

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

B.Sc.Chemistry- END SEMESTER EXAMINATIONS APRIL - 2024

SEMESTER -VI

20UCHCT6013- Inorganic Chemistry -II

Total Duration : 2 Hrs. 30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Describe some important terms pertaining to coordination compounds.
2. Explain the types of isomerism.
3. Predict EAN of following complex i) $K_4[Fe(CN)_6]$ ii) $Ni(CO)_4$.
4. Illustrate the crystal field splitting of d-orbitals in square planar complex.
5. Show the factors which affect the crystal field splitting.
6. Predict the hybridization and structure of nickel tetracarbonyl(0).
7. Describe the concept of column chromatography.
8. Distinguish Gas chromatography and High Pressure Liquid Chromatography.

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Explain the Geometrical isomerism in complexes with coordination number 6.
10. Apply Werner's theory of coordinate compounds with suitable examples and write the postulates of Valence bond theory.
11. i) Examine the postulates of Crystal field theory
ii) Compare VBT and CFT.
12. Predict the hybridization and structures of carbonyls of chromium and Manganese.
13. Explain the following concepts:
i) paper chromatography
ii) Ion exchange chromatography.
