Co-ordination compounds

- 1. What are co-ordination compounds?
- 2. Give the differences between double and complex salts.
- 3. What are the postulates of Werner's theory of co-ordination compounds?
- 4. Give the two demerits of Werner's theory.
- 5. What is chelating agent?
- 6. What is denticity?
- 7. What are ambidentate ligands?
- 8. Define Co-ordination number.
- 9. What are homoleptic and heteroptic complexes? Give examples.
- 10. Calculate the oxidation state of central transition metal ion, a) Iron in K₄[Fe(CN)₆], b) Ni in [Ni(CO)₄] and Co in [Co(NH₃)₆]Cl₃.
- 11. Write the structure of hexaamminecobalt(III)chloride, tetrachloridonickelate(II)ion and diamminedichloridoplatinum(II).
- 12. Write a note on geometrical isomerism.
- 13. What is optical isomerism and chiral molecule?
- 14. On the basis of VBT, explain the hybridization, geometrical shape and magnetic property of $[Co(NH_3)_6]^{3+}$, $[CoF_6]^{3-}$, $[Ni(CN)_4]^{2-}$ and $[NiCl_4]^{2-}$.
- 15. Give the main points of CFT.
- 16. Explain Crystal field splitting in octahedral and tetrahedral complexes using energy level diagram.
- 17. Explain the colour of complexes using CFT.
- 18. What is pairing energy?
- real carbonyls? 19. What is synergic effect? What is the effect on M -CO box
- 20. Give the important applications of co-ordinat

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- 2. What are Geminal halides and Vieinal halides?
- 3. What is Swart's and Finkelstein's reaction? Explain with an example.
- 4. Give the preparation of aryl halides by Sandmeyer's reaction.
- 5. Among isobutyl bromide and ter-butyl bromide, which has higher boiling point? Why?
- 6. The melting and boiling points of haloalkanes are higher than parent hydrocarbons. Why?
- 7. Explain the mechanism of S_N^1 and S_N^2 reactions.
- 8. Give the differences between S_N^1 and S_N^2 reactions.
- 9. Butane 2-ol is a chiral molecule and optically active. Explain.
- 10. What are dextrorotatory and laevorotatory substance?
- 11. What is a racemic mixture and racemisation?
- 12. Racemic mixture is optically inactive. Give reason.
- 13. What are enantiomers?
- 14. What is retention and inversion?
- 15. S_N^1 reactions of optically active alkyl halides are accompanied by racemisation. Explain with an example.
- 16. Explain dehydrohalogenation reaction with an example.
- 17. Explain Zaitsev rule with an example.
- 18. Explain Wurtz reaction with an example.
- 19. Aryl halides are less reactive towards nucleophilic substitution reactions. Give reasons.