

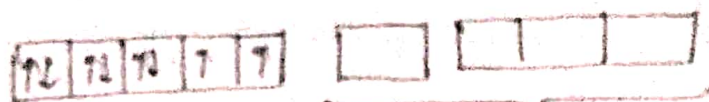
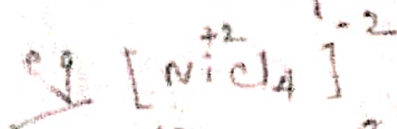
Sem IV

Paper 4 (Nsc)

Bonding in Complex Compound

Complexes having four coordination number having two shape

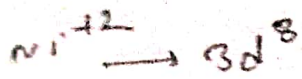
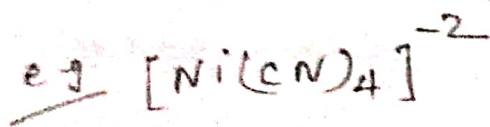
(a) Tetrahedral → Complexes having sp^3 hybridisation have tetrahedral shape and those complex having weak field ligands like halogen, Sulfur containing ligands show such shape and such complex is ^{high} spin complex.



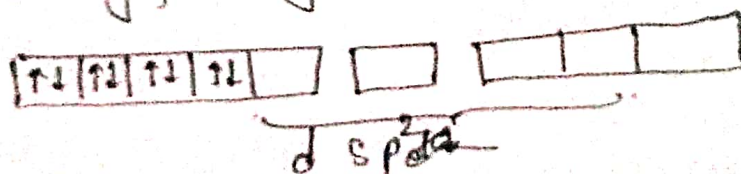
~~low~~ High spin sp^3 complex

Tetrahedral in shape

But complex having low spin i.e. having strong field ligand shows square planar in shape



for strong field ligand (CN)



square planar in shape.

or
High spin complex.