

ANURAG Engineering College

(An Autonomous Institution)

I B.Tech I Semester Supplementary Examinations, June/July – 2024

APPLIED CHEMISTRY-I**(COMMON TO CIVIL & MECH)****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 desalination?	CO1	L1	2M
2. Differentiate between temporary and permanent hardness?	CO1	L2	3M
3. What is specific conductance and molar conductance?	CO2	L1	2M
4. Give example of concentration cell?	CO2	L2	3M
5. Write the characteristics of a cell?	CO3	L1	2M
6. What are engineering applications of fuel cell?	CO3	L1	3M
7. Define corrosion?	CO4	L1	2M
8. What is meant by Galvanic series?	CO4	L2	3M
9. What are differences between physical adsorption and chemical adsorption.	CO5	L2	2M
10. Write a note on co-precipitation method?	CO5	L1	3M

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

11. A) What are the specifications of Potable water? Explain stages involved in the treatment of Potable water?	CO1	L2	10M
OR			
B) Explain Boiler troubles?	CO1	L2	10M
12. A) What is Calomel electrode? Explain how you can determine pH of unknown solution using calomel electrode?	CO2	L3	10M
OR			
B) Explain construction and working of Galvanic cell with a neat diagram.	CO2	L3	10M
13. A) Discuss the working principle of methanol-oxygen fuel cell with a neat sketch.	CO3	L3	10M
OR			
B) Discuss about working and applications of Ni-Cd cell?	CO3	L3	10M
14. A) What do you mean by sacrificial anodic protection? Explain with a Suitable example.	CO4	L3	10M
OR			
B) Write a note on the following i) Waterline corrosion ii) Galvanic iii) Pitting	CO4	L2	10M
15. A) Explain Critical micellar concentration and its applications?	CO5	L2	10M
OR			
B) Provide Electrical, Mechanical and Optical Properties of colloids?	CO5	L3	10M