

## Quadrant II – Notes

**Programme: S.Y. BSc**

**Subject: Chemistry**

**Paper Code: CHC -104 ( Section B )**

**Paper Title: DSC: Physical Chemistry & Inorganic Chemistry**

**Unit: II**

**Module Name: Drawbacks of Valence Bond Theory (VBT)**

**Module No: 18**

**Name of the Presenter: Ms Karishma .K.Prasad**

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### Notes:

Drawbacks of Valence Bond Theory (VBT) :

1. The basic limitation of the theory is that it focussed only on the orbitals of central atom & the importance of the ligands are not properly explained.
2. It gives no explanation for the colour exhibited by coordination compounds.
3. It does not explain the relative energies of different structures.
4. It cannot predict whether a 4-coordinate complex will be tetrahedral or square planar.
5. It does not take into account splitting of d-energy levels.
6. It does not explain electronic spectra of complexes.
7. It does not provide any satisfactory explanation for the existence of inner & outer orbital complexes.
8. It cannot explain why certain complexes are more labile than others.
9. It does not explain why magnetic moment varies with temperature.

