



K20U 1496

Reg. No. :

Name :

V Semester B.Sc. Degree (CBCSS – Reg./Sup./Imp.)
Examination, November 2020
(2014 Admn. Onwards)
Core Course in Chemistry
5B08 CHE : INORGANIC CHEMISTRY – II

Time : 3 Hours

Max. Marks : 40

SECTION – A

Answer **all** questions. **Each** question carries **one** mark.

1. What is EAN rule ?
2. What is the spin only magnetic moment value of $[\text{Fe}(\text{CN})_6]^{3-}$?
3. Give general electronic configuration of actinides.
4. List any two uses of non ferrous alloys. **(4×1=4)**

SECTION – B

Answer **any seven** questions. **Each** question carries **2** marks.

5. What is meant by spectrochemical series ?
6. What are metalloenzymes ? Name two Zn enzymes.
7. What is the difference between active transport and passive transport ?
8. Explain why Δ_t is smaller than Δ_o .
9. What are chelating ligands ? Give examples.
10. Compare the electronic spectra of lanthanides and transition metals.
11. What are the different methods for heat treatment of steel ?
12. What is dry corrosion ?
13. What are coinage metals ? How do they occur in nature ?
14. Distinguish between double salt and complex salt. **(7×2=14)**

P.T.O.



SECTION – C

Answer **any 4** questions. **Each** question carries **3** marks.

15. Explain the electrochemical theory of corrosion.
16. $\text{Co}(\text{NH}_3)_6$ is diamagnetic while CoF_6 is paramagnetic. Explain on the basis of CFT.
17. Write a note on geometrical isomerism of complexes.
18. What are the different ore concentration methods ?
19. Give the structure and functions of Hb.
20. Explain the ion exchange method for separation lanthanides. **(4×3=12)**

SECTION – D

Answer **any 2** questions. **Each** question carries **5** marks.

21. Discuss the causes and consequences of lanthanide contraction.
22. Explain the splitting of d orbitals in tetrahedral and square planar ligand fields.
23. What are the factors influencing corrosion ? Discuss the methods to control corrosion.
24. Explain the biological functions and toxic effects of
 - a) Co
 - b) Ni
 - c) Cu**(2×5=10)**