	Hall Ticket Number :			
Engineering Chemistry (Common to CE & ME)         Max. Marks: 70       Time: 3 Hours         Note: 1. Question Paper consists of two parts (Part-A and Part-B) 2. In Part-A, each question carries Two marks. 3. Answer ALL the questions in Part-A and Part-B PART-A (Compulsory question)         1. Answer ALL the following short answer questions (5 X 2 = 10M)       CO       BL         a) Why do we express hardness of water in terms of calcium carbonate equivalent?       CO2       L1         b) Define reference electrode.       CO2       L1         c) What is meant by degree of polymerization?       CO3       L1         d) What is meant by thermal spalling?       CO4       L1         e) Mention any two uses of smart materials.       CO5       L1         UNIT-I       2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed?       6M       CO1       L2         b) What is meant by hardness of water and its units? What are the disadvantages of hard water?       6M       CO1       L2         b) What is neant by hardness of softening of water.       6M       CO1       L2         b) What is meant by hardness of water and its units? What are the disadvantages of hard water?       6M       CO1       L2         b) Explain the zeolite exchange process for softening of water.       6M       CO1       L2         b) Expla	Code: 20AC14T	R-20	)	
(Common To CE & ME)       Time: 3 Hours         Max. Marks: 70       Time: 3 Hours         Note: 1. Question Paper consists of two parts (Part-A and Part-B)       2. In Part-A, each questions in Part-A and Part-B         2. In Part-A, each questions in Part-A and Part-B       PART-A         Compulsory question)       CO         1. Answer ALL the following short answer questions       (5 X 2 = 10M)       CO       BL         a) Why do we express hardness of water in terms of calcium carbonate       CO1       L1         equivalent?       CO2       L1         b) Define reference electrode.       CO2       L1         c) What is meant by degree of polymerization?       CO3       L1         d) What is meant by thermal spalling?       CO4       L1         e) Mention any two uses of smart materials.       CO5       L1         Marks       CO       BL       UNIT-I         2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed?       6M       CO1       L2         b) What is meant by hardness of water and its units? What are the disadvantages of hard water?       6M       C01       L2         b) What is meant by hardness of softening of water.       6M       C01       L2         b) What is a short note on fuel cells.       6M       C01		bruary 2	023	
Max. Marks: 70       Time: 3 Hours         Note: 1. Question Paper consists of two parts (Part-A and Part-B)       2. In Part-A, each question carries Two marks.         3. Answer ALL the questions in Part-A and Part-B       PART-A         (Compulsory question)       CO         1. Answer ALL the following short answer questions (5 X 2 = 10M)       CO         a) Why do we express hardness of water in terms of calcium carbonate       CO1         b) Define reference electrode.       CO2         c) What is meant by degree of polymerization?       CO3         c) What is meant by thermal spalling?       CO4         c) Mention any two uses of smart materials.       CO5         c) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed?       6M         formation in boilers. How are they removed?       6M       Co1       L2         b) Explain the zeolite exchange process for softening of water.       6M       Co1       L2         b) Explain the zeolite exchange process for softening of water.       6M       Co2       L1         d) Write a short note on fuel cells.       6M       Co2       L1         b) Explain the zeolite exchange process for softening of water.       6M       Co2       L2         b) Write briefly about: (i)Primary cells (ii)Secondary Cells       6M       Co2       L1 <td></td> <td></td> <td></td> <td></td>				
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3. Answer ALL the questions in Part-A and Part-B <u>PART-A</u> (Compulsory question) 1. Answer ALL the following short answer questions $(5 \times 2 = 10 \text{ M})$ CO BL a) Why do we express hardness of water in terms of calcium carbonate CO1 L1 equivalent? b) Define reference electrode. c) What is meant by degree of polymerization? d) What is meant by thermal spalling? e) Mention any two uses of smart materials. CO5 L1 PART-B Answer five questions by choosing one question from each unit $(5 \times 12 = 60 \text{ Marks})$ Marks CO BL UNIT-I 2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed? b) What is meant by hardness of water and its units? What are the disadvantages of hard water? OR 3. a) Describe the estimation of hardness of water by EDTA method. b) Explain the zeolite exchange process for softening of water. b) Write briefly about: (i)Primary cells (ii)Secondary Cells corrosion. CO2 L2 b) Define corrosion. Explain the factors which influence the corrosion. CO2 L2				
(Compulsory question)         1. Answer ALL the following short answer questions (5 X 2 = 10M)       CO       BL         a) Why do we express hardness of water in terms of calcium carbonate equivalent?       CO1       L1         b) Define reference electrode.       CO2       L1         c) What is meant by degree of polymerization?       CO3       L1         d) What is meant by thermal spalling?       CO4       L1         e) Mention any two uses of smart materials.       CO5       L1         e) Mention any two uses of smart materials.       CO5       L1         e) Mention any two uses of smart materials.       CO6       BL         unit1       2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed?       6M       CO1       L2         b) What is meant by hardness of water and its units? What are the disadvantages of hard water?       6M       CO1       L2         OR       3. a) Describe the estimation of hardness of water by EDTA method.       6M       CO1       L2         b) Write a short note on fuel cells.       6M       CO2       L1         c) a) Describe about (i) Sacrificial anodic protection method (ii) impressed current method of cathodic protection.       6M       CO2       L1         c) Define corrosion.       Explain the factors which influence the corrosion	•			
1. Answer ALL the following short answer questions (5 X 2 = 10M)       CO       BL         a) Why do we express hardness of water in terms of calcium carbonate equivalent?       CO1       L1         b) Define reference electrode.       CO2       L1         c) What is meant by degree of polymerization?       CO3       L1         d) What is meant by thermal spalling?       CO4       L1         e) Mention any two uses of smart materials.       CO5       L1         PART-B       Answer five questions by choosing one question from each unit (5 x 12 = 60 Marks)       Marks       CO       BL         0       UNIT-I       2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed?       6M       CO1       L2         b) What is meant by hardness of water and its units? What are the disadvantages of hard water?       6M       CO1       L2         OR       3. a) Describe the estimation of hardness of water by EDTA method.       6M       CO1       L2         Imathod.       0R       CO2       L1         0       Write a short note on fuel cells.       6M       CO2       L1         b) Write briefly about: (i) Parimary cells (ii)Secondary Cells       6M       CO2       L1         0       Describe about (i)       Sacrificial anodic protection method (ii) impressed current me				
<ul> <li>a) Why do we express hardness of water in terms of calcium carbonate C01 L1 equivalent?</li> <li>b) Define reference electrode. C02 L1</li> <li>c) What is meant by degree of polymerization? C03 L1</li> <li>d) What is meant by thermal spalling? C04 L1</li> <li>e) Mention any two uses of smart materials. C05 L1</li> <li>PART-B</li> <li>Answer five questions by choosing one question from each unit (5 x 12 = 60 Marks) Marks C0 BL</li> <li>UNIT-I</li> <li>2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed? 6M C01 L2</li> <li>b) What is meant by hardness of water and its units? What are the disadvantages of hard water? 6M C01 L2</li> <li>b) What is meant by hardness of water by EDTA method. 6M C01 L2</li> <li>b) Explain the zeolite exchange process for softening of water. 6M C01 L2</li> <li>b) Write a short note on fuel cells. 6M C02 L1</li> <li>c) Write briefly about: (i)Primary cells (ii)Secondary Cells 6M C02 L1</li> <li>c) Describe about (i) Sacrificial anodic protection. 6M C02 L2</li> <li>b) Define corrosion. Explain the factors which influence the corrosion. 6M C02 L2</li> </ul>				
equivalent?       CO2       L1         b) Define reference electrode.       CO3       L1         c) What is meant by degree of polymerization?       CO3       L1         d) What is meant by thermal spalling?       CO4       L1         e) Mention any two uses of smart materials.       CO5       L1         e) Mention any two uses of smart materials.       CO5       L1         e) Mention any two uses of smart materials.       CO5       L1         e) Mention any two uses of smart materials.       CO5       L1         e) Mention any two uses of smart materials.       CO5       L1         e) Mention any two uses of smart materials.       CO5       L1         e) Mention any two uses of smart materials.       CO5       L1         e) Mention in boilers. How are they removed?       6M       CO1       L2         b) What is meant by hardness of water and its units? What are the disadvantages of hard water?       6M       CO1       L2         OR       6M       CO1       L2       Immthod.       6M       CO1       L2         b) Explain the zeolite exchange process for softening of water.       6M       CO2       L1         d) Write a short note on fuel cells.       6M       CO2       L1         b) Write briefly about: (i)Prim		,		
b) Define reference electrode. c) What is meant by degree of polymerization? d) What is meant by thermal spalling? e) Mention any two uses of smart materials. PART-B Answer five questions by choosing one question from each unit (5 x 12 = 60 Marks) Marks CO BL UNIT-I 2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed? b) What is meant by hardness of water and its units? What are the disadvantages of hard water? CO2 L1 Describe the estimation of hardness of water by EDTA method. b) Explain the zeolite exchange process for softening of water. b) Write briefly about: (i)Primary cells (ii)Secondary Cells formation. CO2 L1 CO3 L1 CO3 L1 CO4 L1 CO4 L1 CO5 L1 PART-B Answer five questions by choosing one question from each unit (5 x 12 = 60 Marks) Marks CO BL CO1 L2 b) What is meant by hardness of water and its units? What are the disadvantages of hard water? CO2 CO2 Answer five question of hardness of water by EDTA method. CO1 L2 Describe the estimation of hardness of water by EDTA method. CO2 L1 CO2 CO3 CO3 CO3 CO3 CO3 CO3 CO3 CO3		arbonate	e co	1 L1
<ul> <li>c) What is meant by degree of polymerization?</li> <li>c) What is meant by thermal spalling?</li> <li>c) What is meant by choosing one question from each unit (5 x 12 = 60 Marks)</li> <li>Marks CO BL</li> <li>Marks CO BL</li> <li>UNIT-I</li> <li>c) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed?</li> <li>c) What is meant by hardness of water and its units? What are the disadvantages of hard water?</li> <li>c) What is meant by hardness of water by EDTA method.</li> <li>c) Explain the zeolite exchange process for softening of water.</li> <li>c) Write briefly about: (i)Primary cells (ii)Secondary Cells</li> <li>c) Write briefly about: (i) Sacrificial anodic protection method (ii) impressed current method of cathodic protection.</li> <li>c) Define corrosion. Explain the factors which influence the corrosion.</li> </ul>				~
<ul> <li>(a) What is meant by thermal spalling?</li> <li>(b) What is meant by thermal spalling?</li> <li>(c) 4 L1</li> <li>(c) 4 L1</li> <li>(c) 4 L1</li> <li>(c) 5 L1</li> <li>(c) 5 L1</li> <li>(c) 6 L1</li> <li>(c) 7 L1</li> <li>(c) 8 L</li> <li>(c) 8 L</li></ul>				
<ul> <li>e) Mention any two uses of smart materials.</li> <li>e) Mention any two uses of smart materials.</li> <li>PART-B</li> <li>Answer five questions by choosing one question from each unit (5 x 12 = 60 Marks) Marks CO BL</li> <li>UNIT-I</li> <li>2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed?</li> <li>b) What is meant by hardness of water and its units? What are the disadvantages of hard water?</li> <li>OR</li> <li>3. a) Describe the estimation of hardness of water by EDTA method.</li> <li>b) Explain the zeolite exchange process for softening of water.</li> <li>b) Write a short note on fuel cells.</li> <li>b) Write briefly about: (i) Primary cells (ii) Secondary Cells</li> <li>COS L1</li> <li>COS L2</li> <li>COS L1</li> <li>COS L2</li> <li>COS L1</li> <li>COS L2</li> <li>COS L2</li> </ul>	c) What is meant by degree of polymerization?			
PART-B         Answer five questions by choosing one question from each unit (5 x 12 = 60 Marks ) Marks CO BL         UNIT-I       Marks CO BL         2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed?       6M CO1 L2         b) What is meant by hardness of water and its units? What are the disadvantages of hard water?       6M CO1 L2         OR       6M CO1 L2         b) Explain the zeolite exchange process for softening of water.       6M CO1 L2         Describe the estimation of hardness of water by EDTA method.       6M CO1 L2         b) Explain the zeolite exchange process for softening of water.       6M CO1 L2         Describe the estimation of fuel cells.       6M CO2 L1         b) Explain the zeolite exchange process for softening of water.       6M CO2 L1         c) UNIT-II       6M CO2 L1         c) Describe about (i) Primary cells (ii)Secondary Cells       6M CO2 L1         c) Describe about (i) Sacrificial anodic protection method (ii) impressed current method of cathodic protection.       6M CO2 L2         b) Define corrosion. Explain the factors which influence the corrosion.       6M CO2 L2	d) What is meant by thermal spalling?		CO	4 L1
Answer five questions by choosing one question from each unit (5 x 12 = 60 Marks) Marks CO BL         UNIT-I         2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed?       6M CO1 L2         b) What is meant by hardness of water and its units? What are the disadvantages of hard water?       6M CO1 L2         OR       6M CO1 L2         b) Explain the zeolite exchange process for softening of water.       6M CO1 L2         b) Write a short note on fuel cells.       6M CO2 L1         b) Write briefly about: (i)Primary cells (ii)Secondary Cells       6M CO2 L1         OR       6M CO2 L1         Lunit-II       6M CO2 L1	<ul> <li>Mention any two uses of smart materials.</li> </ul>		CO	5 L1
UNIT-I         2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed?       6M CO1 L2         b) What is meant by hardness of water and its units? What are the disadvantages of hard water?       6M CO1 L2         b) What is meant by hardness of water and its units? What are the disadvantages of hard water?       6M CO1 L2         COR       6M CO1 L2         3. a) Describe the estimation of hardness of water by EDTA method.       6M CO1 L2         b) Explain the zeolite exchange process for softening of water.       6M CO1 L2         UNIT-II       6M CO2 L1         4. a) Write a short note on fuel cells.       6M CO2 L1         b) Write briefly about: (i)Primary cells (ii)Secondary Cells       6M CO2 L1         OR       6M CO2 L1         b) Describe about (i) Sacrificial anodic protection method (ii) impressed current method of cathodic protection.       6M CO2 L2         b) Define corrosion. Explain the factors which influence the corrosion.       6M CO2 L2				
UNIT-I2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed?6M CO1 L2b) What is meant by hardness of water and its units? What are the disadvantages of hard water?6M CO1 L2OR6M CO1 L2M CO1 L2OR3. a) Describe the estimation of hardness of water by EDTA method.M CO1 L2D Explain the zeolite exchange process for softening of water.OM CO1 L2UNIT-II4. a) Write a short note on fuel cells. b) Write briefly about: (i)Primary cells (ii)Secondary CellsOR5. a) Describe about (i) Sacrificial anodic protection method (ii) impressed current method of cathodic protection. b) Define corrosion. Explain the factors which influence the corrosion.CO2 L26M CO2 L2	Answer five questions by choosing one question from each unit ( 5 x 12		-	BI
<ul> <li>2. a) What are Boiler troubles? Explain Scale and Sludge formation in boilers. How are they removed?</li> <li>b) What is meant by hardness of water and its units? What are the disadvantages of hard water?</li> <li>3. a) Describe the estimation of hardness of water by EDTA method.</li> <li>b) Explain the zeolite exchange process for softening of water.</li> <li>c) UNIT-II</li> <li>4. a) Write a short note on fuel cells.</li> <li>b) Write briefly about: (i)Primary cells (ii)Secondary Cells</li> <li>c) Describe about (i) Sacrificial anodic protection method (ii) impressed current method of cathodic protection.</li> <li>b) Define corrosion. Explain the factors which influence the corrosion.</li> </ul>	UNIT-I	Marks	00	DL
formation in boilers. How are they removed? b) What is meant by hardness of water and its units? What are the disadvantages of hard water? <b>OR</b> 3. a) Describe the estimation of hardness of water by EDTA method. b) Explain the zeolite exchange process for softening of water. <b>UNIT-II</b> 4. a) Write a short note on fuel cells. b) Write briefly about: (i)Primary cells (ii)Secondary Cells <b>OR</b> 5. a) Describe about (i) Sacrificial anodic protection method (ii) impressed current method of cathodic protection. b) Define corrosion. Explain the factors which influence the corrosion. <b>GM</b> CO1 L2 <b>GM</b> CO1 L2 <b>GM</b> CO2 L1 <b>GM</b> CO2 L1 <b>GM</b> CO2 L2 <b>GM</b> CO2 L2		Э		
are the disadvantages of hard water?6MCO1L2OR0R6MCO1L23. a)Describe the estimation of hardness of water by EDTA method.6MCO1L2b)Explain the zeolite exchange process for softening of water.6MCO1L2b)Explain the zeolite exchange process for softening of water.6MCO1L24. a)Write a short note on fuel cells. b)6MCO2L1b)Write briefly about: (i)Primary cells (ii)Secondary Cells OR6MCO2L1corrosion.CO2L16MCO2L2b)Define corrosion. Explain the factors which influence the corrosion.6MCO2L26MCO2L26MCO2L2			CO1	L2
OR3. a) Describe the estimation of hardness of water by EDTA method.6MCO1L2b) Explain the zeolite exchange process for softening of water.6MCO1L2UNIT-II4. a) Write a short note on fuel cells. b) Write briefly about: (i)Primary cells (ii)Secondary Cells OR6MCO2L16MCO2L16MCO2L16MCO2L1OR5. a) Describe about (i) Sacrificial anodic protection method (ii) impressed current method of cathodic protection. b) Define corrosion. Explain the factors which influence the corrosion.6MCO2L26MCO2L2	b) What is meant by hardness of water and its units? What	t		
<ul> <li>3. a) Describe the estimation of hardness of water by EDTA method.</li> <li>b) Explain the zeolite exchange process for softening of water.</li> <li>4. a) Write a short note on fuel cells.</li> <li>b) Write briefly about: (i)Primary cells (ii)Secondary Cells</li> <li>5. a) Describe about (i) Sacrificial anodic protection method (ii) impressed current method of cathodic protection.</li> <li>b) Define corrosion. Explain the factors which influence the corrosion.</li> </ul>	are the disadvantages of hard water?	6M	CO1	L2
method.6MCO1L2b)Explain the zeolite exchange process for softening of water.6MCO1L2UNIT-II4. a)Write a short note on fuel cells.6MCO2L1b)Write briefly about: (i)Primary cells (ii)Secondary Cells6MCO2L1OR5. a)Describe about (i)Sacrificial anodic protection method (ii) impressed current method of cathodic protection.6MCO2L2b)Define corrosion.Explain the factors which influence the corrosion.6MCO2L2	OR			
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UNIT-II6M CO2 L14. a) Write a short note on fuel cells. b) Write briefly about: (i)Primary cells (ii)Secondary Cells OR6M CO2 L15. a) Describe about (i) Sacrificial anodic protection method (ii) impressed current method of cathodic protection. b) Define corrosion. Explain the factors which influence the corrosion.6M CO2 L26M CO2 L2	method.	6M	CO1	L2
<ul> <li>b) Write briefly about: (i)Primary cells (ii)Secondary Cells</li> <li>6M CO2 L1</li> <li>6M CO2 L1</li> <li>6M CO2 L2</li> <li>6M CO2 L2</li> <li>6M CO2 L2</li> <li>6M CO2 L2</li> </ul>		6M	CO1	L2
OR5. a) Describe about (i) Sacrificial anodic protection method (ii) impressed current method of cathodic protection.6M CO2 L2b) Define corrosion. Explain the factors which influence the corrosion.6M CO2 L2	4. a) Write a short note on fuel cells.	6M	CO2	L1
<ul> <li>5. a) Describe about (i) Sacrificial anodic protection method (ii) impressed current method of cathodic protection.</li> <li>b) Define corrosion. Explain the factors which influence the corrosion.</li> <li>6M CO2 L2</li> </ul>	b) Write briefly about: (i)Primary cells (ii)Secondary Cells	6M	CO2	L1
<ul> <li>(ii) impressed current method of cathodic protection.</li> <li>6M CO2 L2</li> <li>b) Define corrosion. Explain the factors which influence the corrosion.</li> <li>6M CO2 L2</li> </ul>	OR			
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corrosion. 6M CO2 L2	(ii) impressed current method of cathodic protection.	6M	CO2	L2
	b) Define corrosion. Explain the factors which influence the	3		
Dage 1 of 7	corrosion.	6M	CO2	L2
		Ρασι	e <b>1</b> of <b>2</b>	

		UNIT–III			
6.	a)	Distinguish between thermoplastics and thermosetting			
		polymers or resins.		CO3	
	b)	Discuss, with examples about the types of polymerization.	6M	CO3	L4
		OR			
7.	a)	Describe the determination of calorific value of a fuel by using bomb calorimeter.	6M	CO3	L2
	b)	What is crude oil? Describe the refining Process of crude			
		petroleum.	6M	CO3	L2
0	、				
8.	a)	Discuss the classification of composites with suitable examples in brief.	6M	CO4	L4
	b)	Define refractory. What are the properties of a good			
		refractory?	6M	CO4	L1
		OR			
9.	a)	Write notes on lubricants with special reference to their classification, mode of action, examples and applications.	6M	CO4	L2
	b)	What is Portland cement? Explain the different ingredients			
		of Portland cement.	6M	CO4	L2
10	<b>2</b> )	UNIT-V Describe the chemical synthesis of nanomaterials by Sol-			
10.	a)	gel method.	6M	CO5	L2
	b)	Discuss the applications of nanomaterials in wastewater treatment.	6M	CO5	14
		OR	OW	005	L4
11	2)		614	005	1.4
11.	,	Discuss the classification of smart materials.		CO5	
	b)	What are the applications of shape memory alloys? Explain.	0IVI	CO5	L2

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	I B.Tech. I Semester Regular & Supplementary Examinations Februa Engineering Graphics-I	ry 2023	3	
	Answer <i>five full</i> questions by choosing one question from each unit $(5 \times 14 = 70)$	ə: 3 Ηοι Marks)	Jrs	
	*****	Marks	со	
	UNIT-I			
•	A fountain jet is discharged from the ground level at an inclination of 45 <sup>0</sup> . The jet travels a horizontal distance of 10 m from the point of discharge and falls on the ground. Trace the path of the jet.		CO1	
	OR			
	Construct a conic when the distance of its focus from its directrix is equal to 50 mm and its eccentricity is 2/3. Name the curve, mark its major axis and minor axis. Draw a tangent at any point, P on the curve.		CO1	
5.	A coin of 40 mm diameter rolls over horizontal table without slipping. A point on the circumference of the coin is in contact with the table surface in the beginning and after one complete revolution. Draw and name of the curve. Draw a tangent and normal at any point			
	on the curve.	14M	CO2	
•	<b>OR</b> Draw an epi-cycloid of a circle of 40 mm diameter, which rolls on another circle of 120 mm diameter for one revolution clockwise. Draw a tangent and a normal to it at a point 90 mm from the events of the diameter of the diameter.		000	
	from the centre of the directing circle.	14M	CO2	
	A line AB, 90 mm long, is inclined at $30^{\circ}$ to the H.P. Its end A is 12 mm above the H.P and 20 mm in front of the V.P. Its front view measures 65 mm. Draw the top view of AB and determine its inclination with the V.P.	14M	CO3	
_	<b>OR</b> The top view of a 75 mm long line AB, measures 65 mm; while the length of its front view			
	is 50 mm. It's one end A is in the H.P and 12 mm in front of the V.P. Draw the projections of the line AB and determine its inclination with H.P and V.P.		CO3	
	A square lamina ABCD of 30 mm side rests on one of its corners on the ground. Its plane is inclined at 35 <sup>o</sup> with H.P and diagonal DB inclined at 65 <sup>o</sup> to V.P. Draw its projections.		CO4	
	Draw the projections of circle of 50mm diameter resting in the HP on a point A on the circumference, its plane inclined at 45° to the HP and the top view of the diameter AB making an angle 30° to the VP.	14M	CO4	
•	<b>UNIT-V</b> Draw the projections of a line 80 mm long inclined at $30^{\circ}$ to H.P and its top view appears to be inclined at $60^{\circ}$ to V.P. One of the ends of the line is 45 mm above H.P and 60 mm in front of V.P. Draw its projections by auxiliary plane method.		CO5	
•	<b>OR</b> A regular hexagon of 25 mm side has a corner on the H.P. Its surface inclined at 45 <sup>°</sup> to the H.P and top view of the diagonal through the corner which is in the H.P makes an angle of 60 <sup>°</sup> with the V.P. Draw the projections. (Use auxiliary plane method).		CO5	

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Code: 20A511T	R-20	j
I B.Tech. I Semester Regular & Supplementary Examinations F <b>Problem Solving through C Programming</b> (Common to All Branches)	<sup>-</sup> ebruary 202	!3
Max. Marks: 70	Time: 3 Hc	ours
<ul> <li>Note: 1. Question Paper consists of two parts (Part-A and Part-B)</li> <li>2. In Part-A, each question carries Two mark.</li> <li>3. Answer ALL the questions in Part-A and Part-B</li> </ul>		
PART-A		
(Compulsory question)		
1. Answer the following(5 X 2 = 10M)	CO BL	-
a) Differentiate an algorithm and a flowchart.	CO1 L2	
<ul> <li>Differentiate do-while and while statements.</li> </ul>	CO2 L2	
c) Describe the scope of variables in C program.	CO3 L2	
d) Define predefined functions realloc() and free()	CO4 L2	
<ul> <li>e) Illustrate the use of enumerated data type in C programming.</li> </ul>	. CO5 L3	
<u>PART-B</u> Answer five questions by choosing one question from each unit (5 x 12 = 6	30 Marks)	
	Marks	CO BL
UNIT–I		
a) Illustrate the use of ternary or conditional operator to find	the	
maximum of three given integers	6M	1 L4
b) Describe the concept of Associativity and Precedence	e of	
operators.	6M	1 L2
OR		
Explain the structure of a C program	12M	1 L2
UNIT–II		
a) Develop a C program for Binary search.	6M	2 L4
b) Apply bubble sort on the following list of elements		
30, 60, 80, 10, 50, 90, 70, 20	6M	2 L:
	01	
OR		
OR	QN/	2 1 2
OR a) Model a C program for matrix multiplication b) Discuss the loop control statements in C programming.	8M 4M	2 L3 2 L2

	Code: 20A	A511T		
		UNIT–III		
6.	a)	Differentiate call by value and call by reference with example.	8M	3 L3
	b)	Illustrate the concept of recursion.	4M	3 L3
		OR		
7.	a)	Discuss the preprocessor directives.	8M	3 L2
	b)	Develop a C program to find the LCM of two integers.	4M	3 L5
		UNIT–IV		
8.	a)	Define a pointer and list the advantages and disadvantages		
		of pointers.	6M	4 L3
	b)	Differentiate malloc() and calloc() with examples	6M	4 L2
		OR		
9.	a)	Develop a c program to swap two integer variables using		
		swap function.	6M	4 L6
	b)	Illustrate the concept of pointer arithmetic.	6M	4 L4
		UNIT–V		
10.	a)	Differentiate structure and union with examples.	4M	5 L3
	b)	Develop a c program to display the content of unformatted		
		text file.	8M	5 L5
		OR		
11.	a)	Outline the concept of self-referential structures.	6M	5 L3
	b)	Demonstrate the passing of structures to functions as		
		parameters.	6M	5 L3
		***END***		

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11	3.Tech. I Semester Regular & Supplem <b>Algebra and</b>	-		imina	IIONS F	202	3	
	(Common to Al							
Ma	x. Marks: 70	* *				Time: 3 Hc	ours	
Not	<ul> <li>e: 1. Question Paper consists of two parts (Pa 2. In Part-A, each question carries Two ma 3. Answer ALL the questions in Part-A an <u>PART-</u></li> </ul>	art-A an arks. nd Part		nrt-B)				
	(Compulsory	questio	n)					
1. Ar	nswer ALL the following short answer	questi	ons	(5 X	2 = 10	) C	OE	3L
a)	Define the rank of the matrix.						1	2
b)	State Caley Hamilton Theorem.						2	2
	e rank of the matrix. Evnond to the second vision	oorio	•					
C)	Expand ley Hamilton Theore Urin's						3	2
d)	Evaluate	Serie	3.					
	$\int_{0}^{2} \int_{1}^{2} \int_{1}^{2} x y^{2} z  dz  dy  dx$						4	3
e)	Find the value of (1,1/2)						5	3
. a)	Answer <i>five</i> questions by choosing one questions UNIT-I educe the f. llowing matrix into the $\begin{bmatrix} 2 & 3 & 0 \\ 2 & 4 & 3 & 2 \\ 3 & 2 & 1 & 3 \\ 6 & 9 & 7 & 5 \end{bmatrix}$ Echelon form and he	ion fron				= <b>60 Marks</b> ) Marks	со	BL
	Test for consistency and solve 5x+3y+7z=4 3x+26y+2z=9 7x+2y+10z=5	ence f	ind i	ts ran	k	6M 6M	1	
	OR							
•	Find the eigenvalues an eigenvect	t0 Lirs of	ma	rix t				

eigenvalues an eigenvecto rix  $d_{\parallel} -1 \quad 4$  irs of mat  $\begin{bmatrix} 3 & 2 & -1 \\ 2 & 1 & -1 \end{bmatrix}$ 12M 1 3

Page **1** of **2** 

4. Verify C: Hamilton the JNIT-II the matrix A and find its  

$$ayley-2 - 1 \quad 1 \text{ orem for} \\
inverse. A = \begin{bmatrix} -1 & 2 & -1 \\ 1 & -1 & 2 \end{bmatrix} \quad 12M \quad 2 \quad 3 \\
\hline OR \\
5. R^{1} d ce^{\frac{1}{1}h} c ad^{2} (c \text{ forn}) \\
2^{e} u^{2} t^{2} 2^{-1} t^{2} 3^{-1} 2^{-1} t^{2} 3^{-1} 6 a \text{ canonical form by an orthogonal} \\
reduction and discuss its nature. Also, find the modal matrix. 12M \quad 2 \quad 3 \\
\hline equation and discuss its nature. Also, find the modal matrix. 12M \quad 2 \quad 3 \\
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	Hal	I Ticket Number :	]	
	Cod	le: 20AC15T	·20	
		B.Tech. I Semester Regular & Supplementary Examinations Februar	ry 2023	
		Communicative English	-	
		(Common to CE, ME, CSE, CSE(AI), CSE(DS) and AI&DS)	0.11	
	Mo	ax. Marks: 70 Time	e: 3 Hours	
	Note	: 1. Question Paper consists of two parts (Part-A and Part-B)		
		2. In Part-A, each question carries <b>Two mark</b> .		
		3. Answer ALL the questions in Part-A and Part-B PART-A		
		(Compulsory question)		
	1. A	Inswer ALL the following short answer questions $(5 \times 2 = 10M)$		BL
	a) V	What emotions did Hazlitt's son express when he was going to scho	ol?	L2
	b) V	Vhat is the poem "The Brook" about?		L2
	c) J	lustify the title " The death trap.		L2
	d) H	low did Mrinalini fight for change?		L2
	e) [	Discuss the concept of Micro credit and Micro finance.		L2
		PART-B		
		Answer <i>five</i> questions by choosing one question from each unit ( $5 \times 12 = 60$ Ma	arks )	
			Marks CO	BL
		UNIT–I		
2.		"Never conceive a prejudice against others". Substantiate it with		
		reference to William Hazlitt's essay" on the conduct of life".	12M	L3
		OR		
3.	a)			L4
	i)	I do not Know English.	1M	
	ii)	I will meet you tomorrow.	1M	
	iii)	I had never been to Bombay.	1M	
	iv)	I ate salad for my Breakfast.	1M	
	V)	She came here yesterday	1M	
	vi)	They are not Indians.	1M	
	b)	Identify the parts of speech of the underlined words.		L2
	vii)	It being a <u>hot day, We stayed Indoors.</u>	2M	
	viii)	It is <u>too</u> hot today. <u>I</u> can't go out.	2M	
	ix)	It is an <u>irrevocable</u> change <u>and</u> cannot be revoked.	2M	
		UNIT–II		
4.		Write a critical appreciation of 'The Brook' by Tennyson.	12M	L4
		OR		
5.		Write a paragraph on the importance of communication skills.	12M	L3
		UNIT–III		
6.		How does Dimitri defend himself from the death trap?	12M	L4

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OR

7.	a)	Rearrange the jumbled sentences to form a meaningful paragraph.	l	L3
	i)	Although he had learned German at college, he soon realized that he did not remember much.	1 1M	20
	ii)	His German has improved a lot.	1M	
	iii)	When Pradeep retuned to India after a one Month's stay in Germany, he started learning German again	<sup>1</sup> 1M	
	iv)	Now he is preparing to appear for an Exam.	1M	
	V)	He intends to work on a new project.	1M	
	vi)	Next year, he plans to enroll himself in an advance course.	1M	
	vii)	It is essential for him to make frequent visits.	1M	
	b)	Fill in the blanks using appropriate form of the given verb.		L4
١	viii)	Sindhu(Win) the silver medal in Olympics.	1M	
	ix)	Suraj(wake) up early this morning.	1M	
	X)	She has just(arrive)	1M	
	xi)	They always(drink) coffee at breakfast.	1M	
	xii)	I (be) happy to hear this news.	1M	
		UNIT–IV		
8.		Explain how Muhammed Yunus makes a difference in the banking sector?	) 12M	L3
		OR		
9.		Write an Essay on the Topic," importance of world peace."	12M	L4
4.0		UNIT-V	_	
10.		How does Ranjana Deve convey the notion that being a performer was not an acceptable career choice for "Respectable Women?"	12M	L3
11.		OR Correct the following sentences:		L4
	i)	He is elder than me.	1M	L4
	ii)	Let us discuss about the issue.	1M	
	iii)	He gave me a good advice.	1M	
	iv)	You went home yesterday. Isn't it?	1M	
	(V)	If I went to Bombay next week, I will meet your Uncle.	1M 1M	
	vi) vii)	They have lived here from March 2020 Bread and Butter are what we usually have for Breakfast.	1M 1M	
	viii)	Walking along the Road, my hat was lost.	1M	
	ix)	My Father went to buy floor carpets and returned back.	1M	
	x)	You have to agree that I am cent percent right.	1M	
	xi)	I came on foot.	1M	
	xii)	Taj mahal is an unique Monument.	1M	
		*** End ***		