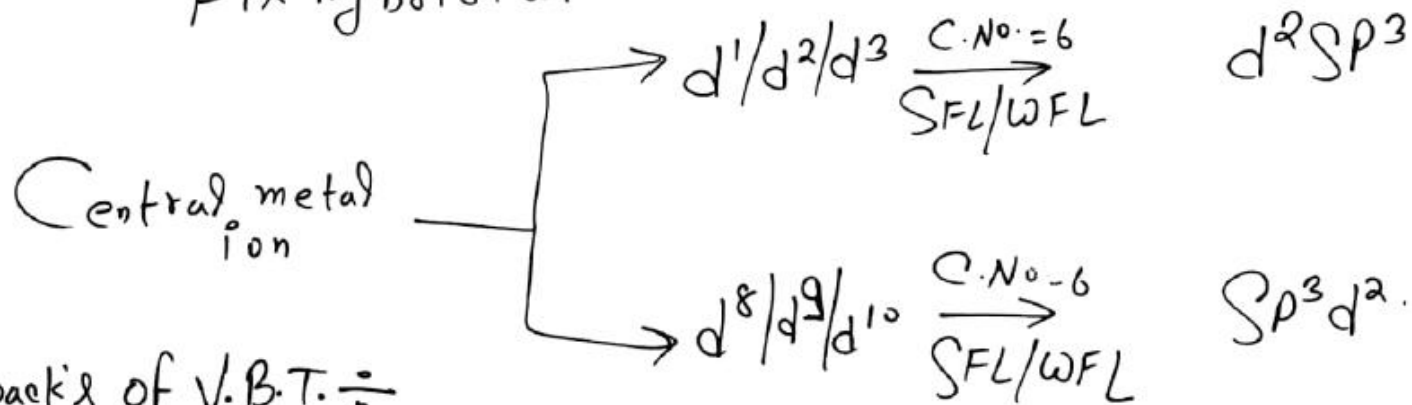


Brahmstra

Fix hybridisation Cases



Drawbacks of V.B.T. :-

- (1) This theory mainly based on assumption.
- (2) Spectrum analysis of complex is not given.
- (3) Colour of spectrum is not explained.
- (4) It does not explain prediction regarding Tetrahedral & Square planar geometry. C.No. = 4.

## Crystal field theory (C.F.T.) ÷

- (1) This theory is mainly based on electrostatics model.
- (2) This theory assumed that ligand is point negative charge while the central metal ion has +ve charge.
- (3) When the ligand attacks on <sup>the</sup> metal ion, energy of d-orbital of central metal ion (CMI) is increased b/c in orbital electrons are already filled which does repulsion with electron of ligand which is donated.
- (4) The increased in energy is unsymmetrical which cause splitting of d-orbital.
- (5) The nature of splitting depend upon the type of attack.

Case I Attack in Octahedral field

During the formation of octahedral complex the energy of axial d-orbital is increased more than non-axial d-orbitals therefore splitting occurs.

