



- (c) Differentiate physical adsorption and chemical adsorption. (3)
- Q-5** **Attempt all questions** (14)
- (a) Write periodic trend and factor affecting on the magnitude of ionic radius. [7]
- (b) Give the definition of molality and calculate that for 10% (W/W) solution of NaCl what is the mole fraction of each component in the solution? (Molecular weight: NaCl= 58.5 and H<sub>2</sub>O= 18) [5]
- (c) What is the V.B.? Write any two limitations of it. [2]
- Q-6** **Attempt all questions** (14)
- (a) Write any four methods for preparation of cycloalkanes. (8)
- (b) Write any six uses of adsorption. (6)
- Q-7** **Attempt all questions** (14)
- (a) Give the definition of mole fraction and strength of solution and find out weight fraction percentage ( % W/W) of solution prepared from 5 gm NaOH stabilized into 45 gm H<sub>2</sub>O (5)
- (b) Explain SP<sup>2</sup> hybridization with example of ethylene molecule. [5]
- (c) Write short note on preparation of standard solution. [4]
- Q-8** **Attempt all questions** (14)
- (a) Explain elimination reaction briefly. (7)
- (b) Write a note on freundlich adsorption isotherm with diagram. (7)

