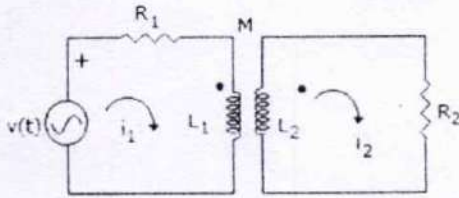


- a) 0.V  
b) 20 V  
c) very large  
d) 7.5 V

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

5

24. For the network of figure KVL for first loop is



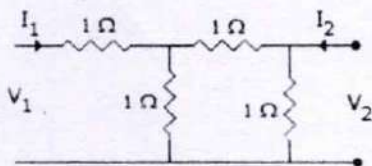
A.  $v(t) = R_1 i_1 + L_1 \frac{di_1}{dt} + M \frac{di_2}{dt}$

B.  $v(t) = R_1 i_1 - L_1 \frac{di_1}{dt} - M \frac{di_2}{dt}$

C.  $v(t) = R_1 i_1 + L_1 \frac{di_1}{dt} - M \frac{di_2}{dt}$

D.  $v(t) = R_1 i_1 - L_1 \frac{di_1}{dt} + M \frac{di_2}{dt}$

25. For the network of figure,  $z_{11} =$



A.  $5/3 \Omega$

B.  $3/2 \Omega$

C.  $2 \Omega$

D.  $2/3 \Omega$

26. For a network having  $1 \Omega$  resistor and  $1 \text{ F}$  capacitor in series  $Z(s) =$

A.  $\frac{s+1}{s}$

B.  $\frac{s}{s+1}$

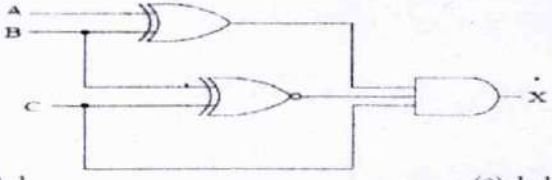
C.  $1+s$

D.  $\frac{1}{s+1}$

*Leena*  
Dr. LEENA A V  
PRINCIPAL,  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



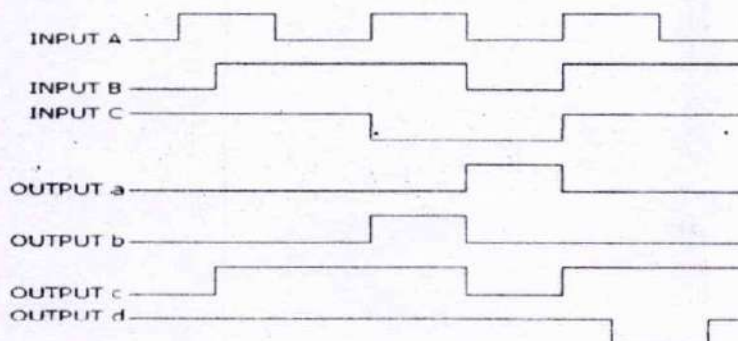
6

27. An RLC series circuit has  $R = 8 \Omega$ ,  $X_L = 8 \Omega$  and  $X_C = 8 \Omega$  Its impedance is
- $8 + j 16 \Omega$
  - $8 + j 8 \Omega$
  - $8 \Omega$
  - $24 \Omega$
28. 10 To find current in a resistance connected in a network, Thevenin's theorem is used  $V_{TH} = 20 \text{ V}$  and  $R_{TH} = 5 \Omega$ . The current through the resistance
- is 4 A.
  - is 4 A or less
  - is less than 4 A
  - may be 4 A or less or more than 4 A
29. The output of a logic gate is '1' when all its input are at logic 0. The gate is either
- NAND or an EX OR gate
  - NOR or an EX-NOR gate
  - an OR or an EX NOR gate
  - an AND or an EX-OR gate
30. The Boolean function  $Y = AB + CD$  is to be realized using only 2 input NAND gates. The minimum number of gates required is
- 2
  - 3
  - 4
  - 5
31. For the logic circuit shown in the figure, the required input condition (A,B,C) to make the output  $X = 1$  is
- 
- 1, 0, 1
  - 0, 0, 1
  - 1, 1, 1
  - 0, 1, 1
32. In a 4 bit counter the outputs of 3 JK FFs from MSB downward are connected to the NAND gate whose output is connected to CLR
- It is a MOD-14 counter
  - It is a MOD-13 counter
  - It is divide by-13 counter
  - It is divide by-14 counter

*Leena*  
**DR. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PATTANUR, KANNUR

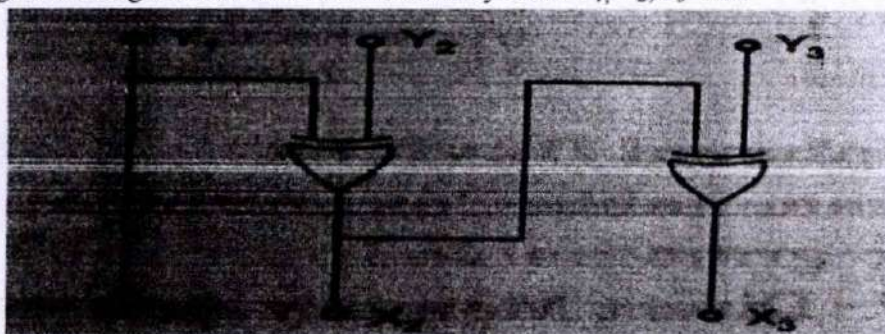
7

33. For a three-input NOR gate, with the input waveforms as shown below, which output waveform is correct?



- a) A
- b) B
- c) C
- d) D

34. The logic circuit given below converts a binary code  $Y_1, Y_2, Y_3$  into



- a) excess -3 code
- b) Gray code
- c) BCD code
- d) Hamming code

35. How many flip-flops are required to make a MOD-32 binary counter?

- a) 3
- b) 45
- c) 5
- d) 6


*mech*

*Leena*  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PATTANUR, KANNUR




8

36. A J-K flip-flop is in a "no change" condition when \_\_\_\_\_.
- A.  $J = 1, K = 1$
- B.  $J = 1, K = 0$
- C.  $J = 0, K = 1$
- D.  $J = 0, K = 0$
37. The divergence of the vector field  $\vec{A} = x\hat{a}_x + y\hat{a}_y + z\hat{a}_z$  is
- (a) 0 (c) 1
- (b) 1/3 (d) 3
38. The unit of  $\nabla \times H$  is
- (a) Ampere (c) Ampere/meter<sup>2</sup>
- (b) Ampere/meter (d) Ampere-meter
39. If  $C$  is a closed curve enclosing a surface  $S$ , then the magnetic field intensity  $\vec{H}$ , the current density  $\vec{J}$  and the electric flux density  $\vec{D}$  are related by
- (a)  $\iint_S \vec{H} \cdot d\vec{s} = \int_C \left( \vec{J} + \frac{\partial \vec{D}}{\partial t} \right) \cdot d\vec{l}$
- (b)  $\iint_S \vec{H} \cdot d\vec{l} = \int_C \left( \vec{J} + \frac{\partial \vec{D}}{\partial t} \right) \cdot d\vec{s}$
- (c)  $\iint_S \vec{H} \cdot d\vec{s} = \int_C \left( \vec{J} + \frac{\partial \vec{D}}{\partial t} \right) \cdot d\vec{l}$
- (d)  $\iint_C \vec{H} \cdot d\vec{l} = \int_S \left( \vec{J} + \frac{\partial \vec{D}}{\partial t} \right) \cdot d\vec{s}$
40. The VSWR can have any value between
- (a) 0 and 1 (c) 0 and  $\infty$
- (b) -1 and +1 (d) 1 and  $\infty$
41. Divergence theorem is based on
- a) Biot Savart's law
- b) Ampere's circuital law
- c) Gauss's law
- d) Pascal's law

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

9

42. A transmission line of  $50 \Omega$  characteristic impedance is terminated with a  $100 \Omega$  resistance. The minimum impedance measured on the line is equal to
- (a)  $0 \Omega$  (c)  $50 \Omega$   
(b)  $25 \Omega$  (d)  $100 \Omega$
43. Which of the following theorem use the curl operation?
- a) Green's theorem  
b) Gauss Divergence theorem  
c) Stoke's theorem  
d) Maxwell equation
44. The total electric flux through any closed surface surrounding charges is equal to the amount of charge enclosed".  
The above statement is associated with
- (a) Coulomb's square law  
(b) Gauss's law  
(c) Maxwell's first law  
(d) Maxwell's second law
45. A transistor configuration with the lowest current gain.
- (a) Common base  
(b) Common emitter  
(c) Common collector  
(d) Emitter-follower
46. Negative feedback in an amplifier
- (a) reduces gain (b) increases distortion  
(c) reduces bandwidth (d) increases noise
47. Voltage series feedback results in
- (a) increase in both i/p and o/p impedance  
(b) decrease in both i/p and o/p impedance  
(c) increase in i/p impedance and decrease in o/p impedance  
(d) decrease in i/p impedance and increase in o/p impedance

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



48. Crossover distortion occurs at


- (a) Class A o/p stage
- (b) Class B o/p stage
- (c) Class AB o/p stage
- (d) Common pulse o/p stage

49. The alpha ( $\alpha$ ) and beta ( $\beta$ ) of a transistor are related to each other as

- (a)  $\alpha = \frac{\beta}{\beta + 1}$
- (b)  $\beta = \frac{\alpha}{1 + \alpha}$
- (c)  $\beta = \frac{1 + \alpha}{\alpha}$
- (d)  $\alpha = \frac{1 + \beta}{\beta}$

50. The Barkhausen criterion for sustained oscillations is given by

- (a)  $A\beta = 1$
- (b)  $|A\beta| \geq 1$
- (c)  $|A\beta| < 1$
- (d)  $\angle A\beta = 180^\circ$

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

Q1 A = 85CA B = 23CG

LCD

Binary & Decimal

⇒ Decimal

$$A = 8 \times 16^3 + 5 \times 16^2 + C \times 16^1 + A \times 16^0$$
$$= 8000 + 500 + 120 + 16$$
$$= (8636)_{10}$$

$$B = 2 \times 16^3 + 3 \times 16^2 + C \times 16^1 + 6 \times 16^0$$
$$= 2000 + 300 + 120 + 6$$
$$= (2426)_{10}$$

$$\begin{array}{r} 500 \\ 130 \\ \hline 630 \end{array}$$

300  
120  
420  
⇒ Binary

A = (1001010011001010)<sub>2</sub>

B = (0010001111000110)<sub>2</sub>

$$\begin{array}{r} 1010 \\ 1011 \\ 1100 \\ 1101 \\ 1110 \end{array}$$

Q2

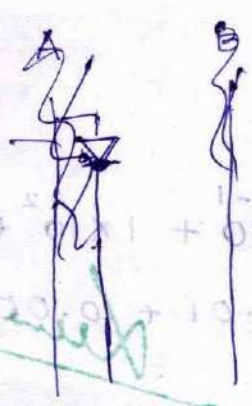
$$A + B = \begin{array}{r} 1001010011001010 \\ + 0010001111000110 \\ \hline (1011100110010000)_2 \end{array}$$

Q3 F(ABCD) = Σm(0,1,2,4,5,6), X = Σm(3,7,14,15)

KMAPAB

| CD \ AB | 00 | 01 | 11 | 10 |
|---------|----|----|----|----|
| 00      | 1  | 1  |    |    |
| 01      | 1  | 1  |    |    |
| 11      | X  | X  | X  |    |
| 10      | 1  | 1  | X  |    |

$$Y = \bar{A} + BC$$



Equivalent logic diagram ⇒



DELEENA AV  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



Q4 Perform  $(9)_{10} - (5)_{10}$  using 2's complement

$$9 = (1001)_2$$

$$5 = (0101)_2$$

$$-5 = \text{2's complement of } (0101)_2$$

$$\therefore (1010)_2 + 1 = (1011)_2$$

$$2 \therefore (9)_{10} + (-5)_{10} = \begin{array}{r} 1001 \\ + 1011 \\ \hline (10100)_2 = (4)_{10} \end{array}$$

Q5  $(1011)_2$  convert to (i) Gray code  
(ii) Excess 3 code

$$\Rightarrow \text{Excess 3} \Rightarrow (1011)_2 + (011)_2 = (1000)_2$$

$$\therefore \begin{array}{r} 1011 \\ + 011 \\ \hline (1110)_2 \end{array}$$

$\Rightarrow$  Gray code  $\Rightarrow$

$$\text{Binary} \Rightarrow (1110)_2$$

$$\Rightarrow (1101)_2$$

|    |    |    |    |    |
|----|----|----|----|----|
|    | 01 | 11 | 10 | 00 |
| 00 |    | 1  | 1  |    |
| 01 |    | 1  | 1  |    |
| 10 | 1  | 0  | 1  | 1  |
| 11 | 1  | 1  | 0  | 1  |

$$\Rightarrow (1110)_2$$

Q6.  $(101101.1101)_2 \Rightarrow$  decimal  
 $\Rightarrow$  hexa  
 $\Rightarrow$  octal

$$101101.1101$$

$$\Rightarrow 1 \times 10^5 + 0 \times 10^4 + 1 \times 10^3 + 1 \times 10^2 + 0 \times 10^1 + 1 \times 10^0 + 1 \times 10^{-1} + 1 \times 10^{-2} + 0 \times 10^{-3} + 1 \times 10^{-4}$$

$$100000 + 1000 + 100 + 1 + 0.1 + 0.01 + 0.0001$$

$$101401.1$$

Dr. LEENA AV

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

$$\frac{2 \times 2 \times 4 \times 2 \times 2}{4 \times 4 \times 4} = 1$$

$$45 + 0.5 + 0.25 + 0.063$$

hexadecimal

1000  
1000  
1000  
1000

$$(2D, D)_{16}$$

octal

Leena

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



(1) Check the system is causal or not? (2)

$$h(n) = 2^n u(n)$$

(2) How to check cross correlation of two signals (2)

(3) Find final value of  $F(s) = \frac{s(s^2 + 3s + 2)}{(s+1)(s+3)}$  (2)

(4) What is an energy signal? (2)

(5) Plot  $u(t-3) + u(t+5)$  (2)

5/10

$$(3) F(s) = \frac{s(s^2 + 3s + 2)}{(s+1)(s+3)} = \frac{A}{s+1} + \frac{B}{s+3} = \frac{s(s^2 + 3s + 2)}{(s+1)(s+3)}$$

$$\lim_{t \rightarrow \infty} f(t) = \lim_{s \rightarrow 0} sF(s)$$

$$\lim_{t \rightarrow \infty} f(t) = \lim_{s \rightarrow 0} s \left[ \frac{s(s^2 + 3s + 2)}{(s+1)(s+3)} \right]$$

$$\lim_{t \rightarrow \infty} f(t) = \lim_{s \rightarrow 0} s \left[ \frac{s^3 + 3s^2 + 2s}{(s+1)(s+3)} \right]$$

$$\lim_{t \rightarrow \infty} f(t) = 0$$

(4) For an energy signal power will be equal

to zero. The energy signal should also have

finite energy. So the signal with

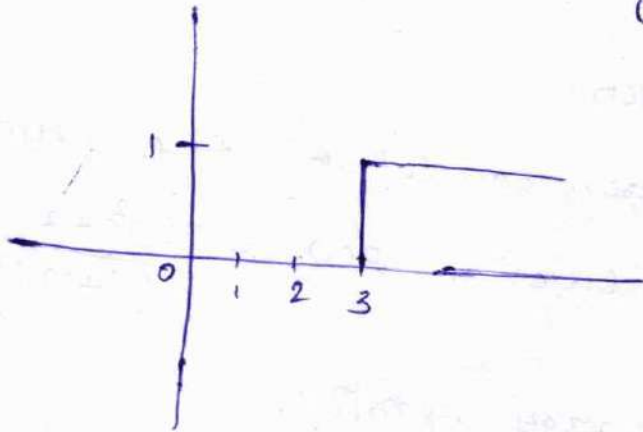
power zero and finite energy is energy signal.

DELEENA AV

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

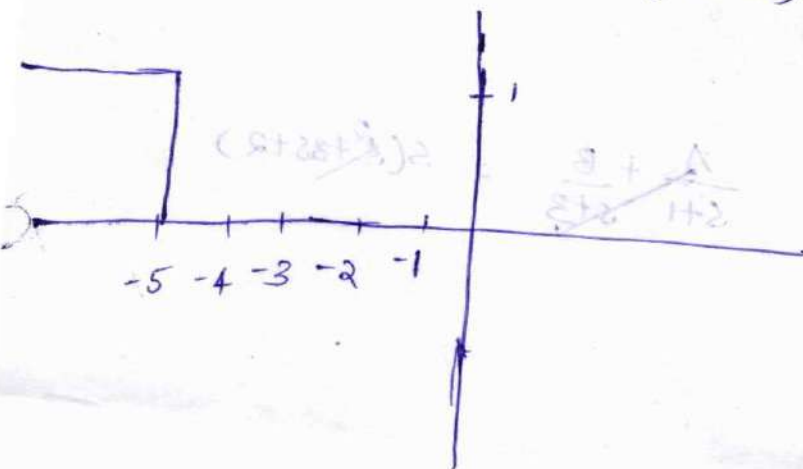
⑤  $u(t-3)$

,  $t=3$  , right shift

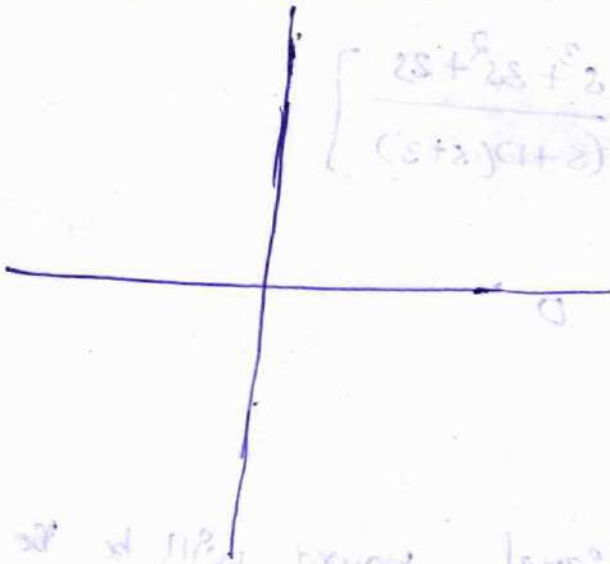


$u(t+5)$

$t=-5$  , left shift

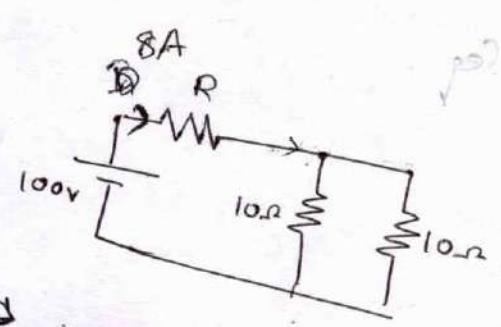


$u(t-3) + u(t+5)$





1) Find R.



7  
W

→  $V = 100 \text{ V}$

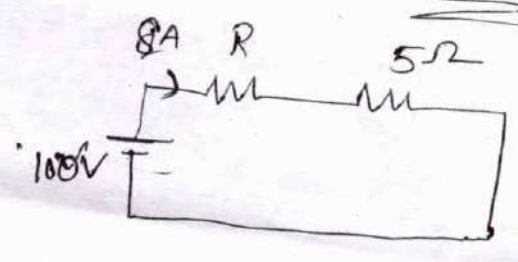
$R_{eq} = 10 + 10 \Omega$  parallel to  $10 \Omega$

$$R_{eq} = \frac{1}{\frac{1}{10} + \frac{1}{10}} = \frac{100}{20} = 5 \Omega$$

$V = 100$

$I = 8 \text{ A}$

$R = \frac{100}{8} = 12.5 \Omega$



$V = IR$

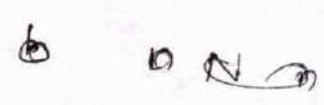
$100 = 8 (R + 5 \Omega)$

$100 = 8R + 40$

$8R = 100 - 40$   
 $= 60$

$R = \frac{60}{8} = 7.5 \Omega$

2)



$n$  - nodes  
 $B$  - Branches

number of loops

$= B - n + 1$



state KVL

It states that sum algebraic sum of voltage around the closed loop is equal to zero.

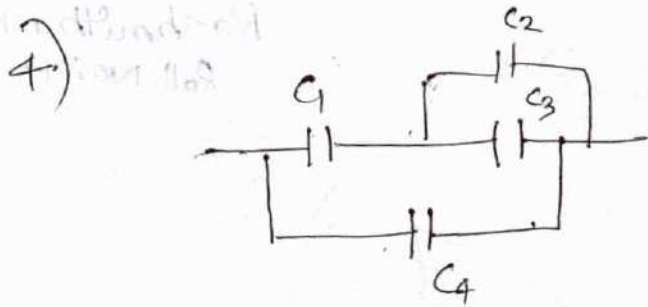
$\sum V_i = 0$

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

$6 - 4 + 1 = 3$

$B + n - 1$

links =  $B - n + 1$



Find  $C_{eq}$ .

$= C_1$

5) state Millman's theorem.

4) Answer  $C_1$  &  $C_4$  is parallel.

$C_{eq} = C_1 + C_4$



$= C_1 + C_2 + C_3 + C_4$

5) Ans  $\rightarrow \phi$

Handwritten calculations and notes, including  $100 = 100$ ,  $100 = 100$ , and  $100 = 100$ .

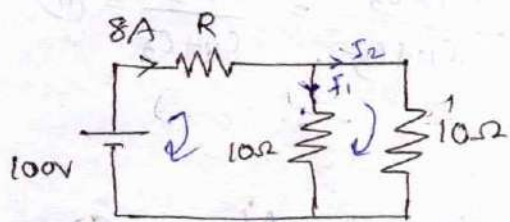
Handwritten signature and stamp.

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY,  
PATTANUR, KANNUR

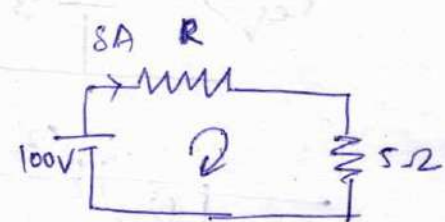


5  
10

1)



Find R.



$$100 = 8R + 10 \times 8$$

$$\frac{10 \times 10}{10 + 10} = R$$

By KVL,  
 $100 = 8R + 40$

$$100 = 8R + 80$$

$$100 - 80 = 8R$$

$$20 = 8R$$

$$R = \frac{20}{8} = 2.5 \Omega$$

$$\frac{10R}{20}$$

By KVL,

$$100 = 8R + (8 - I_1)10$$

$$100 = 8R + 80 - 10I_1$$

$$100 - 80 = 8R - 10I_1$$

$$20 = 8R - 10I_1$$

$$\frac{20 + 10I_1}{8} = R$$

$$\begin{array}{r} 2.5 \\ 8 \overline{) 20.0} \\ \underline{16} \phantom{0} \\ 40 \phantom{0} \end{array}$$

$$\begin{array}{r} 7.5 \\ 8 \overline{) 60.0} \\ \underline{56} \phantom{0} \\ 40 \phantom{0} \end{array}$$

$$100 = 8R + 5 \times 8$$

$$100 = 8R + 40$$

$$60 = 8R$$

$$\frac{60}{8} = R = 7.5 \Omega$$

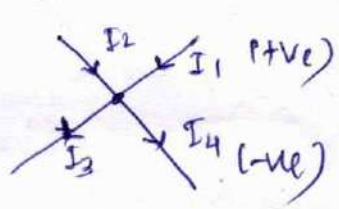
Q. A network 12 X

Q. b - n + 1

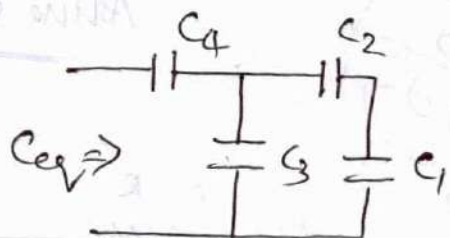
Q. Two capacitors in parallel.

$$\frac{1}{C_1} + \frac{1}{C_2} = \frac{C_1 \times C_2}{C_1 + C_2}$$

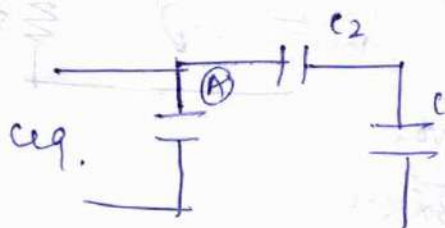
Q. Kirchhoff's current law is defined as the net current at the node is equal to 0 and the current entering into the node is +ve and current coming out of the node is -ve.



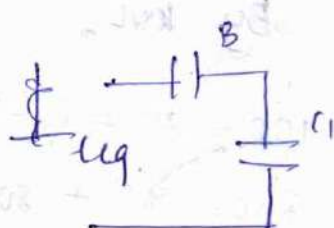
⑥



$$\Rightarrow \frac{C_4 \times C_3}{C_4 + C_3} = \frac{C_4 C_3}{C_4 + C_3} = (A)$$



$$\Rightarrow \frac{A \times C_2}{A + C_2} = \frac{A C_2}{A + C_2} = (B) = \left( \frac{C_4 C_3}{C_4 + C_3} \right) C_1 + C_2$$



$$\Rightarrow \frac{B \times C_1}{B + C_1} \Rightarrow \left( \frac{C_4 C_3 C_2}{C_4 C_3 + C_2 C_3 C_4} \right) C_1$$

$$\frac{\left( \frac{C_4 C_3}{C_4 + C_3} \right) C_2}{\frac{C_4 C_3}{C_4 + C_3} + C_2} + C_1$$

⑦ Reciprocity theorem

$$\left[ \frac{C_1 C_2}{C_1 + C_2} + C_3 \right] C_4$$

$$\frac{C_1 C_2}{C_1 + C_2} + C_3 + C_4$$

*Leena*

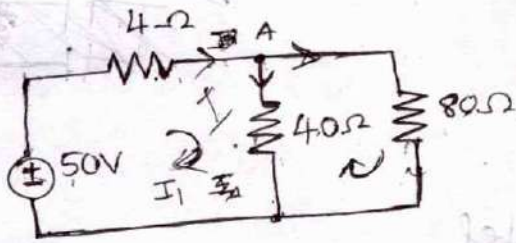
DR. LEENA A V

PRINCIPAL

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



1. Find the value of current in 80Ω resistor.



$$\frac{7}{\omega}$$

A.

~~50V~~

Equivalent resistance.

40Ω 80Ω in ||

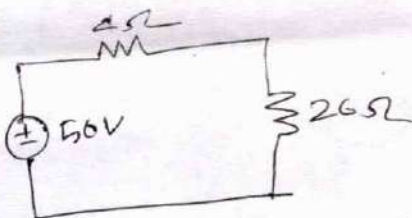
$$\frac{1}{R_p} = \frac{1}{40} + \frac{1}{80}$$

$$= \frac{40+80}{40 \times 80} = \frac{120}{3200}$$

$$= 3.8 \times 10^{-2}$$

$$R_p = \frac{1}{3.8} \times 10^2$$

$$= 26.32$$



$$\text{eq. resistance} = 26 + 4 = 30.32$$

$$\text{eq. resistance} = \frac{50}{30} = 1.7$$

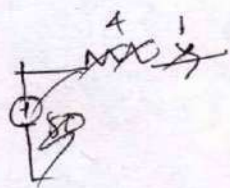
eq. current

current

$$I = \frac{V}{R} = \frac{50}{30} = 1.7A$$

current through 80Ω

$$= \frac{40 \times 1.7}{40 + 80} = 5.7A$$



$$V=IR$$

$$I = \frac{V}{R}$$

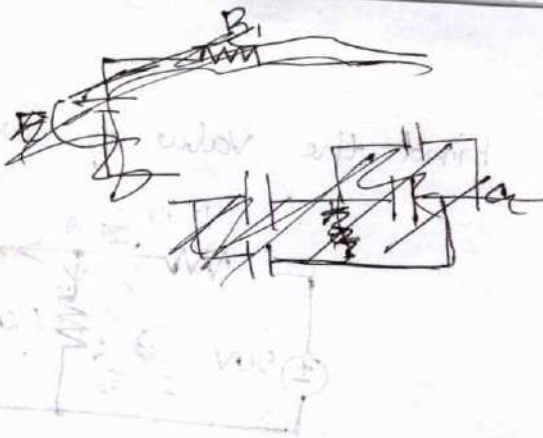
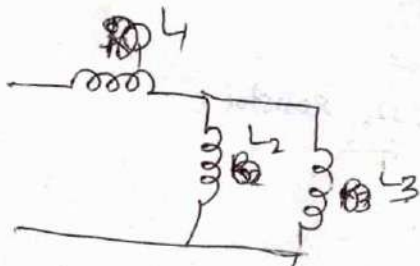
2. 2A. Infinite internal resistance.

3A.  $C = C_1 + C_2$ 

4A. The algebraic sum of voltages in a loop is equal to the emf of the circuit.

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

5A.



$L_{eq}$

$L_2$  and  $L_3$  in parallel

$$\frac{1}{L_p} = \frac{1}{L_2} + \frac{1}{L_3}$$

$$= \frac{L_2 + L_3}{L_2 L_3}$$

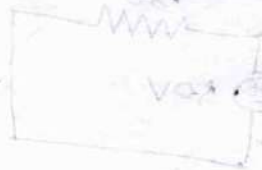
$$L_p = \frac{L_2 L_3}{L_2 + L_3}$$

$L_1$  and  $L_p$  in series

$$L_1 + \frac{L_2 L_3}{L_2 + L_3}$$

$$= \frac{L_2 L_1 + L_3 L_1 + L_2 L_3}{L_2 + L_3}$$

6A. State Millmans theorem.



$$V = \frac{\sum \frac{V_i}{R_i}}{\sum \frac{1}{R_i}}$$

$$V = \frac{\sum V_i G_i}{\sum G_i}$$

sub

Keene



$$1) F = AB + AC + C + AD + ABC + ABC$$

$$= AB(C + \bar{C})(D + \bar{D}) + AC(B + \bar{B})(D + \bar{D}) + C(A + \bar{A})(B + \bar{B})(D + \bar{D}) + ABC(D + \bar{D})$$

$$= AB(CD + C\bar{D} + \bar{C}D + \bar{C}\bar{D}) + AC(BD + B\bar{D} + \bar{B}D + \bar{B}\bar{D}) + C(ABD + AB\bar{D} + \bar{A}BD + \bar{A}\bar{B}D + ABCD + ABC\bar{D})$$

$$= ABCD + ABC\bar{D} + AB\bar{C}D + AB\bar{C}\bar{D} + ABCD + ABC\bar{D} + A\bar{B}CD + A\bar{B}C\bar{D} + \text{---} (ABCD + ABC\bar{D} + A\bar{B}CD + A\bar{B}C\bar{D} + \bar{A}BCD + \bar{A}BC\bar{D} + \bar{A}\bar{B}CD + \bar{A}\bar{B}C\bar{D} + ABCD + ABC\bar{D})$$

$$= m_{15} + m_{14} + m_{13} + m_{12} + m_{15} + m_{14} + m_{11} + m_{10} + m_{15} + m_{14} + m_{11} + m_{10} + m_7 + m_6 + m_3 + m_2 + m_{15} + m_{14}$$

$$= \sum m(2, 3, 6, 7, 10, 11, 12, 13, 14, 15)$$

Q2) Perform  $(1011)_2 - (0100)_2$  , using 1's complement

→

1's complement form

$$\Rightarrow \text{---} (1011)_2 = \text{---} (0100)_2$$

$$\Rightarrow (0100)_2 = (1011)_2$$

$$\begin{array}{r} 0100 \\ 1011 \\ \hline \end{array}$$

Adding

$$\begin{array}{r} 1011 \\ + 1011 \\ \hline 10110 \end{array}$$

Ans

$$\rightarrow \begin{array}{r} 0110 \\ + 1 \\ \hline 0111 \end{array} \Rightarrow$$

$$(0111)_2$$

DR. LEENA AV  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

Q3) Convert binary to decimal, Hex-decimal, octal form.

1)  $(101101.1101)_2$

\* Binary to decimal

Integer part

$(101101)_2 \Rightarrow$

$= 2^5 \times 1 + 2^4 \times 0 + 2^3 \times 1 + 2^2 \times 1 + 2^1 \times 0 + 2^0 \times 1$

$= 32 + 8 + 4 + 1$

$= (45)_{10}$

Fractional part

$(1101)_2$

$= 2^{-1} \times 1 + 2^{-2} \times 1 + 2^{-3} \times 0 + 2^{-4} \times 1$

$= 0.5 + 0.25 + 0 + 0.0625$

$= 0.81$

$(101101.1101)_2 = (45.81)_{10}$

\* Binary to Hex

$(101101.1101)_2 \Rightarrow \left( \underbrace{0010}_2 \underbrace{1101}_D \cdot \underbrace{1101}_D \right)$

$\Rightarrow (2D.D)_{16}$

\* Octal Binary to Octal

$(101101.1101)_2 \Rightarrow \left( \underbrace{101}_5 \underbrace{101}_5 \cdot \underbrace{110}_6 \underbrace{100}_4 \right)_2$

$= (55.64)_8$

DE. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



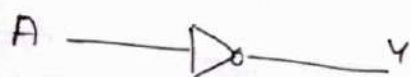
Q4)  $F(A, B, C, D) = \sum m(0, 1, 2, 4, 5, 6)$ ,  $X = (3, 7, 14, 15)$

=)

K-map

| A, B \ C, D | 00 | 01 | 11 | 10 |
|-------------|----|----|----|----|
| 00          | 1  | 1  |    |    |
| 01          | 1  | 1  |    |    |
| 11          | X  | X  | X  |    |
| 10          | 1  | 1  | X  |    |

2  $Y = \bar{A}$



Q5)  $(11011)_2 \rightarrow (10110)_2$

2  $\Rightarrow$

$$\begin{array}{r}
 11011 \\
 - 10110 \\
 \hline
 00101
 \end{array}$$

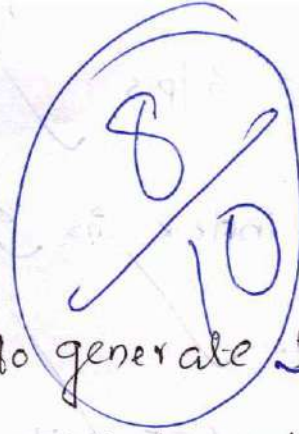
$\Rightarrow (00101)_2$

*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

1. Block diagram of PWM

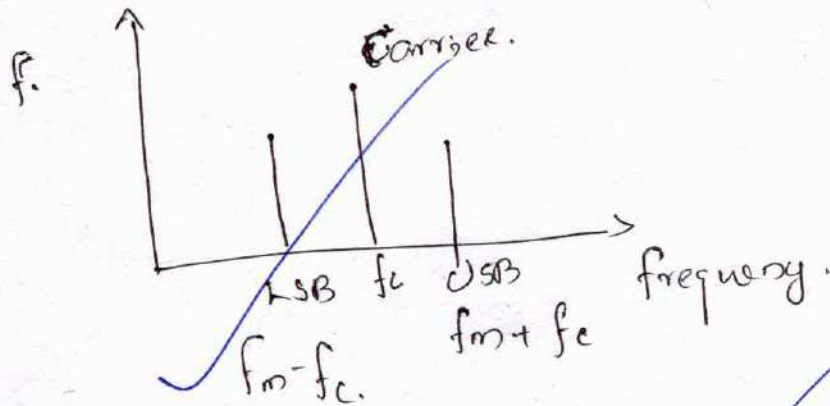
2. Duty cycle



3. Balanced modulator: used to generate DSB AM.

4. DSB AM - Double side band amplitude modulation.

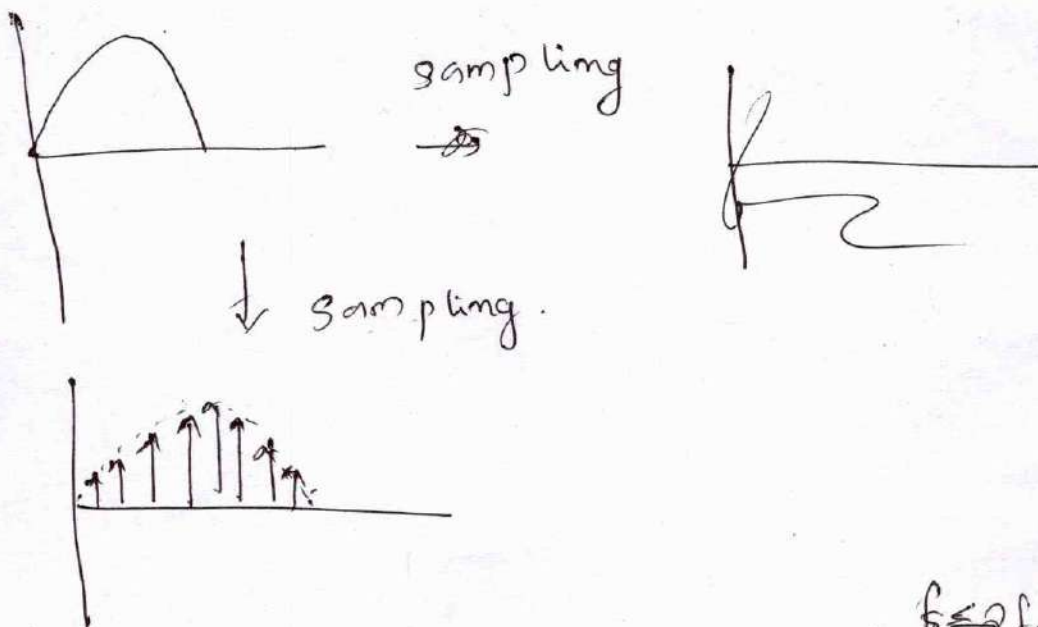
DSB FC → Double Side band Full carrier.



5. UHF range : 300 MHz to 3000 MHz.

6. Pulse code modulation: Converts analog <sup>s/g's</sup> to digital s/g's in communication.

7. Sampling:



$$f_s \geq 2f_m$$

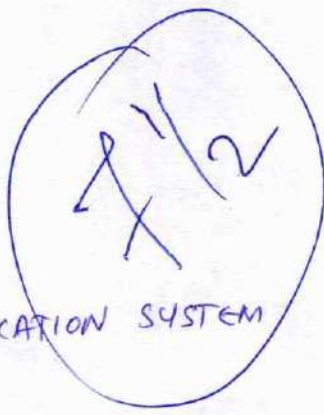
Sampling theorem:

$$f_s \geq 2f_m$$

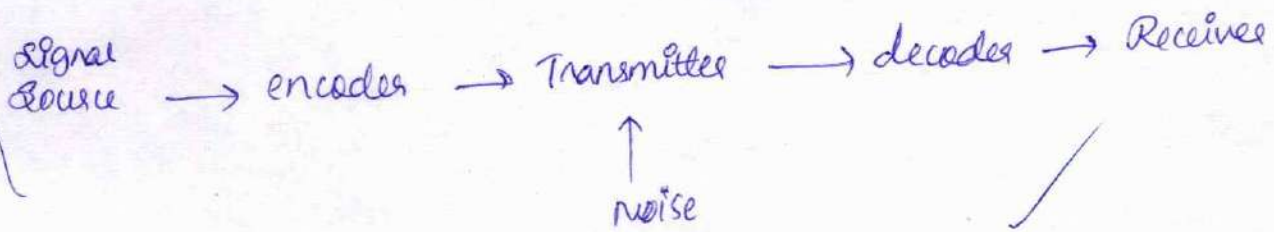
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



7. Moires 2 %/ps ✓
8. modulation Index is doubled. ✓
9. Space waves. ✓
10. IF range - 455 KHz. ✓



## 1. BASIC ELEMENTS OF COMMUNICATION SYSTEM



## 2. Modulation Index

$$m = \frac{V_{\max} - V_{\min}}{V_{\max} + V_{\min}}$$

30Hz to 3kHz

## 3. Intermediate frequency = 455 kHz.

4. Modulation is the variations occurring in the carrier signal with respect to given signal either amplitude, frequency or phase.

$$P_t = P_c \left(1 + \frac{m^2}{2}\right)$$

## 6. Generation of indirect FM.

## 7. Tuned Radio frequency receiver (TRF).

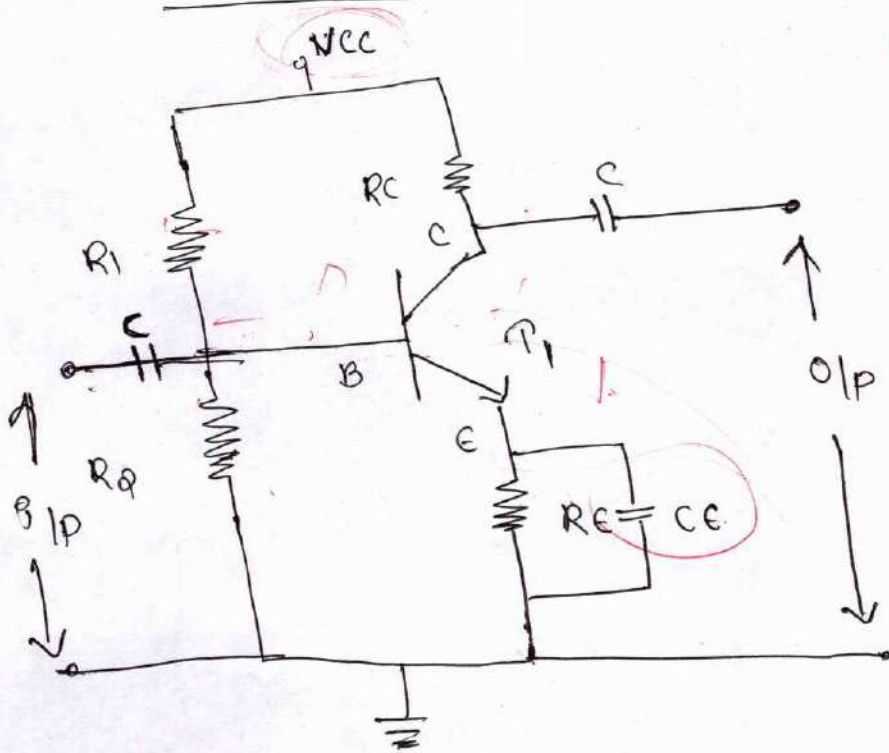
8. Demodulation is the process of —

9. 15 kHz.

10. Tuning.

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



1) RC coupled amplifier

*Handwritten notes:*  
 $A_{mid}$   
 $\beta$

*Handwritten note:*  
 $\frac{1}{10}$

2) Barkhausen criteria

1.  $A\beta = 1$
2. phase shift is  $0^\circ$  or  $360^\circ$
3. It is a +ve feedback.

3) differentiator

$$R_c \ll R \quad X_c \gg 10R$$

Integrator

$$R_c \gg R \quad 10X_c < R$$

$0.0016R$  — Differentiator.

$16R$  — Integrator.

4)  $S =$  ?

5)

*Signature*  
 Dr. ILEENA A V  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PATTANUR, KANNUR

$\frac{5}{10}$

- (1)
- (2) ✓
- (3)
- (4) ✓
- (5) ✓
- (6)
- (7)
- (8)
- 9 ✓
- 10

Integrator  
RC

~~RC~~ 200164  
Integrator  
RC < 0.0167  
~~Differential~~

Leena

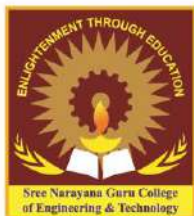
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATAYANUR, KANNUR



- 1) zero X
- 2) Parallel polarisation ✓
- 3) ~~zero~~ X
- 4) right hand rule ✓
- 5)  $\text{coulomb/m}^2$  ✓
- 6) Electric field intensity ✓
- 7)  $\beta = \frac{2\pi}{\lambda}$  X  $\lambda = \frac{1}{\nu} = \frac{c}{\nu}$  X
- 8) Perpendicular ✓
- 9) X
- 10) zero ✓

$$\frac{5 \frac{1}{2}}{10}$$

Leena



# **Sree Narayana Guru College of Engineering & Technology**

CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307



AY 2018-2019  
(PLACEMENT ACTIVITIES, STUDENTS PLACED  
ON AND OFF CAMPUS,  
HIGHER STUDIES)





# Sree Narayana Guru College of Engineering & Technology

KOROM, PAYYANUR, KANNUR-670 307



5.2.1 Percentage of outgoing students and students progressing to higher education during the last five years

| Year    | Name of students enrolling into higher education and contact | Program graduated from                           | Name of institution joined                  | Name of program admitted to (applicable for students who progressed to higher                 |
|---------|--------------------------------------------------------------|--------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------|
| 2018-19 | NIMISHA M K                                                  | B.Tech Computer Science Engineering              | LBS College of Engineering,Kasargod         | M Tech in Computer Science and Information Security                                           |
|         | THULASI BAI A                                                | B.Tech Computer Science Engineering              | VIMAL JYOTHI Engineeing,Chemperi            | M Tech in Computer Science and Engineering                                                    |
|         | SHARIJA P                                                    | B.Tech Computer Science Engineering              | VIMAL JYOTHI Engineeing,Chemperi            | M Tech in Computer Science and Engineering                                                    |
|         | THRISHNA S                                                   | B.Tech Electronics and Communication Engineering | VIMAL JYOTHI Engineeing,Chemperi            | M.Tech in Communication Engineering and Signals Processing                                    |
|         | ANUSHA RAJ                                                   | B.Tech Electronics and Communication Engineering | Cochin University of Science and Technology | M.Tech inElectronics and Communication Engineering with Specialization in Wireless Technology |

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



**Sree Narayana Guru College  
of Engineering & Technology**  
CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307



| Year    | Name of student placed | Program graduated from                              | Name of the employer with contact details | Pay package at appointment (In INR per annum) (applicable for students who got placement) |
|---------|------------------------|-----------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------|
| 2018-19 | SHABNA MELATH BABU     | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | Infiniz Solutions,Ernakulam               | 3L/annum                                                                                  |
|         | VISHNU UNNIKRISHNAN    | B TECH IN ELECTRICAL AND ELECTRONICS ENGINEERING    | Byjus learning app                        | 4.5L/annum                                                                                |
|         | SREEROOP SREEDHAR      | BTECH IN CIVIL ENGINEERING                          | Infiniz Solutions,Ernakulam               | 2L/annum                                                                                  |
|         | AYUSH RAJ              | BTECH IN CIVIL ENGINEERING                          | Focus Academy                             | 2L/annum                                                                                  |
|         | SHIFA AMEER            | BTECH IN CIVIL ENGINEERING                          | Agile Business consultancy                | 2L/annum                                                                                  |
|         | SRUTHI T K             | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | Byjus learning app,Poornam Infovision     | 4.5L/annum                                                                                |
|         | ASWATHI SREEKANTH      | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | AIR lab                                   | 3.6 L/annum                                                                               |
|         | SHEONA SATHISH         | B TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING | Eben Telecom, Ernakulam                   | 4L/annum                                                                                  |

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR





# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

Korom, Chalakkode P.O., Payyanur, Kannur - 670307

Managed by Sree Bhakthi Samvardhini Yogam, Talap, Kannur

Affiliated to APJ Abdul Kalam Technological University and Approved by AICTE



## POOLED CAMPUS DRIVE

By Infiniz IT Solutions

For 2019 Pass out Students

On 03-11-2018 & 04-11-2018



Registration Fees - 100

**Note :** Interested to participate in this drive please give your name to college placement officer on or before **October 12th ,2018**

**Dr. LEENA A V**  
PRINCIPAL


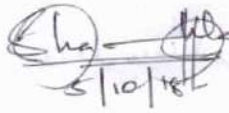
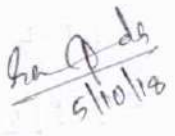



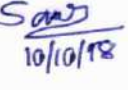


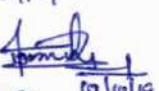
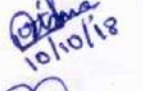

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR




### CERTIFICATE OF UNDERTAKING

We understand that we are being given an opportunity through college to attend an pooled campus drive which may lead to selection in Agile Business Consultancy, opening in position are civil engineer, mechanical engineer and we are volunteering to attend the drive for the same,

We further understand, as advised by the college, that we need not to pay any money (apart from registration fees of Rs.100/-) as training charges/deposit etc for any of the activities related to this pooled campus drive or further selection, to anybody. We indemnify the college from any liability arising out of any financial transaction that may be done by us, against this advice, in this regard.

1. Nilufar Fathima - ST Civil -  5/10/18
2. Sahle Absoobulcar - ST Civil -  5/10/18
3. Bahada. V.P - ST CIVIL -  5/10/18
4. Fathima Abdulla kunhi - ST CIVIL -  5/10/18
5. Shifa Ameer - ST Civil -  5/10/18
6. Ansal Raj.A - ST ME -  8/10/18
7. SAURAV SIVADAS - ST ME -  10/10/18
8. SIDHARTH.A - ST ME -  10/10/18
9. Saurav.B - ST ME -  10/10/18
10. Fawaz .P.c - ST ME -  10/10/18
11. VishnuRajan.E - ST ME -  10/10/18
12. Pranav Piyar - ST ME -  10/10/18

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



## POOLED CAMPUS DRIVE

We are happy to inform you that infiniz it solutions conducting a pooled recruitment drive for 2019 pass out students on November 3<sup>rd</sup> & 4<sup>th</sup>, 2018 for

### **Agile business consulting, India & Dubai**

About the company



[http://www.agilebss.com/about\\_us/](http://www.agilebss.com/about_us/)

Recruiting for the following Position:

- ❖ Civil engineer (B Tech 2019 passout)
- ❖ Mechanical engineer (B Tech 2019 passout)

**Eligibility criteria:** candidate must have at least 60% and 5 backlogs students can also attend (no back-logs on completion of course/joining time)

**There would be registration fees of Rs 100 per candidate.**

Day 1(Round 1)

- Aptitude test, Group discussion, Hr interview

Day 2(Round 2)

- Group discussion, Hr & technical interview, Results

(Decision of infiniz it solutions will be final in all matters)

**Note:** Interested to participate in this drive Please give your name to college placement officer on or before October 12<sup>th</sup>, 2018.

  
HR&PO 04/10/18

Date: 04/10/2018

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



**SREE NARAYANA GURU  
COLLEGE OF ENGINEERING & TECHNOLOGY  
PAYYANUR**

(PROMOTED BY SREE BHAKTHI SAMVARDHINI YOGAM, KANNUR)  
CHALAKKODE P.O., PAYYANUR, KANNUR-670307, KERALA



**DIYA SYSTEMS CAMPUS RECRUITMENT 2019**  
**SNGCET CAMPUS**

**Openings in Tech Support**  
**Company Website: [www.diya.net](http://www.diya.net)**

**Qualification: Final year B. Tech/BCA/BSc IT/BSc CS/MCA/MS**  
**(Minimum 50% throughout academics)**

**Recruitment Date: 28/04/2019**

**Registration fee applicable @ Rs. 100/- will be collecting on registration desk on same day**

**Registration closes on 25<sup>th</sup> march 2019**

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR





**SREE NARAYANA GURU COLLEGE OF ENGINEERING &  
TECHNOLOGY**

**TRAINING & PLACEMENT CELL**



## **DIYA SYSTEMS CAMPUS RECRUITMENT 2019**

**SNGCET CAMPUS**

### **Openings in Tech Support**

Company Website: [www.diya.net](http://www.diya.net)

**Qualification:** Final year **B.Tech/BCA/BSc IT/BSc CS/MCA/MS**  
(Minimum 50 % throughout academics)

**Interview process :** English Essay, Aptitude Test & Typing Test, Technical discussion & Decision to offer.

**Recruitment Date: 28/04/2019**

**Mandatory documents to carry for interview process :**

- One copy of resume
- 1 passport size photograph
- 10<sup>th</sup> , 12<sup>th</sup> , Degree mark sheets

Registration fee applicable @ Rs.100/- will be collecting on registration desk on same day

**Registration link will be available soon. Interested candidates register through link / Contact Placement officer: Anand M E, Mob: 8547504940.**

**Registration closes on 25<sup>th</sup> march 2019**

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

| S/NO | NAME OF THE STUDENT   | SIGN                                                                                |
|------|-----------------------|-------------------------------------------------------------------------------------|
| 1.   | ADARSH PRAKASH        |    |
| 2.   | AKSHAY P              |    |
| 3.   | ASWATHI SREEKANTH     |    |
| 4.   | GOPIKA C              |    |
| 5.   | HARSHITHA T V         |    |
| 6.   | JINSHA T K            |    |
| 7.   | SHABNA MELATH BABU    |    |
| 8.   | SHEONA SATHISH        |    |
| 9.   | SRUTHI T K            |    |
| 10.  | ABHIJITH PHALGUNAN    |    |
| 11.  | ARJUN M PURUSHOTHAMAN |    |
| 12.  | ASHOK R               |    |
| 13.  | ASWATHI M             |    |
| 14.  | ATHUL S KUMAR         |    |
| 15.  | C V NAVAS NAZAR       |    |
| 16.  | DHANUSHA P K          |   |
| 17.  | DIOL MATHEW PM        |  |
| 18.  | K GEETHIKA RAJEEV     |  |
| 19.  | KAVYA GANESH          |  |
| 20.  | MALAVIKA PRADEEP      |  |
| 21.  | MOHAMED MUFEED        |  |
| 22.  | NAHLA M               |  |
| 23.  | NAJWA MUHAMMED        |  |
| 24.  | NEETHU CV             |  |
| 25.  | NISHIKA U             |  |
| 26.  | POOJA M               |  |
| 27.  | RISHANA P V           |  |
| 28.  | SHIFA NOURIN          |  |
| 29.  | SIBIN PRASAD          |  |
| 30.  | SIDHARTH S BABU       |  |
| 31.  | SREEROOP SREEDHAR     |  |
| 32.  | SRUTHI VALIYA PURAYIL |  |
| 33.  | AJMAL P P V           |  |
| 34.  | AKSHAY M NAMBIAR      |  |
| 35.  | ANAGHA ASHOKAN        |  |
| 36.  | ANSAB K P             |  |
| 37.  | ASWINRAJ T            |  |
| 38.  | MUHAMMED IRSHAD       |  |
| 39.  | NIDHIN NANDAKUMAR     |  |
| 40.  | NITHIN M              |  |
| 41.  | ROHIT V K             |  |

  
**DR. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR





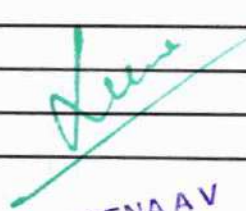
*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR




**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF CIVIL ENGINEERING**  
**STUDENTS LIST 2016-2020**

| SL NO | REGISTER NUMBER | NAME                    |
|-------|-----------------|-------------------------|
| 1     | SNC16CE001      | ABIN DAMODAR            |
| 2     | SNC16CE002      | ADARSH B NAIR           |
| 3     | SNC16CE003      | AKHIL SURENDRAN         |
| 4     | SNC16CE004      | AMRITHA P               |
| 5     | SNC16CE005      | ANASWARA HAREENDRAN     |
| 6     | SNC16CE006      | ANGAJA PRAKASH          |
| 7     | SNC16CE007      | ANJALI V                |
| 8     | SNC16CE008      | ANOJA M                 |
| 9     | SNC16CE009      | ARJUN CHANDRAN          |
| 10    | SNC16CE010      | ARJUN M V               |
| 11    | SNC16CE011      | ASHIK K V               |
| 12    | SNC16CE012      | ASHIQ A K               |
| 13    | SNC16CE013      | DRISHYA K P             |
| 14    | SNC16CE014      | FATHIMA ABDUL KAREEM    |
| 15    | SNC16CE015      | JITHIN KUMAR KP         |
| 16    | SNC16CE016      | KEERTHANA UTHAMAN       |
| 17    | SNC16CE017      | K NISHANA               |
| 18    | SNC16CE018      | KRISHNA K               |
| 19    | SNC16CE019      | KRISHNAVENI K           |
| 20    | SNC16CE020      | MIRSHAD E M             |
| 21    | SNC16CE021      | MUHAMMED SHAZ P         |
| 22    | SNC16CE022      | NADA NAZAR OVINAKATH    |
| 23    | SNC16CE023      | NANMA JAYARAJ           |
| 24    | SNC16CE024      | NASHATH JALEEK          |
| 25    | SNC16CE025      | NAYANA RAGHUNATH        |
| 26    | SNC16CE026      | NEERAJA S               |
| 27    | SNC16CE027      | NIKESH K                |
| 28    | SNC16CE028      | REENA K                 |
| 29    | SNC16CE029      | SREENATH PRAKASH C      |
| 30    | SNC16CE030      | SREEPARVATHI S          |
| 31    | SNC16CE031      | SUHARIRA PONNA VALAPPIL |
| 32    | SNC16CE032      | SWANAM C                |
| 33    | SNC16CE033      | THEJAS P K              |

  
**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



|                                                                                   |                           |                                                                                                                               |            |    |
|-----------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------|----|
|  |                           | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | CE |
|                                                                                   |                           |                                                                                                                               |            |    |
| TEST. I                                                                           |                           |                                                                                                                               |            |    |
| Programme & Branch :                                                              | BTECH– Civil Engineering  |                                                                                                                               | Semester : | 06 |
| Course Code & Name :                                                              | CE352– Comprehensive exam |                                                                                                                               | Date :     |    |

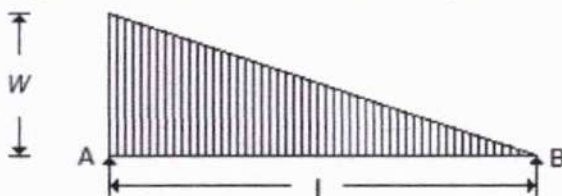
Maximum Marks : 10

Duration: 15 Minutes

1. The section modulus of a circular section about an axis through its C.G., is

- A.  $\pi d^2/4$  B.  $\pi d^2/16$  C.  $\pi d^3/16$  D.  $\pi d^3/32$  ✓

2. A simply supported beam with a gradually varying load from zero at B and  $w$  per unit length at A is shown in the below figure. The shear force at B is equal to



- A.  $wl/6$  B.  $wl/3$  C.  $wl$  ✓ D.  $2wl/3$

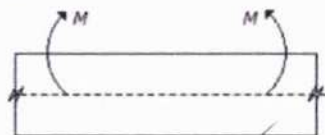
3. The compression test is carried on \_\_\_\_\_ materials.

- A. Ductile B. brittle ✓ C. malleable D. plastic

4. The modulus of elasticity for mild steel is approximately equal to

- A.  $10 \text{ kN/mm}^2$  B.  $80 \text{ kN/mm}^2$  C.  $100 \text{ kN/mm}^2$  ✓ D.  $210 \text{ kN/mm}^2$

5. A rectangular beam subjected to a bending moment is shown in the below figure. The upper layer of the beam will be in tension.




- A. True B. False ✓

6. Critical depth ( $h$ ) of a channel, is

A.  $h = \frac{v^2}{g}$

B.  $h = \frac{v^2}{2g}$  ✓

Dr. LEENA A V  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR

|                                                                                   |                                                                                                                               |            |           |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | <b>CE</b> |
|                                                                                   |                                                                                                                               |            |           |
| Programme& Branch :                                                               | <b>BTECH- Civil Engineering</b>                                                                                               | Semester : | <b>06</b> |
| Course Code & Name :                                                              | <b>CE352- Comprehensive exam</b>                                                                                              | Date :     |           |

Maximum Marks :10

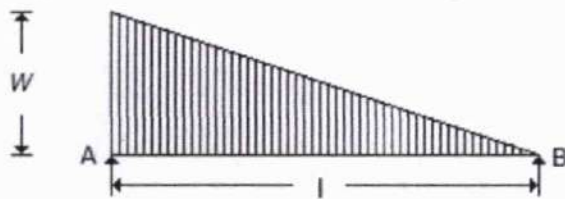
Duration: 15 Minutes

1. The section modulus of a circular section about an axis through its C.G., is

- A.  $\pi d^2/4$  B.  $\pi d^2/16$  C.  $\pi d^3/16$  D.  $\pi d^3/32$

7  
10

2. A simply supported beam with a gradually varying load from zero at B and  $w$  per unit length at A is shown in the below figure. The shear force at B is equal to



- A.  $wl/6$  B.  $wl/3$  C.  $wl$  D.  $2wl/3$

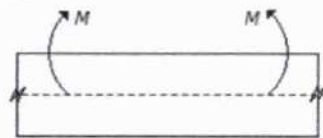
3. The compression test is carried on \_\_\_\_\_ materials.

- A. Ductile B. brittle C. malleable D. plastic

4. The modulus of elasticity for mild steel is approximately equal to

- A.  $10 \text{ kN/mm}^2$  B.  $80 \text{ kN/mm}^2$  C.  $100 \text{ kN/mm}^2$  D.  $210 \text{ kN/mm}^2$

5. A rectangular beam subjected to a bending moment is shown in the below figure. The upper layer of the beam will be in tension.



- A. True B. False

6. Critical depth ( $h$ ) of a channel, is

A.  $h = \frac{v^2}{g}$

B.  $h = \frac{v^2}{2g}$

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



C.  $h = \frac{v}{2g}$

D.  $h = \frac{v}{g}$

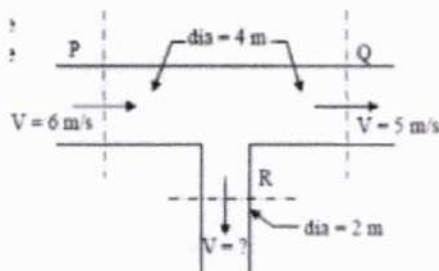
7. The side slope of Cipolletti weir is generally kept

- A. 1 to 4 B. 1 to 3 C. 1 to 2 D. 1 to 5

8. The dynamic viscosity of a fluid is 0.139 kgf-sec/. If the specific gravity of fluid is 0.95 its kinematic viscosity is

- A. 0.1463 B. 0.001435 C. 0.000146 D. 0.5

9. The circular water pipes shown in the sketch are flowing full. The velocity of flow (in m/s) in the branch pipe "R" is




- A. 3 B. 4 C. 5 D. 6

10. A 2 km long pipe of 0.2 m diameter connects two reservoirs. The difference between water levels in the reservoirs is 8 m. The DarcyWeisbach friction factor of the pipe is 0.04.

Accounting for frictional, entry and exit losses, the velocity in the pipe (in m/s) is:

- A. 0.63 B. 0.35 C. 2.52 D. 1.25

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

|                                                                                   |                                                                                                                               |            |           |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | <b>CE</b> |
|                                                                                   |                                                                                                                               |            |           |
| Programme & Branch :                                                              | <b>BTECH– Civil Engineering</b>                                                                                               | Semester : | <b>06</b> |
| Course Code & Name :                                                              | <b>CE352– Comprehensive exam</b>                                                                                              | Date :     |           |

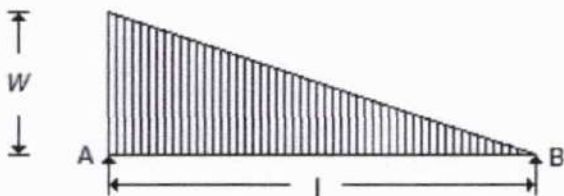
Maximum Marks :10

Duration: 15 Minutes

1. The section modulus of a circular section about an axis through its C.G. is

- A.  $\pi d^2/4$  B.  $\pi d^2/16$  C.  $\pi d^3/16$  ☒ D.  $\pi d^3/32$

2. A simply supported beam with a gradually varying load from zero at B and  $w$  per unit length at A is shown in the below figure. The shear force at B is equal to



- ☒ A.  $wl/6$  B.  $wl/3$  C.  $wl$  D.  $2wl/3$

$\frac{6}{10}$

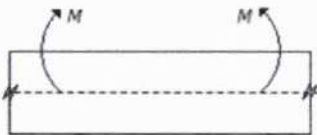
3. The compression test is carried on \_\_\_\_\_ materials.

- A. Ductile ☒ B. brittle C. malleable D. plastic

4. The modulus of elasticity for mild steel is approximately equal to

- A.  $10 \text{ kN/mm}^2$  B.  $80 \text{ kN/mm}^2$  C.  $100 \text{ kN/mm}^2$  ☒ D.  $210 \text{ kN/mm}^2$

5. A rectangular beam subjected to a bending moment is shown in the below figure. The upper layer of the beam will be in tension.



- A. True ☒ B. False

6. Critical depth ( $h$ ) of a channel, is

☒ A.  $h = \frac{v^2}{g}$

B.  $h = \frac{v^2}{2g}$

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



C.  $h = \frac{v}{2g}$

D.  $h = \frac{v}{g}$

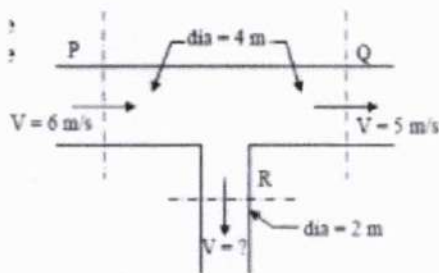
7. The side slope of Cipolletti weir is generally kept

- A. 1 to 4   B. 1 to 3   C. 1 to 2   D. 1 to 5

8. The dynamic viscosity of a fluid is 0.139 kgf-sec/. If the specific gravity of fluid is 0.95 its kinematic viscosity is

- A. 0.1463   B. 0.001435   C. 0.000146   D. 0.5

9. The circular water pipes shown in the sketch are flowing full. The velocity of flow (in m/s) in the branch pipe "R" is




- A. 3   B. 4   C. 5   D. 6

10. A 2 km long pipe of 0.2 m diameter connects two reservoirs. The difference between water levels in the reservoirs is 8 m. The DarcyWeisbach friction factor of the pipe is 0.04. Accounting for frictional, entry and exit losses, the velocity in the pipe (in m/s) is:

- A. 0.63   B. 0.35   C. 2.52   D. 1.25

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

|                                                                                   |  |                                                                                                                               |            |           |
|-----------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|  |  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | <b>CE</b> |
|                                                                                   |  |                                                                                                                               |            |           |
| Programme & Branch :                                                              |  | <b>BTECH– Civil Engineering</b>                                                                                               | Semester : | <b>06</b> |
| Course Code & Name :                                                              |  | <b>CE352– Comprehensive exam</b>                                                                                              | Date :     |           |

Maximum Marks : 10

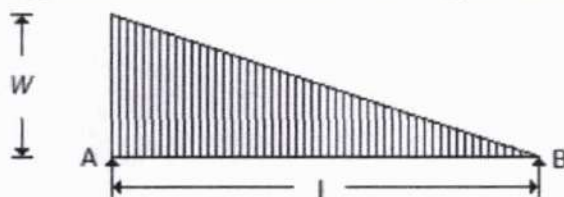
Duration: 15 Minutes

1. The section modulus of a circular section about an axis through its C.G., is

- A.  $\pi d^2/4$  B.  $\pi d^2/16$  C.  $\pi d^3/16$  **D.  $\pi d^3/32$**

6  
10

2. A simply supported beam with a gradually varying load from zero at B and  $w$  per unit length at A is shown in the below figure. The shear force at B is equal to



- A.  $wl/6$  B.  $wl/3$  C.  $wl$  D.  $2wl/3$

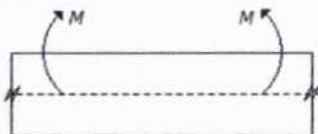
3. The compression test is carried on \_\_\_\_\_ materials.

- A. Ductile **B. brittle** C. malleable D. plastic

4. The modulus of elasticity for mild steel is approximately equal to

- A.  $10 \text{ kN/mm}^2$  B.  $80 \text{ kN/mm}^2$  C.  $100 \text{ kN/mm}^2$  **D.  $210 \text{ kN/mm}^2$**

5. A rectangular beam subjected to a bending moment is shown in the below figure. The upper layer of the beam will be in tension.



- A. True **B. False**

6. Critical depth ( $h$ ) of a channel, is

**A.  $h = \frac{v^2}{g}$**

B.  $h = \frac{v^2}{2g}$

*Leena*  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



C.  $h = \frac{v}{2g}$

D.  $h = \frac{v}{g}$

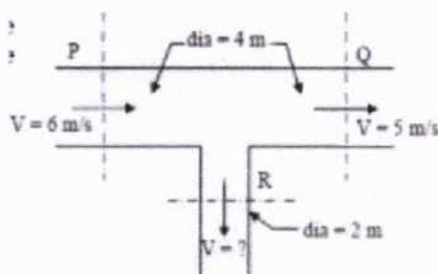
7. The side slope of Cipolletti weir is generally kept

- A. 1 to 4    **B. 1 to 3**    C. 1 to 2    D. 1 to 5

8. The dynamic viscosity of a fluid is 0.139 kgf-sec/. If the specific gravity of fluid is 0.95 its kinematic viscosity is

- A. 0.1463    **B. 0.001435**    C. 0.000146    D. 0.5

9. The circular water pipes shown in the sketch are flowing full. The velocity of flow (in m/s) in the branch pipe "R" is




- A. 3    B. 4    **C. 5**    D. 6

10. A 2 km long pipe of 0.2 m diameter connects two reservoirs. The difference between water levels in the reservoirs is 8 m. The DarcyWeisbach friction factor of the pipe is 0.04. Accounting for frictional, entry and exit losses, the velocity in the pipe (in m/s) is:

- A. 0.63**    B. 0.35    C. 2.52    **D. 1.25**

*Leena*  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PATTANUR, KANNUR

|                                                                                   |                                                                                                                               |            |           |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY</b><br>(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY) |            | <b>CE</b> |
|                                                                                   |                                                                                                                               |            |           |
|                                                                                   |                                                                                                                               |            |           |
| Programme & Branch :                                                              | <b>BTECH– Civil Engineering</b>                                                                                               | Semester : | <b>06</b> |
| Course Code & Name :                                                              | <b>CE352– Comprehensive exam</b>                                                                                              | Date :     |           |

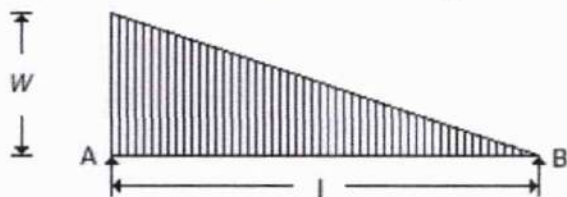
Maximum Marks :10

Duration: 15 Minutes

1. The section modulus of a circular section about an axis through its C.G., is

- A.  $\pi d^2/4$  B.  $\pi d^2/16$  C.  $\pi d^3/16$  D.  $\pi d^3/32$  ✓

2. A simply supported beam with a gradually varying load from zero at B and  $w$  per unit length at A is shown in the below figure. The shear force at B is equal to



- ✓ A.  $wl/6$  B.  $wl/3$  C.  $wl$  D.  $2wl/3$  ✓

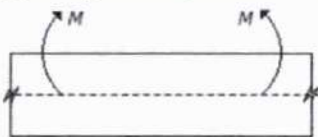
3. The compression test is carried on \_\_\_\_\_ materials.

- A. Ductile B. ~~brittle~~ C. malleable D. plastic ✓

4. The modulus of elasticity for mild steel is approximately equal to

- A.  $10 \text{ kN/mm}^2$  B.  $80 \text{ kN/mm}^2$  C.  $100 \text{ kN/mm}^2$  D.  $210 \text{ kN/mm}^2$  ✓

5. A rectangular beam subjected to a bending moment is shown in the below figure. The upper layer of the beam will be in tension.



- A. True B. ~~False~~ ✓

6. Critical depth ( $h$ ) of a channel, is

A.  $h = \frac{v^2}{g}$

✓ B.  $h = \frac{v^2}{2g}$  ✓

*Leena*  
 Dr. LEENA A V  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR



C.  $h = \frac{v}{2g}$

D.  $h = \frac{v}{g}$

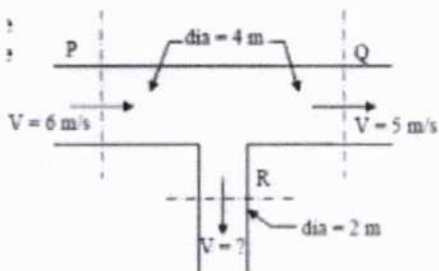
7. The side slope of Cipolletti weir is generally kept

- ☒ A. 1 to 4    B. 1 to 3    C. 1 to 2    D. 1 to 5

8. The dynamic viscosity of a fluid is 0.139 kgf-sec/. If the specific gravity of fluid is 0.95 its kinematic viscosity is

- A. 0.1463    B. 0.001435    ☒ C. 0.000146    D. 0.5

9. The circular water pipes shown in the sketch are flowing full. The velocity of flow (in m/s) in the branch pipe "R" is



- A. 3    ☒ B. 4    C. 5    D. 6

10. A 2 km long pipe of 0.2 m diameter connects two reservoirs. The difference between water levels in the reservoirs is 8 m. The DarcyWeisbach friction factor of the pipe is 0.04. Accounting for frictional, entry and exit losses, the velocity in the pipe (in m/s) is:

- ☒ A. 0.63    B. 0.35    C. 2.52    ☒ D. 1.25

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

### Experiments Completed

Laboratory (1): MICROCONTROLLER LAB Code: EC334

Class: IIIrd Year VIIth Semester ECE Branch

| Duration             | End of 4 <sup>th</sup> week | End of 8 <sup>th</sup> week | End of 12 <sup>th</sup> week | End of Semester           |
|----------------------|-----------------------------|-----------------------------|------------------------------|---------------------------|
| Details              |                             |                             |                              |                           |
| % of Portion covered | Two experiments completed   | 8 experiments completed     | 10 experiments completed     | All experiments completed |
| Signature of Staff   | <u>Leena</u><br>23/2/19     | <u>Leena</u><br>23/3/19     | <u>Leena</u><br>27/4/19      | <u>Leena</u><br>14/5/19   |
| Signature of HOD     | <u>Leena</u><br>23/2/19     | <u>Leena</u><br>23/3/19     | <u>Leena</u><br>27/4/19      | <u>Leena</u><br>14/5/19   |
| Signature of Auditor |                             |                             |                              |                           |

### Experiments Completed

Laboratory (2): COMPREHENSIVE EXAMINATION Code: EC352

Class: IIIrd Year VI Semester ECE Branch

| Duration             | End of 4 <sup>th</sup> week | End of 8 <sup>th</sup> week | End of 12 <sup>th</sup> week | End of Semester              |
|----------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|
| Details              |                             |                             |                              |                              |
| % of Portion covered | One viva session completed  | Two mock tests completed    | One viva session completed   | External viva exam completed |
| Signature of Staff   | <u>Leena</u><br>22/2/19     | <u>Leena</u><br>23/3/19     | <u>Leena</u><br>27/4/19      | <u>Leena</u><br>14/5/19      |
| Signature of HOD     | <u>Leena</u><br>22/2/19     | <u>Leena</u><br>23/3/19     | <u>Leena</u><br>27/4/19      | <u>Leena</u><br>14/5/19      |
| Signature of Auditor |                             |                             |                              |                              |

Leena

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



# Lab Attendance and Assessment

Laboratory (2): Comprehensive Exam Code: EC352 Class: IIIrd Year

| Sl.No | Reg. No. | Name                             | Month   | 2  | 2  | 2  | 2  | 1  | 3  | 3  | 3  | 4  | 4  |
|-------|----------|----------------------------------|---------|----|----|----|----|----|----|----|----|----|----|
|       |          |                                  | Date    | 4  | 5  | 8  | 22 | 31 | 15 | 22 | 29 | 12 | 12 |
|       |          |                                  | Session | 6  | 6  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 6  |
| 1.    | EC001    | Afeefa K.                        | (F)     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 2.    | EC002    | Anagha P.                        | (F)     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 3.    | EC003    | Aryali Babu K.                   | (F)     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 4.    | EC004    | Aryasree Vijayaraj D.            | (F)     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 5.    | EC005    | Arunathi K.T.                    | (F)     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 6.    | EC006    | Athina Anil                      | (F)     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 7.    | EC007    | Athulya K.C.                     | (F)     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 8.    | EC008    | Harsha Shankar                   | (F)     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 9.    | EC009    | K.P. Anupriya                    | (F)     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 10.   | EC010    | Naveena M.                       | (F)     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 11.   | EC011    | Naveya Bhaskaran                 | (F)     | /  | /  | /  | A  | /  | /  | /  | /  | /  | /  |
| 12.   | EC012    | Sae Hani                         |         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 13.   | EC013    | Sudeep K.S.                      |         | /  | /  | /  | A  | /  | /  | /  | A  | /  | /  |
| 14.   | EC014    | Vijin P.V.                       |         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 15.   | EC015    | Vismitha Pramod                  | (F)     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 16.   |          |                                  |         | h  | h  | h  | h  | h  | h  | h  | h  | h  | h  |
| 17.   |          | Total number of students present |         | 0  | 0  | 0  | 2  | 0  | 0  | 0  | 1  | 1  | 1  |
| 18.   |          | Total number of students present |         | 15 | 15 | 15 | 13 | 15 | 15 | 15 | 14 | 14 | 14 |
| 19.   |          | Total strength                   |         | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 20.   |          |                                  |         |    |    |    |    |    |    |    |    |    |    |
| 21.   |          |                                  |         |    |    |    |    |    |    |    |    |    |    |
| 22.   |          |                                  |         |    |    |    |    |    |    |    |    |    |    |
| 23.   |          |                                  |         |    |    |    |    |    |    |    |    |    |    |
| 24.   |          |                                  |         |    |    |    |    |    |    |    |    |    |    |
| 25.   |          |                                  |         |    |    |    |    |    |    |    |    |    |    |
| 26.   |          |                                  |         |    |    |    |    |    |    |    |    |    |    |
| 27.   |          |                                  |         |    |    |    |    |    |    |    |    |    |    |
| 28.   |          |                                  |         |    |    |    |    |    |    |    |    |    |    |
| 29.   |          |                                  |         |    |    |    |    |    |    |    |    |    |    |
| 30.   |          |                                  |         |    |    |    |    |    |    |    |    |    |    |
| 31.   |          |                                  |         |    |    |    |    |    |    |    |    |    |    |

*Leena*  
**DR. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR

VIIth Semester ECE Branch

| Sl.No | ← APRIL →                  | ← MAY →             |
|-------|----------------------------|---------------------|
|       | 16 16 16 26 26 29 3 3 7 8  | 1 4 6 5 6 5 5 6 3 3 |
| 1.    | A / / / / / / / / /        | / / / / / / / / /   |
| 2.    | / / / / / / / / /          | / / / / / / / / /   |
| 3.    | / / / / / / / / /          | / / / / / / / / /   |
| 4.    | / / / / / / / / /          | / / / / / / / / /   |
| 5.    | / / / / / / / / /          | / / / / / / / / /   |
| 6.    | / / / / / / / / /          | / / / / / / / / /   |
| 7.    | / / / / / / / / /          | / / / / / / / / /   |
| 8.    | / AA / / / / / / /         | / / / / / / / / /   |
| 9.    | / / / / / / / / /          | / / / / / / / / A   |
| 10.   | / / / / / / / / /          | / / / / / / / / /   |
| 11.   | / / / / / / / / /          | / / / / / / / / /   |
| 12.   | A / / / / / / / / /        | / / / / / / / / /   |
| 13.   | / AA / / / / / / /         | / / / / / / / / /   |
| 14.   | / / / / / / / / /          | / / / / / / / / /   |
| 15.   | / / / / / / / / /          | / / / / / / / / A   |
| 16.   | h h h h h h h h h          | h h h h h h h h h   |
| 17.   | 2 2 2 0 0 0 0 0 2          | / / / / / / / / /   |
| 18.   | 13 13 13 15 15 15 15 15 13 | / / / / / / / / /   |
| 19.   | 15 15 15 15 15 15 15 15 15 | / / / / / / / / /   |
| 20.   |                            |                     |
| 21.   |                            |                     |
| 22.   |                            |                     |
| 23.   |                            |                     |
| 24.   |                            |                     |
| 25.   |                            |                     |
| 26.   |                            |                     |
| 27.   |                            |                     |
| 28.   |                            |                     |
| 29.   |                            |                     |
| 30.   |                            |                     |



[illegible][illegible]

604





**SREE NARAYANA GURU  
COLLEGE OF ENGINEERING & TECHNOLOGY  
PAYYANUR**

(PROMOTED BY SREE BHAKTHI SAMVARDHINI YOGAM, KANNUR)  
CHALAKODE P.O., PAYYANUR, KANNUR-670307, KERALA

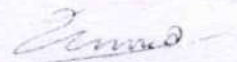



**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

**STUDENT LIST**

**(2016-2020) BATCH**

| Sl. No. | University<br>Reg. No. | Name                |
|---------|------------------------|---------------------|
| 1       | SNC16EC001             | Afeefa K            |
| 2       | SNC16EC002             | Anagha P            |
| 3       | SNC16EC003             | Anjali Babu K       |
| 4       | SNC16EC004             | Aryasree Vijayraj D |
| 5       | SNC16EC005             | Aswathi K T         |
| 6       | SNC16EC006             | Athena Anil         |
| 7       | SNC16EC007             | Athulya K C         |
| 8       | SNC16EC008             | Harsha Sankar       |
| 9       | SNC16EC009             | K P Anupriya        |
| 10      | SNC16EC010             | Naveena M           |
| 11      | SNC16EC011             | Navya Bhaskaran     |
| 12      | SNC16EC012             | Sreehari            |
| 13      | SNC16EC013             | Sudeep K S          |
| 14      | SNC16EC014             | Vipin P V           |
| 15      | SNC16EC015             | Vismitha Pramod     |

  
**HoD  
ECE**

  
**Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR**

SNGCMS

SNGCET-DATACENTRE



# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

Promoted by Sree Bhakthi Samvardhini Yogam

(Affiliated to KTU, Recognised by AICTE)

Cumulative attendance of 2016-2020 EC S6 till 22/5/2019-11:04:57 AM

## Subject : Comprehensive Exam (COMPEXAM)

| Register No. | Student Name         | Hour Present | Hour Absent | Percentage |
|--------------|----------------------|--------------|-------------|------------|
| SNC16EC001   | AFEEFA K             | 27           | 3           | 90         |
| SNC16EC002   | ANAGHA P             | 27           | 3           | 90         |
| SNC16EC003   | ANJALI BABU K        | 27           | 3           | 90         |
| SNC16EC004   | ARYASREE VIJAYARAJ.D | 27           | 3           | 90         |
| SNC16EC005   | ASWATHI K T          | 27           | 3           | 90         |
| SNC16EC006   | ATHENA ANIL          | 27           | 3           | 90         |
| SNC16EC007   | ATHULYA KC           | 27           | 3           | 90         |
| SNC16EC008   | HARSHA SHANKAR       | 27           | 3           | 90         |
| SNC16EC009   | KP ANUPRIYA          | 26           | 4           | 86.67      |
| SNC16EC010   | NAVEENA.M            | 27           | 3           | 90         |
| SNC16EC011   | NAVYA BHASKARAN      | 25           | 5           | 83.33      |
| SNC16EC012   | SREE HARI            | 25           | 5           | 83.33      |
| SNC16EC013   | SUDEEP K S           | 23           | 7           | 76.67      |
| SNC16EC014   | VIPIN P V            | 27           | 3           | 90         |
| SNC16EC015   | VISMITHA PRAMOD      | 26           | 4           | 86.67      |

*[Signature]*  
22/5/19

*[Signature]*  
22/5/19

*[Signature]*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR





# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

Promoted by Sree Bhakthi Samvardhini Yogam

(Affiliated to KTU, Recognised by AICTE)

Cumulative attendance of 2016-2020 EC S6 till 28/2/2019-11:17:03 AM

## Subject : Comprehensive Exam (COMP.EXAM)

| Register No. | Student Name         | Hour Present | Hour Absent | Percentage |
|--------------|----------------------|--------------|-------------|------------|
| SNC16EC001   | AFEEFA K             | 8            | 0           | 100        |
| SNC16EC002   | ANAGHA P             | 8            | 0           | 100        |
| SNC16EC003   | ANJALI BABU K        | 8            | 0           | 100        |
| SNC16EC004   | ARYASREE VIJAYARAJ.D | 8            | 0           | 100        |
| SNC16EC005   | ASWATHI K T          | 8            | 0           | 100        |
| SNC16EC006   | ATHENA ANIL          | 8            | 0           | 100        |
| SNC16EC007   | ATHULYA KC           | 8            | 0           | 100        |
| SNC16EC008   | HARSHA SHANKAR       | 8            | 0           | 100        |
| SNC16EC009   | KP ANUPRIYA          | 8            | 0           | 100        |
| SNC16EC010   | NAVEENA.M            | 8            | 0           | 100        |
| SNC16EC011   | NAVYA BHASKARAN      | 6            | 2           | 75         |
| SNC16EC012   | SREE HARI            | 8            | 0           | 100        |
| SNC16EC013   | SUDEEP K S           | 6            | 2           | 75         |
| SNC16EC014   | VIPIN P V            | 8            | 0           | 100        |
| SNC16EC015   | VISMITHA PRAMOD      | 8            | 0           | 100        |

28/2/19

28/2/19  
(HOD (ECE))

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

SNGCMS

SNGCET-DATACENTRE


**SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY**
**Promoted by Sree Bhakthi Samvardhini Yogam**

(Affiliated to KTU, Recognised by AICTE)

**Cumulative attendance of 2016-2020 EC S6 till 10/4/2019-10:42:40 AM**
**Subject : Comprehensive Exam (COMP.EXAM)**

| Register No. | Student Name         | Hour Present | Hour Absent | Percentage |
|--------------|----------------------|--------------|-------------|------------|
| SNC16EC001   | AFEEFA K             | 14           | 0           | 100        |
| SNC16EC002   | ANAGHA P             | 14           | 0           | 100        |
| SNC16EC003   | ANJALI BABU K        | 14           | 0           | 100        |
| SNC16EC004   | ARYASREE VIJAYARAJ.D | 14           | 0           | 100        |
| SNC16EC005   | ASWATHI K T          | 14           | 0           | 100        |
| SNC16EC006   | ATHENA ANIL          | 14           | 0           | 100        |
| SNC16EC007   | ATHULYA KC           | 14           | 0           | 100        |
| SNC16EC008   | HARSHA SHANKAR       | 14           | 0           | 100        |
| SNC16EC009   | KP ANUPRIYA          | 14           | 0           | 100        |
| SNC16EC010   | NAVEENA M            | 14           | 0           | 100        |
| SNC16EC011   | NAVYA BHASKARAN      | 12           | 2           | 85.71      |
| SNC16EC012   | SREE HARI            | 14           | 0           | 100        |
| SNC16EC013   | SUDEEP K S           | 10           | 4           | 71.43      |
| SNC16EC014   | VIPIN P V            | 14           | 0           | 100        |
| SNC16EC015   | VISMITHA PRAMOD      | 14           | 0           | 100        |

10/4/19

10/4/19

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



SNGCMS

SNGCET-DATACENTRE



# SREE NARAYANA GURU COLLEGE OF ENGINEERING & TECHNOLOGY

Promoted by Sree Bhakthi Samvardhini Yogam

(Affiliated to KTU, Recognised by AICTE)

Student batch list for the class 2016 2020 BTECH EC S6


| S.No. | Register No. | Student_Name         | Roll No. |
|-------|--------------|----------------------|----------|
| 1     | SNC16EC001   | AFEEFA K             | 1        |
| 2     | SNC16EC002   | ANAGHA P             | 2        |
| 3     | SNC16EC003   | ANJALI BABU K        | 3        |
| 4     | SNC16EC004   | ARYASREE VIJAYARAJ.D | 4        |
| 5     | SNC16EC005   | ASWATHI K T          | 5        |
| 6     | SNC16EC006   | ATHENA ANIL          | 6        |
| 7     | SNC16EC007   | ATHULYA KC           | 7        |
| 8     | SNC16EC008   | HARSHA SHANKAR       | 8        |
| 9     | SNC16EC009   | KP ANUPRIYA          | 9        |
| 10    | SNC16EC010   | NAVEENA.M            | 10       |
| 11    | SNC16EC011   | NAVYA BHASKARAN      | 11       |
| 12    | SNC16EC012   | SREE HARI            | 12       |
| 13    | SNC16EC013   | SUDEEP K S           | 13       |
| 14    | SNC16EC014   | VIPIN P V            | 14       |
| 15    | SNC16EC015   | VISMITHA PRAMOD      | 15       |

*Leena*  
28/11/19


*[Signature]*  
28/11/19

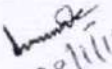
(HOD (ECE))

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

|                                                                                   |                                                                                      |                             |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------|
|  | <b>SREE NARAYANA GURU COLLEGE OF ENGINEERING &amp; TECHNOLOGY</b><br><b>PAYYANUR</b> | <b>ECE</b>                  |
| <b>COMPREHENSIVE EXAMINATION VIVA QUESTIONS</b>                                   |                                                                                      |                             |
| <b>Programme &amp; Branch</b>                                                     | <b>BTech – Electronics and Communication Engineering</b>                             | <b>Semester</b> <b>06</b>   |
| <b>Course Code &amp; Name</b>                                                     | <b>EC 352 – Comprehensive Examination</b>                                            | <b>Date</b> <b>28/01/19</b> |

1. What are AM demodulation techniques?
2. What is the maximum transmission efficiency of an AM signal?
3. What are requirements of synchronous detection of AM signal ?
4. What are limitations of Frequency discrimination method ?
5. What is Automatic gain control ?
6. What are examples of low level modulation ?
7. What are advantages of using an RF amplifier ?
8. What is the standard value for Intermediate frequency (IF) in AM receivers ?
9. What are the functions of radio receiver ?
10. What is frequency deviation in FM ?
11. What is the modulation index of FM ?
12. What is associated with random motion due to thermal agitation in the movement of holes and electrons in a silicon crystal?
13. What is another name for a pn crystal ?
14. What is the barrier potential of germanium at 25°C ?
15. What is the other name of Esaki diode?
16. What is Crossover distortion?
17. What is the main advantage of FM over AM?
18. What is Race around condition?
19. What is difference between combinational and sequential circuits?
20. How many flipflops are required to implement Mod 7 counter?

  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR

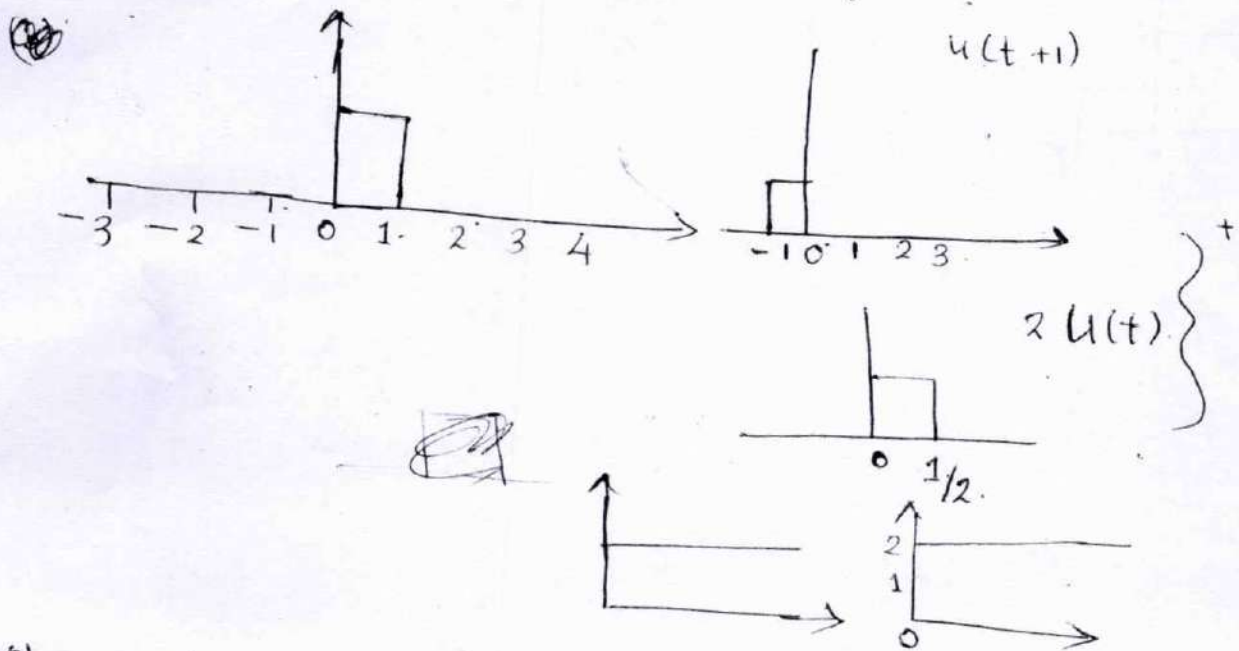
  
 28/1/19



(1) Sketch the sll

$$x(t) = u(t+1) + 2u(t)$$

(2) find even and odd component of  $x(t) = 1 + t + t^2$



(2) even sll

$$x(t) = x(-t)$$

$$x(t) = 1 + t + t^2$$

$$= 1 + \left(\frac{t+2}{2}\right) + \left(\frac{t+2}{2}\right)^2$$

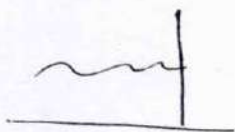
$$= 1 + \frac{t+2}{2} +$$

odd sll

$$-x(t) = x(-t)$$

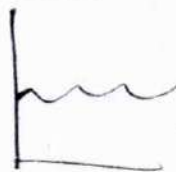
(3) Causal & Antcausal sll

Anticausal sll



sll defined only for  
+ve values

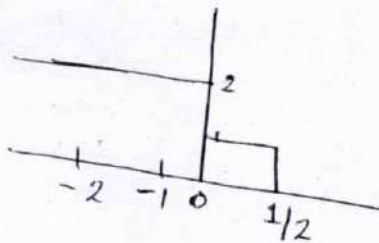
Causal



sll defined only  
for +ve value

*Leena*

$u(t+1)$



*Leena*

DR. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

*Leena*

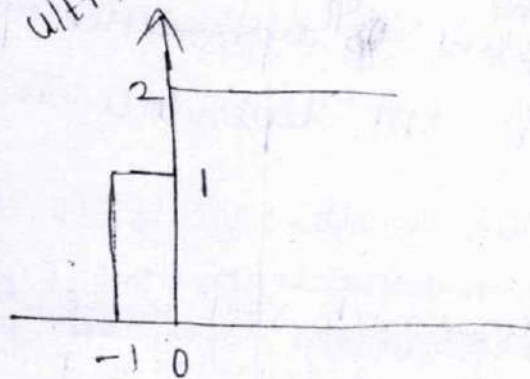
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



1) Sketch the signal  $x(t) = u(t+1) + 2 \cdot u(t)$  Roll no. 4

2) Find even & odd components of  $x(t) = 1 + t + t^2$

1)  $u(t+1) + 2u(t)$



2)  $x(t) = 1 + t + t^2$

$$x(-t) = 1 - t + t^2$$

$$-x(t) = 1 - t - t^2$$

$$\text{Even component} = \frac{x(t) + x(-t)}{2}$$

$$= \frac{1 + \cancel{t} + t^2 + 1 - \cancel{t} + t^2}{2}$$

$$= \frac{2 + 2t^2}{2} = \underline{\underline{1 + t^2}}$$

$$\text{Odd component} = \frac{x(-t) - x(t)}{2}$$

$$= \frac{1 - \cancel{t} + \cancel{t^2} + 1 - \cancel{t} - \cancel{t^2}}{2}$$

$$= \frac{2 - 2t}{2} = \underline{\underline{1 - t}}$$

3) ~~to~~ define causal & anticausal s/m.

4) Invertible & Non invertible

3) causal s/m: A system which said to be causal s/m which ~~depends~~ present ~~o/p~~ dependence upon the present and past ~~o/p~~ <sup>i/p</sup>. Not dependence ~~on~~ on future values of i/p

Anticausal s/m: A system which said to be Anti causal s/m ~~which~~ ~~depends~~ dependence upon the present, past the present o/p dependence upon the present ~~distinct o/p signal from distinct i/p s/l.~~

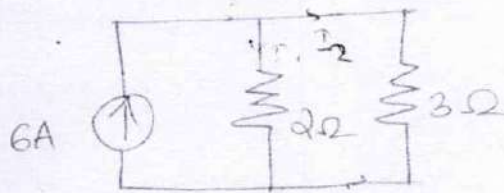
~~i/p can be recovered from its o/p~~  
past and future values of i/p.

4) Invertible s/m: A s/m a said to be invertible s/m when the i/p can be recovered from its o/p.  
A s/m is said to be noninvertible & which ~~do not~~ can't recovered from its o/p



①

Vyran . P. V  
Roll no. 134



$$\frac{8}{10} \quad \frac{22/2/19}{22/2/19}$$

Find current in  $2\Omega$  &  $3\Omega$  resistor.

Ans)

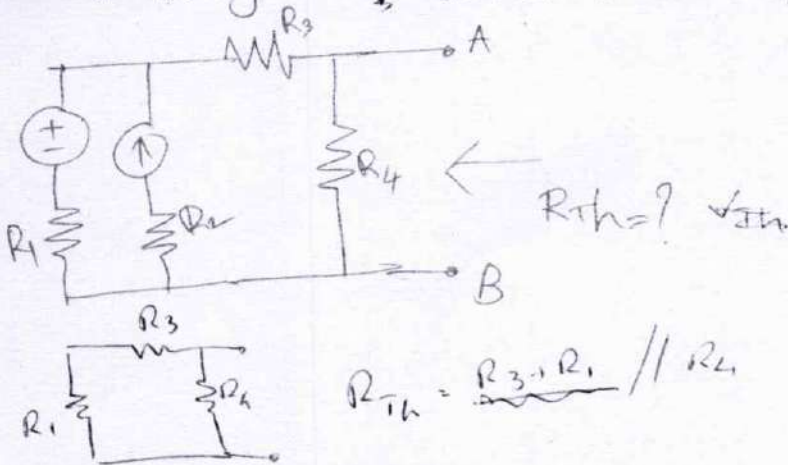
$$I_1 = \frac{I \times 3}{5} = \frac{18}{5}$$

$$I_2 = \frac{I \times 2}{5} = \frac{12}{5}$$

12

2) Thevenin's Theorem:

It states that any linear two terminal network consist of more than one current source, voltage source and impedance then the circuit can be converted into a single equivalent circuit consist of one equivalent voltage in series with impedance.



*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

FIRST MOCK TEST  
COMPREHENSIVE EXAMINATION

NAME: Argasree Vijayaraj D ROLL NO. 04

|    |     |    |     |    |   |   |
|----|-----|----|-----|----|---|---|
| 1  | b ✓ | 21 | d ✓ | 41 | a | ✓ |
| 2  | a ✓ | 22 | b X | 42 | a | X |
| 3  | b X | 23 | c ✓ | 43 | b | ✓ |
| 4  | a ✓ | 24 | a ✓ | 44 | a | ✓ |
| 5  | c X | 25 | c ✓ | 45 | d | ✓ |
| 6  | c ✓ | 26 | d X | 46 | d | ✓ |
| 7  | a X | 27 | c X | 47 | a | X |
| 8  | d X | 28 | d X | 48 | a | ✓ |
| 9  | a X | 29 | c X | 49 | a | ✓ |
| 10 | d X | 30 | c ✓ | 50 | b | X |
| 11 | a ✓ | 31 | a X |    |   |   |
| 12 | c X | 32 | b ✓ |    |   |   |
| 13 | d X | 33 | c X |    |   |   |
| 14 | b ✓ | 34 | b X |    |   |   |
| 15 | b ✓ | 35 | a ✓ |    |   |   |
| 16 | a X | 36 | b ✓ |    |   |   |
| 17 | d ✓ | 37 | b ✓ |    |   |   |
| 18 | a ✓ | 38 | c X |    |   |   |
| 19 | b X | 39 | a X |    |   |   |
| 20 | a ✓ | 40 | c X |    |   |   |

*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



FIRST MOCK TEST  
COMPREHENSIVE EXAMINATION

NAME: VISMITHA PRAMOD ROLL NO. 15

|    |     |    |      |    |   |   |
|----|-----|----|------|----|---|---|
| 1  | B ✓ | 21 | D. ✓ | 41 | A | ✓ |
| 2  | A ✓ | 22 | B ✗  | 42 | A | ✗ |
| 3  | C ✓ | 23 | A ✗  | 43 | B | ✓ |
| 4  | A ✓ | 24 | A ✓  | 44 | A | ✓ |
| 5  | C ✗ | 25 | C ✓  | 45 | D | ✓ |
| 6  | B ✗ | 26 | D ✗  | 46 | C | ✗ |
| 7  | A ✗ | 27 | C ✗  | 47 | A | ✗ |
| 8  | B ✓ | 28 | C ✓  | 48 | B | ✗ |
| 9  | A ✗ | 29 | A ✗  | 49 | A | ✓ |
| 10 | B ✗ | 30 | C ✓  | 50 | B | ✗ |
| 11 | A ✓ | 31 | B ✓  |    |   |   |
| 12 | B ✓ | 32 | D. ✗ |    |   |   |
| 13 | C ✓ | 33 | D. ✗ |    |   |   |
| 14 | B ✓ | 34 | D. ✗ |    |   |   |
| 15 | A ✗ | 35 | B ✗  |    |   |   |
| 16 | A ✗ | 36 | D ✗  |    |   |   |
| 17 | D ✓ | 37 | A ✗  |    |   |   |
| 18 | B ✗ | 38 | A ✗  |    |   |   |
| 19 | A ✗ | 39 | B ✓  |    |   |   |
| 20 | A ✓ | 40 | B ✗  |    |   |   |

23  
50  
Le  
1573119

*Leena*  
Dr. LEENA A V

PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



FIRST MODEL TEST  
COMPREHENSIVE EXAMINATION

NAME: Aswathi K.T ROLL NO. 5

|    |     |    |     |    |   |   |
|----|-----|----|-----|----|---|---|
| 1  | b ✓ | 21 | X   | 41 | d | X |
| 2  | b X | 22 | c ✓ | 42 |   | X |
| 3  | b X | 23 | c ✓ | 43 | b | ✓ |
| 4  | X   | 24 | X   | 44 | a | ✓ |
| 5  | X   | 25 | a X | 45 | a | X |
| 6  | c ✓ | 26 | a X | 46 | d | ✓ |
| 7  | d X | 27 | c X | 47 |   | X |
| 8  | X   | 28 | X   | 48 |   | X |
| 9  | a X | 29 | b ✓ | 49 | a | ✓ |
| 10 |     | 30 | X   | 50 |   | X |
| 11 |     | 31 | X   |    |   |   |
| 12 |     | 32 | X   |    |   |   |
| 13 |     | 33 | a ✓ |    |   |   |
| 14 |     | 34 | X   |    |   |   |
| 15 |     | 35 | b X |    |   |   |
| 16 | d ✓ | 36 | c X |    |   |   |
| 17 | X   | 37 | b ✓ |    |   |   |
| 18 | X   | 38 | X   |    |   |   |
| 19 | d X | 39 | X   |    |   |   |
| 20 | X   | 40 | X   |    |   |   |

12  
50

Leena  
15/3/19

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



SECOND MOCK TEST  
COMPREHENSIVE EXAMINATION

| NAME: |     | Vipin P V |       | ROLL NO. 3 |     | 14 |
|-------|-----|-----------|-------|------------|-----|----|
| 1     | a ✓ | 21        | A ✗   | 41         | b ✗ |    |
| 2     | b ✗ | 22        | a ✓   | 42         | b ✓ |    |
| 3     | d ✓ | 23        | b ✗   | 43         | c ✓ |    |
| 4     | a ✓ | 24        | c ✓   | 44         | c ✗ |    |
| 5     | a ✓ | 25        | d ✗   | 45         | a ✓ |    |
| 6     | c ✓ | 26        | d ✗   | 46         | a ✓ |    |
| 7     | a ✓ | 27        | B ✗   | 47         | d ✗ |    |
| 8     | b ✓ | 28        | a ✗   | 48         | c ✗ |    |
| 9     | a ✓ | 29        | b b ✓ | 49         | a ✓ |    |
| 10    | a ✓ | 30        | d ✗   | 50         | a ✓ |    |
| 11    | c ✓ | 31        | d ✓   |            |     |    |
| 12    | b ✓ | 32        | b ✗   |            |     |    |
| 13    | a ✓ | 33        | a ✓   |            |     |    |
| 14    | d ✓ | 34        | b ✓   |            |     |    |
| 15    | a ✓ | 35        | c ✓   |            |     |    |
| 16    | b ✓ | 36        | A ✗   |            |     |    |
| 17    | c ✓ | 37        | c ✗   |            |     |    |
| 18    | A ✗ | 38        | c ✓   |            |     |    |
| 19    | D ✗ | 39        | c ✓   |            |     |    |
| 20    | D ✗ | 40        | b ✗   |            |     |    |

*Leena*  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

SECOND MOCK TEST  
COMPREHENSIVE EXAMINATION

| NAME: |                  | ANJALI BABU |                  | ROLL NO. |     | 3 |
|-------|------------------|-------------|------------------|----------|-----|---|
| 1     | a ✓              | 21          | D ✗              | 41       | a ✗ |   |
| 2     | b ✗              | 22          | <del>b</del> a ✓ | 42       | a ✗ |   |
| 3     | a ✗              | 23          | b ✗              | 43       | d ✗ |   |
| 4     | d ✗              | 24          | A ✗              | 44       | b ✓ |   |
| 5     | a ✓              | 25          | c ✗              | 45       | d ✗ |   |
| 6     | c ✓              | 26          | c ✗              | 46       | a ✓ |   |
| 7     | a ✓              | 27          | c ✓              | 47       | a ✗ |   |
| 8     | b ✓              | 28          | a ✗              | 48       | c ✗ |   |
| 9     | a ✓              | 29          | b ✓              | 49       | a ✓ |   |
| 10    | a ✓              | 30          | b ✓              | 50       | b ✗ |   |
| 11    | c ✓              | 31          | c ✗              |          |     |   |
| 12    | a ✗              | 32          | b ✗              |          |     |   |
| 13    | a ✓              | 33          | A ✓              |          |     |   |
| 14    | d ✓              | 34          | c ✗              |          |     |   |
| 15    | <del>b</del> a ✓ | 35          | d ✗              |          |     |   |
| 16    | d ✗              | 36          | D ✓              |          |     |   |
| 17    | D ✗              | 37          | a ✗              |          |     |   |
| 18    | c ✓              | 38          | b ✗              |          |     |   |
| 19    | A ✗              | 39          | b ✗              |          |     |   |
| 20    | B ✗              | 40          | b ✗              |          |     |   |

21  
50

Leena  
29/3/19

Leena


Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANAGURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



SECOND MOCK TEST  
COMPREHENSIVE EXAMINATION

| NAME: |     | ATHULYA KL |     | ROLL NO. |     | 07 |
|-------|-----|------------|-----|----------|-----|----|
| 1     | a ✓ | 21         | B ✓ | 41       | c ✓ |    |
| 2     | c ✗ | 22         | d ✗ | 42       | b ✓ |    |
| 3     | d ✓ | 23         | d ✓ | 43       | d ✗ |    |
| 4     | d ✗ | 24         | c ✓ | 44       | b ✓ |    |
| 5     | d ✗ | 25         | C ✗ | 45       | c ✗ |    |
| 6     | b ✗ | 26         | C ✗ | 46       | c ✗ |    |
| 7     | a ✓ | 27         | D ✗ | 47       | a ✗ |    |
| 8     | b ✓ | 28         | B ✗ | 48       | c ✗ |    |
| 9     | b ✗ | 29         | c ✗ | 49       | a ✓ |    |
| 10    | a ✓ | 30         | a ✗ | 50       | b ✗ |    |
| 11    | c ✓ | 31         | a ✗ |          |     |    |
| 12    | a ✗ | 32         | c ✗ |          |     |    |
| 13    | b ✗ | 33         | b ✗ |          |     |    |
| 14    | d ✓ | 34         | d ✗ |          |     |    |
| 15    | c ✗ | 35         | a ✗ |          |     |    |
| 16    | d ✗ | 36         | b ✗ |          |     |    |
| 17    | B ✗ | 37         | c ✗ |          |     |    |
| 18    | B ✗ | 38         | c ✓ |          |     |    |
| 19    | A ✗ | 39         | b ✗ |          |     |    |
| 20    | D ✗ | 40         | a ✗ |          |     |    |

15  
50  
Leena  
29/3/19



Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

# COMPREHENSIVE EXAMINATION

| NAME:                                                                                                                                                                                                                                                                                                            |                  | ROLL NO. |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------|------|
| Anagha P                                                                                                                                                                                                                                                                                                         |                  | 2        |      |
| 1                                                                                                                                                                                                                                                                                                                | b ✓              | 21       | d ✓  |
| 2                                                                                                                                                                                                                                                                                                                | d X              | 22       | b X  |
| 3                                                                                                                                                                                                                                                                                                                | b X              | 23       | a X  |
| 4                                                                                                                                                                                                                                                                                                                | c X              | 24       | b X  |
| 5                                                                                                                                                                                                                                                                                                                | c X              | 25       | c ✓  |
| 6                                                                                                                                                                                                                                                                                                                | c ✓              | 26       | d) X |
| 7                                                                                                                                                                                                                                                                                                                | b ✓              | 27       | a X  |
| 8                                                                                                                                                                                                                                                                                                                | d X              | 28       | c ✓  |
| 9                                                                                                                                                                                                                                                                                                                | a X              | 29       | d X  |
| 10                                                                                                                                                                                                                                                                                                               | b X              | 30       | a X  |
| 11                                                                                                                                                                                                                                                                                                               | a ✓              | 31       | d X  |
| 12                                                                                                                                                                                                                                                                                                               | b ✓              | 32       | X    |
| 13                                                                                                                                                                                                                                                                                                               | <del>c</del> c ✓ | 33       | d X  |
| 14                                                                                                                                                                                                                                                                                                               | d X              | 34       | X    |
| 15                                                                                                                                                                                                                                                                                                               | a X              | 35       | a ✓  |
| 16                                                                                                                                                                                                                                                                                                               | d ✓              | 36       | X    |
| 17                                                                                                                                                                                                                                                                                                               | b X              | 37       | d X  |
| 18                                                                                                                                                                                                                                                                                                               | a ✓              | 38       | c X  |
| 19                                                                                                                                                                                                                                                                                                               | c ✓              | 39       | b ✓  |
| 20                                                                                                                                                                                                                                                                                                               | d X              | 40       | c X  |
| <div style="text-align: right;"> <br/> <b>Dr. LEENA A V</b><br/>           PRINCIPAL<br/>           SREE NARAYANA GURU COLLEGE OF<br/>           ENGINEERING &amp; TECHNOLOGY<br/>           PATTANUR, KANNUR         </div> |                  |          |      |

19  
50  
Lea



# COMPREHENSIVE EXAMINATION

NAME: AFEEFA · K ROLL NO. 01

|    |     |    |                  |    |                |   |
|----|-----|----|------------------|----|----------------|---|
| 1  | b ✓ | 21 | d ✓              | 41 | <del>a</del> a | ✓ |
| 2  | c ✗ | 22 | b ✗              | 42 | a              | ✗ |
| 3  | b ✗ | 23 | c ✓              | 43 | b              | ✓ |
| 4  | b ✗ | 24 | d ✓              | 44 | a              | ✓ |
| 5  | c ✗ | 25 | <del>c</del> c ✓ | 45 | b              | ✗ |
| 6  | c ✓ | 26 | c ✓              | 46 | d              | ✓ |
| 7  | d ✗ | 27 | c ✗              | 47 | a              | ✗ |
| 8  | b ✓ | 28 | a ✗              | 48 | a              | ✓ |
| 9  | c ✗ | 29 | a ✗              | 49 | a              | ✓ |
| 10 | d ✗ | 30 | b ✗              | 50 | d              | ✗ |
| 11 | d ✗ | 31 | d ✗              |    |                |   |
| 12 | b ✓ | 32 | b ✓              |    |                |   |
| 13 | d ✗ | 33 | a ✓              |    |                |   |
| 14 | d ✗ | 34 | b ✗              |    |                |   |
| 15 | a ✗ | 35 | b ✗              |    |                |   |
| 16 | a ✗ | 36 | a ✗              |    |                |   |
| 17 | c ✗ | 37 | b ✓              |    |                |   |
| 18 | d ✗ | 38 | d ✗              |    |                |   |
| 19 | a ✗ | 39 | a ✗              |    |                |   |
| 20 | a ✓ | 40 | c ✗              |    |                |   |

*Deena A V*

DR. DEENA A V  
PRINCIPAL  
SREE NARAYANAGURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

19  
50  
Le



# COMPREHENSIVE EXAMINATION

NAME:

Sreehari

ROLL NO.

12

|    |       |    |     |    |     |   |
|----|-------|----|-----|----|-----|---|
| 1  | B B ✓ | 21 | C X | 41 | B   | X |
| 2  | B X   | 22 | C ✓ | 42 | B   | ✓ |
| 3  | B X   | 23 | D X | 43 | B   | ✓ |
| 4  | B X   | 24 | D X | 44 | A   | ✓ |
| 5  | A ✓   | 25 | C ✓ | 45 | D   | ✓ |
| 6  | C ✓   | 26 | A X | 46 | C   | X |
| 7  | B ✓   | 27 | C X | 47 | A   | X |
| 8  | C X   | 28 | A X | 48 | B   | X |
| 9  | C X   | 29 | B ✓ | 49 | B B | X |
| 10 | B X   | 30 | C ✓ | 50 |     |   |
| 11 | C X   | 31 | C X |    |     |   |
| 12 | D ✓   | 32 | A X |    |     |   |
| 13 | C ✓   | 33 | C X |    |     |   |
| 14 | D X   | 34 | D X |    |     |   |
| 15 | B ✓   | 35 | C X |    |     |   |
| 16 | B X   | 36 | C X |    |     |   |
| 17 | C X   | 37 | D X |    |     |   |
| 18 | A ✓   | 38 | C X |    |     |   |
| 19 | B X   | 39 | B ✓ |    |     |   |
| 20 | D X   | 40 | A X |    |     |   |

*Leena*

Dr. LEENA A V

PRINCIPAL

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANAM, KANNUR



# COMPREHENSIVE EXAMINATION

NAME: KP ANDPRIYA ROLL NO. 09

|    |       |    |       |    |     |   |
|----|-------|----|-------|----|-----|---|
| 1  | (b) ✓ | 21 | (d) ✓ | 41 | (a) | ✓ |
| 2  | (d) X | 22 | (c) ✓ | 42 | (b) | ✓ |
| 3  | (b) X | 23 | (c) ✓ | 43 | (b) | ✓ |
| 4  | (c) X | 24 | (d) X | 44 | (a) | ✓ |
| 5  | (a) ✓ | 25 | (c) ✓ | 45 | (d) | ✓ |
| 6  | (b) X | 26 | (d) X | 46 | (d) | ✓ |
| 7  | (d) X | 27 | (c) X | 47 | (a) | X |
| 8  | (c) X | 28 | (a) X | 48 | (d) | X |
| 9  | (b) X | 29 | (d) X | 49 | (a) | ✓ |
| 10 | (c) X | 30 | (a) X | 50 | (b) | X |
| 11 | (a) ✓ | 31 | (a) X |    |     |   |
| 12 | (b) ✓ | 32 | (c) X |    |     |   |
| 13 | (c) ✓ | 33 | (a) ✓ |    |     |   |
| 14 | (a) X | 34 | (b) X |    |     |   |
| 15 | (b) ✓ | 35 | (a) ✓ |    |     |   |
| 16 | (d) ✓ | 36 | (d) X |    |     |   |
| 17 | (d) ✓ | 37 | (c) X |    |     |   |
| 18 | (b) X | 38 | (c) X |    |     |   |
| 19 | (b) X | 39 | (a) X |    |     |   |
| 20 | (b) X | 40 | (c) X |    |     |   |

*Leena*

Dr. LEENA AV  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

21  
50  
Lena



# COMPREHENSIVE EXAMINATION

NAME: Athulya KC ROLL NO. 07


|    |     |    |     |    |           |   |
|----|-----|----|-----|----|-----------|---|
| 1  | a X | 21 | c X | 41 | b         | X |
| 2  | a ✓ | 22 | a X | 42 | b         | ✓ |
| 3  | c ✓ | 23 | c ✓ | 43 | (b) watts | ✓ |
| 4  | d X | 24 | b X | 44 | a         | ✓ |
| 5  | d X | 25 | b X | 45 | b         | X |
| 6  | b X | 26 | d X | 46 | d         | ✓ |
| 7  | b ✓ | 27 | c X | 47 | b         | ✓ |
| 8  | c X | 28 | c ✓ | 48 | d         | X |
| 9  | c X | 29 | a X | 49 | a         | ✓ |
| 10 | d X | 30 | b X | 50 | a         | ✓ |
| 11 | a ✓ | 31 | b ✓ |    |           |   |
| 12 | d X | 32 | b ✓ |    |           |   |
| 13 | b X | 33 | d X |    |           |   |
| 14 | d X | 34 | X   |    |           |   |
| 15 | b ✓ | 35 | b X |    |           |   |
| 16 | b X | 36 | a X |    |           |   |
| 17 | d ✓ | 37 | b ✓ |    |           |   |
| 18 | b X | 38 | c X |    |           |   |
| 19 | b X | 39 | a X |    |           |   |
| 20 | a ✓ | 40 | c X |    |           |   |

*Leena*

Dr. LEENA A V  
PRINCIPAL  
SRÉE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



# COMPREHENSIVE EXAMINATION

| NAME: Naveena M                                                                                                               |              | ROLL NO. 10 |              |
|-------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|--------------|
| 1                                                                                                                             | b ✓          | 21          | <del>/</del> |
| 2                                                                                                                             | c X          | 22          | <del>/</del> |
| 3                                                                                                                             | d X          | 23          | <del>/</del> |
| 4                                                                                                                             | X            | 24          | b X          |
| 5                                                                                                                             | b X          | 25          | X            |
| 6                                                                                                                             | b X          | 26          | X            |
| 7                                                                                                                             | d X          | 27          | c X          |
| 8                                                                                                                             | X            | 28          | X            |
| 9                                                                                                                             | a X          | 29          | d X          |
| 10                                                                                                                            | <del>/</del> | 30          | X            |
| 11                                                                                                                            | <del>/</del> | 31          | b ✓          |
| 12                                                                                                                            | <del>/</del> | 32          | X            |
| 13                                                                                                                            | c ✓          | 33          | a ✓          |
| 14                                                                                                                            | <del>/</del> | 34          | X            |
| 15                                                                                                                            | <del>/</del> | 35          | a ✓          |
| 16                                                                                                                            | <del>/</del> | 36          | d X          |
| 17                                                                                                                            | <del>/</del> | 37          | b ✓          |
| 18                                                                                                                            | <del>/</del> | 38          | X            |
| 19                                                                                                                            | <del>/</del> | 39          | a X          |
| 20                                                                                                                            | b X          | 40          | X            |
| <div style="text-align: right;">  </div> |              |             |              |

12  
50  
Lor.

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



# COMPREHENSIVE EXAMINATION

NAME: ANJALI BABU ROLL NO. 3

|    |     |    |     |    |     |
|----|-----|----|-----|----|-----|
| 1  | b ✓ | 21 | c X | 41 | d X |
| 2  | a ✓ | 22 | a X | 42 | c X |
| 3  | b X | 23 | a X | 43 | b ✓ |
| 4  | d X | 24 | a ✓ | 44 | a ✓ |
| 5  | a ✓ | 25 | c ✓ | 45 | d ✓ |
| 6  | c ✓ | 26 | d X | 46 | d ✓ |
| 7  | a X | 27 | d ✓ | 47 | c X |
| 8  | d X | 28 | a X | 48 | d X |
| 9  | a X | 29 | c X | 49 | a ✓ |
| 10 | a ✓ | 30 | a X | 50 | b X |
| 11 | a ✓ | 31 | c X |    |     |
| 12 | b ✓ | 32 | b ✓ |    |     |
| 13 | c ✓ | 33 | a ✓ |    |     |
| 14 | b ✓ | 34 | c ✓ |    |     |
| 15 | a X | 35 | b X |    |     |
| 16 | d ✓ | 36 | a X |    |     |
| 17 | c X | 37 | b ✓ |    |     |
| 18 | d X | 38 | c X |    |     |
| 19 | a X | 39 | b ✓ |    |     |
| 20 | a ✓ | 40 | c X |    |     |

*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR



# COMPREHENSIVE EXAMINATION

NAME: Sudeep k.s. ROLL NO. 13

|    |       |    |       |    |     |   |
|----|-------|----|-------|----|-----|---|
| 1  | A B ✓ | 21 | C X   | 41 | D   | X |
| 2  | D X   | 22 | D X   | 42 | D   | X |
| 3  | B X   | 23 | A X   | 43 | B   | ✓ |
| 4  | D X   | 24 | D X   | 44 | D   | X |
| 5  | C X   | 25 | C ✓   | 45 | D   | ✓ |
| 6  | B X   | 26 | B X   | 46 | D   | ✓ |
| 7  | B ✓   | 27 | C X   | 47 | A A | X |
| 8  | A X   | 28 | A X   | 48 | A   | ✓ |
| 9  | A X   | 29 | B ✓   | 49 | A   | ✓ |
| 10 | C X   | 30 | A X   | 50 | B   | X |
| 11 | A ✓   | 31 | B ✓   |    |     |   |
| 12 | C X   | 32 | B ✓   |    |     |   |
| 13 | D X   | 33 | A ✓   |    |     |   |
| 14 | D X   | 34 | C ✓   |    |     |   |
| 15 | A X   | 35 | B X   |    |     |   |
| 16 | C X   | 36 | D X   |    |     |   |
| 17 | C X   | 37 | A X   |    |     |   |
| 18 | D X   | 38 | A D X |    |     |   |
| 19 | B X   | 39 | A X   |    |     |   |
| 20 | A ✓   | 40 | B X   |    |     |   |

Dr. LEENA A V

PRINCIPAL  
GREEN HILLS COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

## COMPREHENSIVE EXAM SECOND MOCK TEST ANSWER KEY

|    |   |    |        |
|----|---|----|--------|
| 1  | a | 26 | a      |
| 2  | d | 27 | c      |
| 3  | d | 28 | c      |
| 4  | a | 29 | b      |
| 5  | a | 30 | b      |
| 6  | c | 31 | d      |
| 7  | a | 32 | a      |
| 8  | b | 33 | a      |
| 9  | a | 34 | b      |
| 10 | a | 35 | c      |
| 11 | c | 36 | d      |
| 12 | b | 37 | d      |
| 13 | a | 38 | c      |
| 14 | d | 39 | a or c |
| 15 | a | 40 | d      |
| 16 | b | 41 | c      |
| 17 | c | 42 | b      |
| 18 | c | 43 | c      |
| 19 | b | 44 | b      |
| 20 | a | 45 | a      |
| 21 | b | 46 | a      |
| 22 | a | 47 | c      |
| 23 | d | 48 | b      |
| 24 | c | 49 | a      |
| 25 | a | 50 | b      |

*Leena*  
**Dr. LEENA A V**  
PRINCIPAL

SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PATTANUR, KANNUR

*Leena*  
29/3/19



# COMPREHENSIVE EXAMINATION

NAME: Harsha S. ROLL NO. 8

|    |     |    |     |    |   |   |
|----|-----|----|-----|----|---|---|
| 1  | b ✓ | 21 |     | 41 | b | X |
| 2  | d X | 22 |     | 42 | b | ✓ |
| 3  | X   | 23 |     | 43 | b | ✓ |
| 4  | X   | 24 |     | 44 | a | ✓ |
| 5  | a ✓ | 25 |     | 45 | b | X |
| 6  | c ✓ | 26 |     | 46 | d | ✓ |
| 7  | c X | 27 |     | 47 | a | X |
| 8  | X   | 28 |     | 48 | b | X |
| 9  | c X | 29 | d X | 49 | a | ✓ |
| 10 | X   | 30 | X   | 50 | b | X |
| 11 | a ✓ | 31 | d X |    |   |   |
| 12 | c X | 32 |     |    |   |   |
| 13 | X   | 33 |     |    |   |   |
| 14 | b ✓ | 34 |     |    |   |   |
| 15 | b ✓ | 35 | c X |    |   |   |
| 16 | b X | 36 | d X |    |   |   |
| 17 |     | 37 | d X |    |   |   |
| 18 |     | 38 | X   |    |   |   |
| 19 |     | 39 | c X |    |   |   |
| 20 |     | 40 | X   |    |   |   |

*Leena*

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



# COMPREHENSIVE EXAMINATION

| NAME: |     | ATHENA ANIL |    | ROLL NO. |   | b  |   |   |
|-------|-----|-------------|----|----------|---|----|---|---|
| 1     | b   | ✓           | 21 | b        | X | 41 | a | ✓ |
| 2     | d   | X           | 22 | c        | ✓ | 42 | a | X |
| 3     | d   | X           | 23 | a        | X | 43 | b | ✓ |
| 4     | b   | X           | 24 | b        | X | 44 | a | ✓ |
| 5     | d   | X           | 25 | a        | X | 45 | d | ✓ |
| 6     | b   | X           | 26 | a        | X | 46 | d | ✓ |
| 7     | b   | ✓           | 27 | c        | X | 47 | d | X |
| 8     | (c) | X           | 28 | a        | X | 48 | b | X |
| 9     | a   | X           | 29 | b        | ✓ | 49 | a | ✓ |
| 10    | c   | X           | 30 | d        | X | 50 | c | X |
| 11    | a   | ✓           | 31 | c        | X |    |   |   |
| 12    | c   | X           | 32 | d        | X |    |   |   |
| 13    | d   | X           | 33 | b        | X |    |   |   |
| 14    | a   | X           | 34 | a        | X |    |   |   |
| 15    | b   | ✓           | 35 | a        | ✓ |    |   |   |
| 16    | c   | X           | 36 | a        | X |    |   |   |
| 17    | b   | X           | 37 | b        | ✓ |    |   |   |
| 18    | d   | X           | 38 | a        | X |    |   |   |
| 19    | b   | X           | 39 | d        | X |    |   |   |
| 20    | d   | X           | 40 | a        | X |    |   |   |

14  
50  
La

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



# COMPREHENSIVE EXAMINATION

NAME: VISMITHA PRAMOD ROLL NO. 15

|    |     |    |      |    |      |
|----|-----|----|------|----|------|
| 1  | a ✓ | 21 | D ✗  | 41 | b ✗  |
| 2  | d ✓ | 22 | C ✗  | 42 | C ✗  |
| 3  | d ✓ | 23 | Bb ✗ | 43 | c ✓  |
| 4  | d ✗ | 24 | A ✗  | 44 | C ✗  |
| 5  | e ✗ | 25 | A ✓  | 45 | a ✓  |
| 6  | C ✓ | 26 | A ✓  | 46 | b ✗  |
| 7  | a ✓ | 27 | C ✓  | 47 | C ✓  |
| 8  | b ✓ | 28 | d ✗  | 48 | a ✗  |
| 9  | a ✓ | 29 | C ✗  | 49 | a ✓  |
| 10 | a ✓ | 30 | b ✓  | 50 | Bb ✗ |
| 11 | C ✓ | 31 | d ✓  |    |      |
| 12 | b ✓ | 32 | b. ✗ |    |      |
| 13 | d ✗ | 33 | d ✗  |    |      |
| 14 | d ✓ | 34 | C. ✗ |    |      |
| 15 | a ✓ | 35 | C ✓  |    |      |
| 16 | a ✗ | 36 | D ✓  |    |      |
| 17 | D ✗ | 37 | a ✗  |    |      |
| 18 | D ✗ | 38 | a ✗  |    |      |
| 19 | A ✗ | 39 | d ✗  |    |      |
| 20 | B ✗ | 40 | d ✓  |    |      |

24  
50  
100%

  
Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR

# COMPREHENSIVE EXAMINATION

| NAME:           |      | ROLL NO. |      |
|-----------------|------|----------|------|
| Nauya Bhaskaran |      | 11.      |      |
| 1               | b x  | 21       | D. x |
| 2               | d. ✓ | 22       | c. x |
| 3               | c. x | 23       | b. x |
| 4               | a. ✓ | 24       | c. ✓ |
| 5               | a. ✓ | 25       | A. ✓ |
| 6               | c. ✓ | 26       | B. x |
| 7               | a. ✓ | 27       | c. ✓ |
| 8               | b. ✓ | 28       | d. x |
| 9               | a. ✓ | 29       | b. ✓ |
| 10              | a. ✓ | 30       | a. x |
| 11              | c. ✓ | 31       | d. ✓ |
| 12              | c. x | 32       | b. x |
| 13              | c. x | 33       | a. ✓ |
| 14              | d. ✓ | 34       | a. x |
| 15              | a. ✓ | 35       | c. ✓ |
| 16              | b. ✓ | 36       | A. x |
| 17              | c. ✓ | 37       | b. x |
| 18              | A. x | 38       | d. x |
| 19              | c. x | 39       | d. x |
| 20              | D. x | 40       | b. x |
|                 |      | 41       | c. ✓ |
|                 |      | 42       | b. ✓ |
|                 |      | 43       | b. x |
|                 |      | 44       | b. ✓ |
|                 |      | 45       | a. ✓ |
|                 |      | 46       | b. x |
|                 |      | 47       | a. x |
|                 |      | 48       | c. x |
|                 |      | 49       | a. ✓ |
|                 |      | 50       | a. ✓ |

26  
50  
Le.

*Leena*

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



# COMPREHENSIVE EXAMINATION

NAME: Aryasree Vijayaraj ROLL NO. 4

|    |                  |    |     |    |   |                |
|----|------------------|----|-----|----|---|----------------|
| 1  | <del>A</del> a ✓ | 21 | B ✓ | 41 | b | x              |
| 2  | d ✓              | 22 | c x | 42 | b | ✓              |
| 3  | b x              | 23 | d ✓ | 43 | c | ✓              |
| 4  | <del>b</del> c x | 24 | c ✓ | 44 | b | ✓              |
| 5  | a ✓              | 25 | c x | 45 | c | x              |
| 6  | c ✓              | 26 | D x | 46 | a | ✓              |
| 7  | a ✓              | 27 | A x | 47 | b | x              |
| 8  | b ✓              | 28 | a x | 48 | c | x              |
| 9  | a ✓              | 29 | b ✓ | 49 | a | ✓              |
| 10 | a ✓              | 30 | a x | 50 | a | <del>a</del> ✓ |
| 11 | c ✓              | 31 | d ✓ |    |   |                |
| 12 | b. ✓             | 32 | c x |    |   |                |
| 13 | a. ✓             | 33 | d x |    |   |                |
| 14 | d ✓              | 34 | b ✓ |    |   |                |
| 15 | a ✓              | 35 | c ✓ |    |   |                |
| 16 | d x              | 36 | D ✓ |    |   |                |
| 17 | c ✓              | 37 | a x |    |   |                |
| 18 | B x              | 38 | a x |    |   |                |
| 19 | <del>B</del> A x | 39 | b x |    |   |                |
| 20 | B x              | 40 | a x |    |   |                |

*Leena*

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

# COMPREHENSIVE EXAMINATION

| NAME: |       | ATHENA ANIL |       | ROLL NO. |     | 6 |  |
|-------|-------|-------------|-------|----------|-----|---|--|
| 1     | a ✓   | 21          | b ✓   | 41       | b x |   |  |
| 2     | d ✓   | 22          | c x   | 42       | d x |   |  |
| 3     | c x   | 23          | c x   | 43       | a x |   |  |
| 4     | b x   | 24          | e ✓   | 44       | b ✓ |   |  |
| 5     | a ✓   | 25          | d x   | 45       | b x |   |  |
| 6     | c ✓   | 26          | b x   | 46       | a ✓ |   |  |
| 7     | a ✓   | 27          | c ✓   | 47       | a x |   |  |
| 8     | b ✓   | 28          | d x   | 48       | c x |   |  |
| 9     | b a ✓ | 29          | b ✓   | 49       | a ✓ |   |  |
| 10    | a ✓   | 30          | b ✓   | 50       | b x |   |  |
| 11    | c ✓   | 31          | d ✓   |          |     |   |  |
| 12    | b ✓   | 32          | c x   |          |     |   |  |
| 13    | d x   | 33          | b x   |          |     |   |  |
| 14    | d ✓   | 34          | a x   |          |     |   |  |
| 15    | a ✓   | 35          | e ✓   |          |     |   |  |
| 16    | b ✓   | 36          | d ✓   |          |     |   |  |
| 17    | d x   | 37          | b x   |          |     |   |  |
| 18    | e ✓   | 38          | (c) ✓ |          |     |   |  |
| 19    | b ✓   | 39          | d x   |          |     |   |  |
| 20    | b x   | 40          | b x   |          |     |   |  |

*Leena*  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR



# COMPREHENSIVE EXAMINATION

| NAME: |         | Navazena m |      | ROLL NO. |      | 10 |
|-------|---------|------------|------|----------|------|----|
| 1     | a. ✓    | 21         | A. X | 41       | c. ✓ |    |
| 2     | b. X    | 22         | d. X | 42       | a. X |    |
| 3     | a. c. X | 23         | b. X | 43       | c. ✓ |    |
| 4     | b. X    | 24         | c. ✓ | 44       | b. ✓ |    |
| 5     | a. ✓    | 25         | c. X | 45       | a. ✓ |    |
| 6     | c. ✓    | 26         | d. X | 46       | a. ✓ |    |
| 7     | a. ✓    | 27         | A. X | 47       | c. ✓ |    |
| 8     | b. ✓    | 28         | b. X | 48       | b. ✓ |    |
| 9     | a. ✓    | 29         | b. ✓ | 49       | a. ✓ |    |
| 10    | a. ✓    | 30         | d. X | 50       | b. X |    |
| 11    | c. ✓    | 31         | d. ✓ |          |      |    |
| 12    | a. X    | 32         | a. ✓ |          |      |    |
| 13    | b. X    | 33         | c. X |          |      |    |
| 14    | d. ✓    | 34         | a. X |          |      |    |
| 15    | a. ✓    | 35         | c. ✓ |          |      |    |
| 16    | a. X    | 36         | B. X |          |      |    |
| 17    | c. ✓    | 37         | a. X |          |      |    |
| 18    | a. X    | 38         | c. ✓ |          |      |    |
| 19    | B. ✓    | 39         | a. ✓ |          |      |    |
| 20    | D. X    | 40         | a. X |          |      |    |

27  
50

Leena

*Leena*  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR

# COMPREHENSIVE EXAMINATION

NAME: Aswathi K.T ROLL NO. 5

|    |     |    |     |    |     |
|----|-----|----|-----|----|-----|
| 1  | a ✓ | 21 | B ✓ | 41 | a ✗ |
| 2  | b ✗ | 22 | c ✗ | 42 | d ✗ |
| 3  | c ✗ | 23 | c ✗ | 43 | c ✓ |
| 4  | a ✓ | 24 | B ✗ | 44 | b ✓ |
| 5  | a ✓ | 25 | c ✗ | 45 | c ✗ |
| 6  | c ✓ | 26 | B ✗ | 46 | a ✓ |
| 7  | a ✓ | 27 | A ✗ | 47 | d ✗ |
| 8  | b ✓ | 28 | a ✗ | 48 | c ✗ |
| 9  | a ✓ | 29 | b ✓ | 49 | a ✓ |
| 10 | a ✓ | 30 | b ✓ | 50 | d ✗ |
| 11 | b ✗ | 31 | d ✓ |    |     |
| 12 | a ✗ | 32 | a ✓ |    |     |
| 13 | d ✗ | 33 | a ✓ |    |     |
| 14 | d ✓ | 34 | c ✗ |    |     |
| 15 | c ✗ | 35 | c ✓ |    |     |
| 16 | c ✗ | 36 | D ✓ |    |     |
| 17 | c ✓ | 37 | c ✗ |    |     |
| 18 | D ✗ | 38 | a ✗ |    |     |
| 19 | A ✗ | 39 | a ✓ |    |     |
| 20 | B ✗ | 40 | b ✗ |    |     |

23/50

Leena

AB-15  
#0+00  
ch A-10  
C C C A-15  
A B y 00 1 D  
C C C 1 10 0

Leena

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



# COMPREHENSIVE EXAMINATION

NAME:

A FEEFA K

ROLL NO.

01

|    |     |    |     |    |     |  |
|----|-----|----|-----|----|-----|--|
| 1  | a ✓ | 21 | A x | 41 | c ✓ |  |
| 2  | d ✓ | 22 | c x | 42 | d x |  |
| 3  | b x | 23 | a x | 43 | b x |  |
| 4  | a ✓ | 24 | B x | 44 | b ✓ |  |
| 5  | a ✓ | 25 | c x | 45 | d x |  |
| 6  | c ✓ | 26 | B x | 46 | a ✓ |  |
| 7  | a ✓ | 27 | B x | 47 | c ✓ |  |
| 8  | b ✓ | 28 | a x | 48 | c x |  |
| 9  | a ✓ | 29 | c x | 49 | b x |  |
| 10 | a ✓ | 30 | a x | 50 | a ✓ |  |
| 11 | d x | 31 | b x |    |     |  |
| 12 | c x | 32 | c x |    |     |  |
| 13 | b x | 33 | A ✓ |    |     |  |
| 14 | d ✓ | 34 | d x |    |     |  |
| 15 | a ✓ | 35 | d x |    |     |  |
| 16 | b ✓ | 36 | A x |    |     |  |
| 17 | c ✓ | 37 | a x |    |     |  |
| 18 | c ✓ | 38 | c ✓ |    |     |  |
| 19 | c x | 39 | c ✓ |    |     |  |
| 20 | B x | 40 | b x |    |     |  |

22  
50  
Le.

*Leena*

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR



| NAME: |     | Vipin P. V |     | ROLL NO. |   | 14 |  |
|-------|-----|------------|-----|----------|---|----|--|
| 1     | b ✓ | 21         | d ✓ | 41       | a | ✓  |  |
| 2     | a ✓ | 22         | c ✓ | 42       | b | ✓  |  |
| 3     | b X | 23         | c ✓ | 43       | b | ✓  |  |
| 4     | a ✓ | 24         | a ✓ | 44       | a | ✓  |  |
| 5     | c X | 25         | a X | 45       | d | ✓  |  |
| 6     | a X | 26         | a X | 46       | d | ✓  |  |
| 7     | b ✓ | 27         | d ✓ | 47       | a | X  |  |
| 8     | c X | 28         | a X | 48       | b | X  |  |
| 9     | d ✓ | 29         | b ✓ | 49       | a | ✓  |  |
| 10    | c X | 30         | b X | 50       | b | X  |  |
| 11    | a ✓ | 31         | a X |          |   |    |  |
| 12    | a X | 32         | d X |          |   |    |  |
| 13    | d X | 33         | d X |          |   |    |  |
| 14    | b ✓ | 34         | c ✓ |          |   |    |  |
| 15    | c X | 35         | a ✓ |          |   |    |  |
| 16    | b X | 36         | c X |          |   |    |  |
| 17    | d ✓ | 37         | d X |          |   |    |  |
| 18    | d X | 38         | c X |          |   |    |  |
| 19    | a X | 39         | a X |          |   |    |  |
| 20    | b X | 40         | b X |          |   |    |  |

*Leena*

640



# COMPREHENSIVE EXAMINATION

| NAME:     |     | ROLL NO. |     | II |                   |
|-----------|-----|----------|-----|----|-------------------|
| Naraya. B |     |          |     |    |                   |
| 1         | b ✓ | 21       | d ✓ | 41 | a ✓               |
| 2         | a ✓ | 22       | c ✓ | 42 | a X               |
| 3         | a X | 23       | c ✓ | 43 | b ✓               |
| 4         | d X | 24       | b X | 44 | <del>12</del> a ✓ |
| 5         | a ✓ | 25       | c ✓ | 45 | <del>d</del> a X  |
| 6         | c ✓ | 26       | b X | 46 | d ✓               |
| 7         | d X | 27       | d ✓ | 47 | c X               |
| 8         | a X | 28       | a X | 48 | a ✓               |
| 9         | b X | 29       | b ✓ | 49 | b X               |
| 10        | d X | 30       | b X | 50 | a ✓               |
| 11        | a ✓ | 31       | a X |    |                   |
| 12        | c X | 32       | d X |    |                   |
| 13        | c ✓ | 33       | a ✓ |    |                   |
| 14        | b ✓ | 34       | d X |    |                   |
| 15        | a X | 35       | b X |    |                   |
| 16        | b X | 36       | c X |    |                   |
| 17        | d ✓ | 37       | b ✓ |    |                   |
| 18        | a ✓ | 38       | a X |    |                   |
| 19        | a X | 39       | a X |    |                   |
| 20        | b X | 40       | b X |    |                   |

*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

# COMPREHENSIVE EXAMINATION

| NAME: |       | KP ANUPRIYA |       | ROLL NO. |     | 09 |
|-------|-------|-------------|-------|----------|-----|----|
| 1     | (a) ✓ | 21          | (A) X | 41       | (c) | ✓  |
| 2     | (d) ✓ | 22          | (b) X | 42       | (c) | X  |
| 3     | (d) ✓ | 23          | (a) X | 43       | (a) | X  |
| 4     | (a) ✓ | 24          | (c) ✓ | 44       | (b) | ✓  |
| 5     | (e) X | 25          | (b) X | 45       | (c) | X  |
| 6     | (d) X | 26          | (D) X | 46       | (a) | ✓  |
| 7     | (a) ✓ | 27          | (A) X | 47       | (c) | ✓  |
| 8     | (b) ✓ | 28          | (a) X | 48       | (c) | X  |
| 9     | (a) ✓ | 29          | (b) ✓ | 49       | (a) | ✓  |
| 10    | (d) X | 30          | (c) X | 50       | (a) | ✓  |
| 11    | (c) ✓ | 31          | (a) X |          |     |    |
| 12    | (d) X | 32          | (b) X |          |     |    |
| 13    | (b) X | 33          | (c) X |          |     |    |
| 14    | (d) ✓ | 34          | (b) ✓ |          |     |    |
| 15    | (a) ✓ | 35          | (c) ✓ |          |     |    |
| 16    | (b) ✓ | 36          | (A) X |          |     |    |
| 17    | (D) X | 37          | (b) X |          |     |    |
| 18    | (c) ✓ | 38          | (d) X |          |     |    |
| 19    | (A) X | 39          | (c) ✓ |          |     |    |
| 20    | (b) X | 40          | (b) X |          |     |    |

23  
50

19

*Leena*

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



# COMPREHENSIVE EXAMINATION

| NAME: |     | Anagha P |     | ROLL NO. |                  | 2 |
|-------|-----|----------|-----|----------|------------------|---|
| 1     | a ✓ | 21       | D ✗ | 41       | C ✓              |   |
| 2     | b ✗ | 22       | C ✗ | 42       | <del>b</del> c ✗ |   |
| 3     | d ✓ | 23       | C ✗ | 43       | d ✗              |   |
| 4     | C ✗ | 24       | B ✗ | 44       | C ✗              |   |
| 5     | a ✓ | 25       | A ✓ | 45       | b ✗              |   |
| 6     | C ✓ | 26       | C ✗ | 46       | C ✗              |   |
| 7     | a ✓ | 27       | A ✗ | 47       | a ✗              |   |
| 8     | b ✓ | 28       | b ✗ | 48       | C ✗              |   |
| 9     | a ✓ | 29       | C ✗ | 49       | <del>b</del> a ✓ |   |
| 10    | a ✓ | 30       | C ✗ | 50       | b ✗              |   |
| 11    | C ✓ | 31       | b ✗ |          |                  |   |
| 12    | d ✗ | 32       | C ✗ |          |                  |   |
| 13    | e ✗ | 33       | a ✓ |          |                  |   |
| 14    | a ✗ | 34       | b ✓ |          |                  |   |
| 15    | a ✓ | 35       | d ✗ |          |                  |   |
| 16    | b ✓ | 36       | D ✓ |          |                  |   |
| 17    | D ✗ | 37       | C ✗ |          |                  |   |
| 18    | A ✗ | 38       | C ✓ |          |                  |   |
| 19    | C ✗ | 39       | b ✗ |          |                  |   |
| 20    | B ✗ | 40       | a ✗ |          |                  |   |

18  
50

Le

  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYANUR, KANNUR

# COMPREHENSIVE EXAMINATION

| NAME: |      | Sreehasi |     | ROLL NO. |     | 12 |
|-------|------|----------|-----|----------|-----|----|
| 1     | a ✓  | 21       | C X | 41       | C ✓ |    |
| 2     | X    | 22       | A ✓ | 42       | A X |    |
| 3     | d ✓  | 23       | B X | 43       | C ✓ |    |
| 4     | d X  | 24       | B X | 44       | B ✓ |    |
| 5     | a. ✓ | 25       | C X | 45       | B X |    |
| 6     | C ✓  | 26       | B X | 46       | C X |    |
| 7     | a ✓  | 27       | P X | 47       | C ✓ |    |
| 8     | b ✓  | 28       | D X | 48       | C X |    |
| 9     | B X  | 29       | B ✓ | 49       | a ✓ |    |
| 10    | C X  | 30       | B ✓ | 50       | B X |    |
| 11    | C ✓  | 31       | D ✓ |          |     |    |
| 12    | C X  | 32       | B X |          |     |    |
| 13    | A ✓  | 33       | D X |          |     |    |
| 14    | d ✓  | 34       | B ✓ |          |     |    |
| 15    | a ✓  | 35       | C ✓ |          |     |    |
| 16    | b ✓  | 36       | D ✓ |          |     |    |
| 17    | D X  | 37       | X   |          |     |    |
| 18    | X    | 38       | X   |          |     |    |
| 19    | X    | 39       | X   |          |     |    |
| 20    | X    | 40       | X   |          |     |    |

23  
50

Leena

*Leena*

**Dr. LEENA A V**  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYANUR, KANNUR



# COMPREHENSIVE EXAMINATION

NAME: Harsha S.. ROLL NO. 8

|    |     |    |       |    |     |
|----|-----|----|-------|----|-----|
| 1  | c x | 21 | c x   | 41 | a x |
| 2  | d ✓ | 22 | a ✓   | 42 | c x |
| 3  | c x | 23 | c x   | 43 | a x |
| 4  | d x | 24 | A x   | 44 | c x |
| 5  | a ✓ | 25 | c x   | 45 | b x |
| 6  | c ✓ | 26 | A ✓   | 46 | a ✓ |
| 7  | a ✓ | 27 | A x   | 47 | a x |
| 8  | b ✓ | 28 | d x   | 48 | c x |
| 9  | c x | 29 | a x   | 49 | a ✓ |
| 10 | d x | 30 | z x   | 50 | b x |
| 11 | c ✓ | 31 | c x   |    |     |
| 12 | d x | 32 | B b x |    |     |
| 13 | b x | 33 | c x   |    |     |
| 14 | d ✓ | 34 | a x   |    |     |
| 15 | a ✓ | 35 | c ✓   |    |     |
| 16 | b ✓ | 36 | A x   |    |     |
| 17 | c ✓ | 37 | c x   |    |     |
| 18 | A x | 38 | c ✓   |    |     |
| 19 | A x | 39 | a ✓   |    |     |
| 20 | A ✓ | 40 | a x   |    |     |

18/50

Leena

*Leena*

Dr. LEENA A V  
PRINCIPAL  
SREE NARAYANA GURU COLLEGE OF  
ENGINEERING & TECHNOLOGY  
PAYYANUR, KANNUR

### Course Objectives (COBs)

Laboratory (2): COMPREHENSIVE EXAMINATION Code: EC 352.....

Class: IIIrd Year VIIth Semester ECE..... Branch

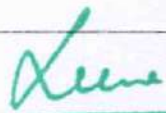
|       |                                                                                                |
|-------|------------------------------------------------------------------------------------------------|
| COB-1 | To assess the comprehensive knowledge gained in basic courses relevant to the branch of study. |
| COB-2 | To comprehend the questions asked and answer them with confidence.                             |
| COB-3 |                                                                                                |
| COB-4 |                                                                                                |
| COB-5 |                                                                                                |

### Course Outcomes (COs)

Laboratory (2): COMPREHENSIVE EXAMINATION Code: EC 352.....

Class: IIIrd Year VIIth Semester ECE..... Branch

|                 |                                                                                                                                                    |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| CO-1            | The students will be confident in discussing the fundamental aspects of any engineering problem / situation and give answers in dealing with them. |
| <del>CO-2</del> |                                                                                                                                                    |
| CO-2            | The students will acquire practice in attending objective type questions.                                                                          |
| CO-3            | The students will be able to face all types of competitive exams and interviews.                                                                   |
| CO-4            | The students will gain knowledge in all the fields of their branch of study.                                                                       |
| CO-6            |                                                                                                                                                    |
| CO-7            |                                                                                                                                                    |
| CO-8            |                                                                                                                                                    |
| CO-9            |                                                                                                                                                    |
| CO-10           |                                                                                                                                                    |

  
**DR. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAPPANUR, KANNUR




### PEOs Mapping with Course

| Laboratory (2)                         | Programme Educational Objectives |       |       |       |       |
|----------------------------------------|----------------------------------|-------|-------|-------|-------|
|                                        | PEO-1                            | PEO-2 | PEO-3 | PEO-4 | PEO-5 |
| COMPREHENSIVE<br>EXAMINATION<br>EC 352 | 3                                | 3     | 3     | 3     |       |

### POs Mapping with COs

| PSOs |      | Course Outcomes | Programme Outcomes |   |   |   |   |   |   |   |   |    |    |    |
|------|------|-----------------|--------------------|---|---|---|---|---|---|---|---|----|----|----|
| PSO1 | PSO2 |                 | 1                  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2    | 3    | CO-1            | 3                  | 2 | 2 | 2 |   |   |   | 2 | 3 | 3  | 2  | 3  |
|      |      | CO-2            |                    |   |   |   |   |   |   |   |   |    |    |    |
|      |      | CO-3            |                    |   |   |   |   |   |   |   |   |    |    |    |
|      |      | CO-4            |                    |   |   |   |   |   |   |   |   |    |    |    |
|      |      | CO-5            |                    |   |   |   |   |   |   |   |   |    |    |    |
|      |      | CO-6            |                    |   |   |   |   |   |   |   |   |    |    |    |
|      |      | CO-7            |                    |   |   |   |   |   |   |   |   |    |    |    |
|      |      | CO-8            |                    |   |   |   |   |   |   |   |   |    |    |    |
|      |      | CO-9            |                    |   |   |   |   |   |   |   |   |    |    |    |
|      |      | CO-10           |                    |   |   |   |   |   |   |   |   |    |    |    |

Note: 3 - Strong Contribution, 2-Average Contribution, 1-Some Contribution

  
**Dr. LEENA A V**  
 PRINCIPAL  
 SREE NARAYANA GURU COLLEGE OF  
 ENGINEERING & TECHNOLOGY  
 PAYYANUR, KANNUR