Question Paper Code: R18A12HS03

R18

ANURAG Engineering College

(An Autonomous Institution)

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

ENGINEERING CHEMISTRY

(COMMON TO ECE & CSE)

Time: 3 Hours **Max. Marks: 75**

Section – A (Short Answer type questions) (25 Marks)

Answer All Questions

		Course Outcome	B.T Level	Marks
1.	Define atomic orbital Molecular orbital.	CO1	L1	2M
2.	Show M.O.E.D of N_2 molecule.	CO1	L2	3M
3.	Define Temporary and Permanent hardness.	CO2	L1	2M
4.	What are Scales and Sludges.	CO2	L1	3M
5.	What is Nernst equation? Elaborate.	CO3	L1	3M
6.	What is Galvanising? Give example	CO3	L1	2M
7.	Define Enantiomers and Diastereomers.	CO4	L1	2M
8.	Explain Anti Markownikoff Rule.	CO4	L2	3M
9.	Compare Thermoplastics and thermosetting plastics	CO5	L2	3M
10.	Give the applications of Poly Lactic Acid	CO5	L2	2M

Section B (Essay Questions)

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

11. A)	Explain Molecular Orbital energy level diagram of O_2 molecule.	CO1	L2	10M
	OR			
B)	Outline Crystal filed splitting in Octahedral complex.	CO1	L2	10M
12. A)	Explain the external treatment of Ion – Exchange process.	CO2	L2	10M
	OR			
B)	Explain the estimation of Hardness using EDTA method.	CO2	L2	10M
13. A)	Explain briefly H_2 –O_2 fuel cell.	CO3	L2	10M
	OR			
B)	What is Cathodic protection? Explain sacrificial anode method.	CO3	L3	10M
14. A)	Explain briefly Conformational analysis of n-butane.	CO4	L2	10M
	OR			
B)	Explain oxidation of alcohols using $KMnO_4$ & CrO_3.	CO4	L2	10M
15. A)	Outline Preparation, properties and engineering applications of PVC, Bakelite.	CO5	L2	10M
	OR			
B)	Explain the Preparation and properties of Polyhydroxy butyrate (PHB), Polyhydroxybutyrate-co-b-Hydroxy valerate (PHBV)	CO5	L2	10M