

CSE

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Reg.No.:								
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VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 4001

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – AUG. / SEP. 2023

Second Semester

Computer Science and Engineering

U19CH207 – ENGINEERING CHEMISTRY

(Regulation 2019)

(Common to Information Technology, Biotechnology & Computer Science and Technology)

Time : Three Hours

Maximum : 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	(10 x 2 = 20 Marks)		
		Marks	KL	CO
1.	Recall the disadvantages of scale and sludge formation.	2	K1	CO1
2.	What are the reasons for boiler corrosion?	2	K1	CO1
3.	Define the term functionality.	2	K1	CO2
4.	Identify any two properties and uses of Nylon-6.	2	K3	CO2
5.	List the size dependent properties of nanomaterials.	2	K4	CO3
6.	Identify any four uses of nanowires.	2	K3	CO3
7.	What are the types of tidal power plants? Give examples	2	K2	CO4
8.	Recall the principle of fuel cell.	2	K1	CO4
9.	Differentiate chemical corrosion and electrochemical corrosion.	2	K4	CO5
10.	What are the objectives of electroplating?	2	K1	CO5

PART – B

(5 x 16 = 80 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	i. Outline the importance of water quality parameters.	8	K2	CO1
	ii. Discuss the construction, working and advantages of Zeolite process.	8	K6	CO1
(OR)				
b)	i. Show and describe the EDTA method for the measurement of hardness of water.	8	K2	CO1
	ii. Summarize the principle, construction and advantages of reverse osmosis.	8	K2	CO1
12. a)	i. Outline the classification of polymer. Give example for each class.	8	K2	CO2
	ii. Write the preparation, properties and uses of a. PMMA b. Bakelite	8	K2	CO2
(OR)				
b)	i. Illustrate the types of polymerization with examples.	8	K2	CO2
	ii. Explain the anionic mechanism of addition polymerization.	8	K2	CO2
13. a)	Elaborate the Chemical Vapour Deposition and Laser ablation method for synthesis of nanomaterials.	16	K6	CO3
(OR)				
b)	Discuss the properties of nanomaterials and predict the applications of nanomaterials in medical field.	8+8	K6	CO3
14. a)	What are solar cells? Write a note on working principle and application of solar cells.	16	K2	CO4
(OR)				
b)	Explain the construction and working principle of Lead acid battery. State the advantages and disadvantages of batteries.	16	K2	CO4
15. a)	i. Identify and explain the factors influencing the rate of corrosion.	8	K3	CO5
	ii. What are the constituents of paint? Give examples. Mention their functions	8	K1	CO5
(OR)				
b)	i. How is corrosion prevented by cathodic protection? Explain.	8	K1	CO5
	ii. Explain the electroless plating technique of Ni	8	K6	CO5