Question Paper Code: R22A12HS02

R22

ANURAG Engineering College

(An Autonomous Institution)

I B.Tech II Semester Supplementary Examinations, January – 2025

ENGINEERING CHEMISTRY

(COMMON TO CIVIL, EEE, ECE & IT)

Time: 3 Hours **Max. Marks: 60**

Section – A (Short Answer type questions) (10 Marks)

Answer All Questions

		Course Outcome	B.T Level	Marks
1.	Define Permanent Hardness. What are the units of Hardness?	CO1	L1	1M
2.	What is Calgon Conditioning?	CO1	L1	1M
3.	What are Primary and Secondary Batteries? Give examples.	CO2	L1	1M
4.	What is Pitting Corrosion?	CO2	L1	1M
5.	Define a Conducting Polymer with an example.	CO3	L1	1M
6.	What are Biodegradable Polymers? Give examples.	CO3	L1	1M
7.	Define Atomic Orbital.	CO4	L1	1M
8.	Omit any two Salient features of CFT.	CO4	L1	1M
9.	What are Thermo Response Materials? Give Examples.	CO5	L1	1M
10.	Define Fire Point and Flash Point.	CO5	L1	1M

Section B (Essay Questions)

Answer all questions, each question carries equal marks. **(5 X 10M = 50M)**

11. A)	What is Deflouridation? Explain the Determination of F- ion by ion-selective electrode method.	CO1	L2	10M
	OR			
B)	Explain Softening of water by ion- exchange process.	CO1	L2	10M
12. A)	Explain the Construction, working and applications of Methanol-Oxygen Fuel Cells.	CO2	L2	10M
	OR			
B)	What is Cathodic protection? Explain the Sacrificial anodic method.	CO2	L2	10M
13. A)	Explain the preparation of Addition polymerisation.	CO3	L2	10M
	OR			
B)	Outline the preparation, properties and applications of BUNS-S and Thiokol Rubber.	CO3	L2	10M
14. A)	Draw the Molecular orbital energy level diagrams of diatomic molecule O_2.	CO4	L2	10M
	OR			
B)	Explain the Crystal field splitting of transition metal ion d- orbital in Octahedral complexes.	CO4	L2	10M
15. A)	What are Shape memory materials? Explain the Preparation, Properties and applications of Poly L- Lactic acid.	CO5	L2	10M
	OR			
B)	Explain thin film and extreme pressure lubrication mechanism.	CO5	L2	10M