

- b) Describe hard and soft acid-base concept. (7)
- Q-6** **Attempt all questions** (14)
- a) Write advantages and limitation of liquid ammonia. (7)
- b) Explain characteristic properties of solvents. (8)
- Q-7** **Attempt all questions** (14)
- a) Explain Splitting of d-orbital in octahedral complex. (7)
- b) Calculate CFSE and magnetic moment of $[\text{Fe}(\text{CO})_6]^{2+}$ and find oxidation number of Fe. (7)
- Q-8** **Attempt all questions** (14)
- a) Write multiplication table for C_{2v} . (7)
- b) Explain Splitting of d-orbital in tetrahedral complex. (7)

