



## **M.Sc. Chemistry (Sem - II)**

### **Question Bank (2022-23)**

#### **C-201 INORGANIC CHEMISTRY**

**Q.1 Give the answer of following questions (1 marks each)**

1. Define physiology of blood.
2. Draw the structure of Cupferon.
3. What is a strong basic anion-exchange resin?
4. Discuss the role of Tannin in analysis.
5. Explain the use of trace elements in our body.
6. Discuss the work of Hemoglobin in our blood.
7. Discuss the physiology of blood.
8. Draw the structure of porphyrine.
9. What is the importance of Iron in our body?
10. Give the two suitable examples of Heteroleptic  $\pi$ -bonded organo metallic compounds.
11. Discuss the toxicity of lead.
12. Give the examples of strong and weak cation- exchange resins.
13. Discuss the toxicity of Arsenic.
14. Discuss the structure of Hemoglobin.
15. Discuss isotropic 'g' value in ESR.
16. Draw the structure of Ni-DMG complex.
17. Define heme and globin.
18. Draw the ion-exchange flow scheme.
19. Draw the structure of Pyrogallol.
20. Define the term electrolyte.

**Q 2. Give the answer of any two following questions (7 marks each)**

1. How many peaks do you expect in ESR spectrum of  $\text{CH}_3$ , discuss it in detail.
2. Give the classification of  $\pi$ -bond OMC of transition metals.
3. Write application of ion-exchange chromatography.
4. Discuss the role of Iodine in activity of thyroid hormone.
5. Write the short notes on Dithiozone and Benzidine.
6. Discuss the ESR spectrum of  $\text{H}_2$ .
7. Discuss the experimental technique of Ion-exchange chromatography for the separation of Cu and Zn.
8. Discuss the structure of hemoglobin and explain its function and define metalloporphyrines.
9. Discuss Hyperfine splitting in ESR.
10. Discuss the role of bulk metal in biological process.
11. Discuss the transport and storage of protein.
12. Give the classification and role of metal ions according to their action in biological system.
13. Describe toxic elements, toxicity and deficiency with suitable example.
14. Discuss the experimental technique of Ion-exchange chromatography for the separation of Co and Ni.
15. Write note on instrumentation and the work of different parts of ESR instruments.