



K22U 2288

Reg. No. : .....

Name : .....

**V Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/  
Improvement) Examination, November 2022  
(2019 Admission Onwards)  
Core Course in Chemistry/Polymer Chemistry  
5B07CHE/PCH – ANALYTICAL AND INORGANIC CHEMISTRY – II**

Time : 3 Hours

Total Marks : 40

## SECTION – A

Answer **all** questions. **Each** carries **1** mark.

1. Define the term chromatogram.
2. Draw the structure of  $B_4H_{10}$ .
3. What is post precipitation ?
4. Give the composition of alloy steels. (4×1=4)

## SECTION – B

Answer **seven** questions out of 10. **Each** carries **2** marks.

5. Give the significance of electrometallurgy with an example.
6. Give the geometry and hybridization of  $XeO_3$  and  $XeF_4$ .
7. What are refractory materials ? Give any two examples.
8. Explain why helium is used in diving apparatus as a diluents for oxygen.
9. Mention the important factors affecting DTA.
10.  $ClF_3$  molecule has a T-shaped structure. Why ?
11. What are ion exchange resins ?
12. List out any four applications of column chromatography.
13. Distinguish between dry corrosion and wet corrosion.
14. What are thermometric titrations ? (7×2=14)

P.T.O.

K22U 2288



## SECTION – C

Answer **four** questions out of 6. **Each** carries **3** marks.

15. Discuss any two methods for concentration of ore.
16. Explain the term corrosion control.
17. Give the preparation, properties and applications of SiC.
18. List out the important uses of noble gases.
19. Discuss different types of solvent extraction.
20. Discuss the principle of gravimetric estimation of iron. (4×3=12)

## SECTION – D

Answer **two** questions out of 4. **Each** carries **5** marks.

21. Discuss the principle, instrumentation and applications of TGA.
22. Give the preparation, properties and applications of silicones.
23. Discuss the various steps involved in the extractive metallurgy of gold.
24. Explain the electrochemical theory and peroxide theory of corrosion. (2×5=10)