

S.Y.B.Sc

Semester III

Question bank

Chemistry Paper II

Dr. Pooja V. Jagasia

Valence bond theory:

1. Define the following terms

a. Resonance .

b. Formal charge.

2. Explain the structure of barium chloride on the basis of VBT.

3. Explain the structure of PCl_5 on the basis of VBT.

4. Explain the structure of Permanganate ion on the basis of VBT.

5. Give rules for writing resonating structures

6. Draw the resonating structures of CO, NO.

7. Give limitations of VBT.

Bonding in coordination compounds:

1. Give the assumptions of Valence bond theory for coordination compounds.

2. Explain sp^3 , dsp^2 , dsp^3 hybridisation with a suitable example.

3. Explain Electroneutrality principle.

4. Write a short note on back bonding.

5. Explain inner orbital and outer complexes with a suitable example.

Gravimetric analysis :

1. What is gravimetric analysis? Explain different types of gravimetric analysis.

2. Explain the role of following in gravimetric analysis.

a. Common ion effect. b. Diverse ion effect c. Effect of pH

3. Write a note on Ostwald's ripening.

4. Discuss the importance of digestion and washing in gravimetric analysis.

5. Discuss the principles underlying drying and ignition of ppt.

6. Define nucleation and give its types.

7. Write a note on filtration in gravimetric analysis.

8. Write a note on co precipitation.

9. Write a note on postprecipitation.

10. Explain the use of following organic reagents in gravimetric analysis.

a. Dimethylglyoxime.

b. Cupron

c. Salicylaldehyde

d. Oxine