



Mahila Vikas Sanstha's

**INDRAPRASTHA NEW ARTS
COMMERCE & SCIENCE
COLLEGE,** AT POST NALWADI, DIST. WARDHA (M.S.)

Accredited 'B' by NAAC

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of Maharashtra

Affiliated to Rashtrasant Tukadoji
Maharaj Nagpur University, Nagpur

Recognised by U.G.C New Delhi
under section 2 (f) & 12 (b) of
UGC act 1956

QUESTION BANK

PAPER I (*INORGANIC CHEMISTRY*)

2022 - 2023

M.SC 2nd SEMESTER

1. Discuss Electronic spectra of the octahedral complexes of d_2 and d_8 configuration on the basis of Orgel diagram.
2. Discuss high spin-low spin cross over phenomenon in complexes.
3. Explain correlation between the magnetic moment and structure in tetrahalo cobalt (II) complexes.
4. How does substitution reaction in square planar complexes proceed if water is used as solvent ? Explain its mechanism with suitable example.
5. What are the conditions for one electron transfer reaction ? Discuss inner sphere mechanism with suitable example.
6. Write notes on :
 - (i) Tunneling effect
 - (ii) Two electron transfer reaction.
7. What do you mean by synergic bonding in metal carbonyls ? Explain.
8. What is Vaska's compound ? Discuss its preparation and chemical properties.
9. What are charge transfer transitions ? How do these differ from d-d transitions ? Explain.
10. How are metal nitrosyls useful in differentiating sulphide, sulphite and sulphate ? Explain with reaction involved.