Reg.No.:												

VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 40001

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – JAN. / FEB. 2025
Second Semester
Computer Science and Engineering
U19CH207 – ENGINEERING CHEMISTRY
(Common to IT)
(Regulation 2019)

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	Marks	KL	CO
1.	Define hardness of water. Name the ions responsible for hardness.	2	K2	CO1
2.	What is boiler corrosion? How can it be prevented?	2	K2	CO1
3.	Identify any two examples of polymer which is formed by condensation polymerization.	2	K3	CO2
4.	Recall the uses of poly ethylene.	2	K1	CO2
5.	List any two applications of nanomaterials.	2	K1	CO3
6.	Name the different types of Carbon Nano Tubes.	2	K1	CO3
7.	Recall any two advantages of solar energy.	2	K2	CO4
8.	List the applications of dry cell.	2	K1	CO4
9.	Compare the differences between dry corrosion and wet corrosion.	2	K2	CO5
10.	What is paint? Give the uses of paint.	2	K1	CO5

PART – B

(5 x 16 = 80 Marks)

Q.No.			Questions	Marks	KL	CO
11.	a)	i.	What is caustic embrittlement? How can it be prevented?	8	K1	CO1
		ii.	Summarize the ion-exchange process of water softening.	8	K2	
			(OR)			
	b)		What is desalination? With a neat diagram describe the reverse osmosis process for the desalination of brackish water.	16	K1	CO1
12.	a)	i.	What are plastics? Differentiate thermoplastics from thermosetting plastics.	8	K1	CO2
		ii.	Compare and contrast the additional polymerization and condensation polymerization.	8	K2	
			(OR)			
	b)	i.	Explain the steps involved in free radical polymerization mechanism.	8	K2	CO2
		ii.	Summarize the preparation, properties and uses of Nylon 6,6.	8	K2	
13.	a)		Explain in detail the synthesis of Nanomaterials by bottom up process.	16	K2	CO3
			(OR)			
	b)		Summarize the applications of nano materials in medical and electronic field.	16	K2	CO3
14.			Identify and discuss the working principle of solar cell. Mention their applications.	16	K3	CO4
			(OR)			
	b)		Explain the construction and working of nickel cadmium (NICAD) battery with a neat sketch. Mention their advantages and disadvantages.	16	K2	CO4
15.	a)		How underground pipeline can be protected from corrosion by sacrificial anodic protection and impressed current cathodic protection? Illustrate with examples.	16	K1	CO5
			(OR)			
	b)		Outline the steps involved in cleaning the surface for electro plating. Discuss the electro plating method with suitable examples.	16	K2	CO5