

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. END SEMESTER EXAMINATIONS APRIL-2022

SEMESTER - VI

17UCHCT6013 - INORGANIC CHEMISTRY-II

Total Duration : 3 Hrs.

Total Marks : 60

Section A

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

1. What are chelates? Give one example
2. Predict the shape for $[NiCl_4]^{2-}$
3. What type of ligand is carbonyl?
4. Show whether $[Fe(CN)_6]^{4-}$ obeys 18 electron rule
5. What is spectrochemical series?
6. What are degenerate orbitals?
7. Why is R_f less than 1?
8. What are the moving and stationary phases in paper chromatography?

Section B

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

9. Discuss Werner's theory of coordination compounds. What are its limitations?
10. Discuss the bonding, hybridisation and structure of structure of $Fe_2(CO)_9$
11. Explain crystal field splitting in square planar complexes.
12. Use the trans effect series to suggest synthetic routes to cis -and trans- $[PtCl_2(NH_3)_2]$.
13. Explain the principle and experimental methodology of column chromatography.
