CHEMISTRY
CLASS 12
SOLUTIONS

Q1. The freezing point of a solution containing 0.3 grams of Acetic acid in 30 grams of Benzene is lowered by 0.45 K. Calculate the van't Hoff factor.

[Answer. i = 0.527]

Q2. 12.2 g of benzoic acid (Mol wt = 122) in 100g benzene has depression in freezing point 2.6°C. If there is 100% association, calculate number of molecules of benzoic in associated state. [Given: K_f = 5.2°Ckg/mol]

[Answer. n = 2]

Q3. 0.004 M Na_2SO_4 is isotonic with 0.01 M glucose at equilibrium. What is the apparent degree of dissociation of Na_2SO_4?

[Answer. 0.75]

Q4. Define van't Hoff factor i.