

Paper-VII CHN 501 Inorganic Chemistry

- I Electronic Spectra and Magnetic Properties of Transition Metal Complexes** 20 Hrs
- Spectroscopic ground states, correlation, Orgel and Tanabe-Sugano diagrams for transition metal complexes (d^1 - d^9 states), calculations of Dq , B and β parameters, charge transfer spectra, spectroscopic method of assignment of absolute configuration in optically active metal chelates and their stereochemical information, anomalous magnetic moments, magnetic exchange coupling and spin crossover
- II Metal π -Complexes** 12 Hrs
- Metal carbonyls, structure and bonding, vibrational spectra of metal carbonyls for bonding and structural elucidation, important reactions of metal carbonyls; preparation, bonding, structure and important reactions of transition metal nitrosyl, dinitrogen and dioxygen complexes; tertiary phosphine as ligand
- III Metal Clusters** 14 Hrs
- Higher boranes, carboranes, metalloboranes and metallocarboranes. Metal carbonyl and halide clusters, compounds with metal-metal multiple bonds.
- IV A Isopoly and Heteropoly Acids and Salts** 3 Hrs
- B Sigma bonded organo metallic compounds of transition metals** 12 Hrs
classification synthesis structure , properties and applications