Hall Ticket Number :

Code: 5GC22

I B.Tech. II Semester Supplementary Examinations June 2022

Engineering Chemistry

(Common to EEE & ECE)

Max. Marks: 70

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

- 1. a) What is break point chlorination? State its significance.
 - b) Write brief account on Priming and foaming.

OR

UNIT-II

- 2. a) With the help of neat diagram, describe the reverse osmosis method for the desalination of brackish water.
 - b) What is hardness of water? How do you classify and express hardness?
- Give reasons for the following
 (i) Corrosion of water-filled tank occurs below the waterline
 (ii) A Copper equipment should not possess a small Steel bolt

OR

4. On dilution Equivalent Conductance of an electrolyte increases whereas Specific Conductance decreases. Explain.

UNIT–III

- 5. a) Describe the method of preparation, properties of Bakelite
 - b) Write a brief notes on Vulcanization and compounding of rubber

OR

6. Describe the synthesis and conducting mechanism of polyacetylene

UNIT–IV

- 7. a) What are the characteristics of a good fuel?
 - b) Write short note on octane number and cetane number.

OR

8. The percentage composition of a sample of coal by weight was found to be: C = 76%, H=5.2%, O = 12.8%, N = 2.7%, S = 1.2%, the remaining being ash. Calculate the minimum weight of air necessary for complete combustion of 1 kg of coal and percentage composition by weight of dry products, if 50% excess air supplied.

UNIT–V

9. What is meant by Lubrication Process? Describe thick-film Lubrication and thin-film Lubrication.

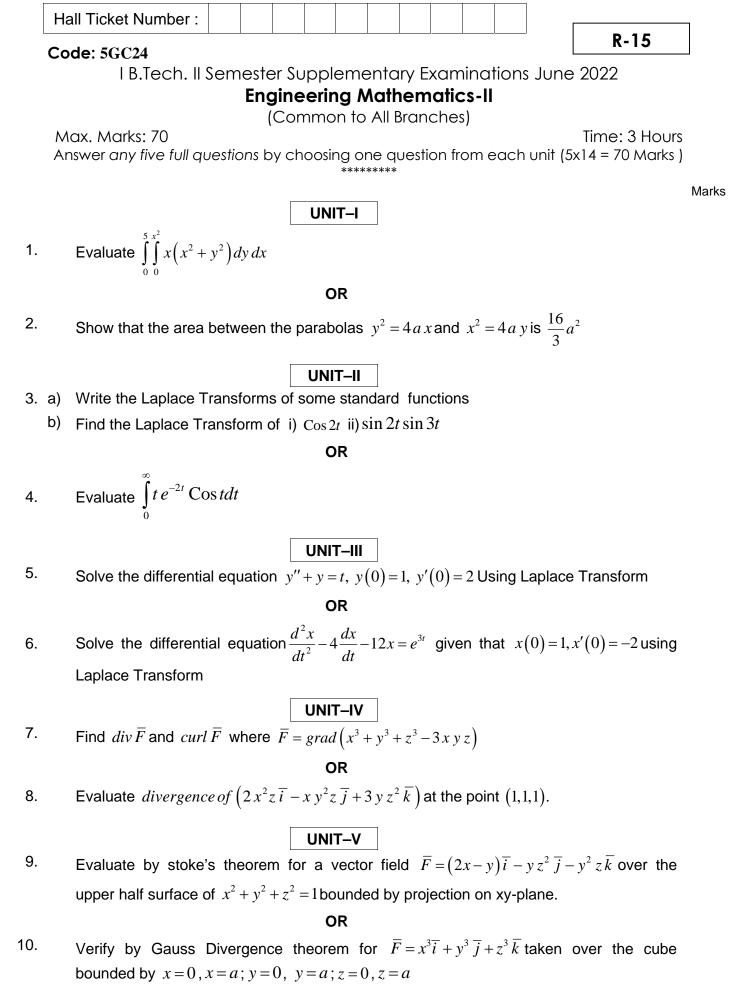
OR

- 10. a) How are lubricants classified? Give examples
 - b) Describe the analysis of cement



R-15

Time: 3 Hours



	Ha	all Ticket Number : R-15]
	Co	ode: 5G121	
I B.Tech. II Semester Supplementary Examinations June 2022			
		C Programming and Data Structures (Common to All Branches)	
		ax. Marks: 70 Time: 3 Hours	
	Ar	nswer any five full questions by choosing one question from each unit (5x14 = 70 Marks)	
		UNIT-I	Marks
1.	a)	Define pointer? How pointer variables are initialized.	
	b)	Write a c program to access elements of an array using pointers.	
		OR	
2.	a)	Write a short note on void pointer.	
	b)	Discuss about any two dynamic memory allocation functions.	
~	-)	UNIT-II	
3.	a) b)	Differentiate structures and unions.	
	b)	Explain any one sorting technique with example program. OR	
4	a)	List and explain any four functions related to file handling in c.	
	b)	Differentiate linear search and binary search.	
		UNIT-III	
5.		What is Queue? Explain the operations of a Queue with an example program.	
		OR	
6.	a)	Convert the following infix expression to post fix expressions	
		i) A + B * C +D ii) (A + B) * (C+D)	
	b)	What is stack? Write the applications of stack.	
		UNIT-IV	
7.		Discuss the operations of a single linked list with proper diagrams.	
		OR	
8.		How to represent doubly linked list? Write the algorithm to insert and delete operations	
		in double linked list.	
		UNIT-V	
9.		What is Binary Search Tree? Construct the BST for the nodes 15, 6, 3, 7, 45, 50	
		OR	
0.		What is Di-graph? Explain different representation of graphs.	
