UG 3rd Semester Examination 2022

CHEMISTRY

[HONOURS]

Course Code: HCC 6

Full Marks: 10

Answer any five questions [2×5=10]

1. Deduce the geometry and diagram the electronic structure of F_2SeO and I_3^-.
2. What is the bond order in NO?
3. Distinguish between nonbonding and antibonding orbitals.
4. Bond angle in H_2O is 105˚ and H_2S in 92˚. Explain this difference.
5. Compare the molecular orbital configuration of F_2 and OF.
6. Draw the molecular orbital diagram of BeH_2.
7. Solubility of KCl is maximum in CH_3COOH. Explain?
8. At room temperature, pollonium crystallizes in primitive cubic unit cell. If a = 3.36 Å, Calculate the theoretical density of polonium. Molar mass *M* of polonium = 209 $gmol^{-1}$.