

CHEMISTRY

CLASS 12

SOLUTIONS

Q1. Equal weights of two substances X and Y are dissolved in equal volumes of water .The osmotic pressure of the solution containing Y is five times the osmotic pressure of the solution containing X. What is the molecular weight of X if that of Y is 60? [**Answer. $M_x = 300$]**

Q2. The osmotic pressure of a 0.25 M urea solution is 2.67 atm. What will be the osmotic pressure of a 0.25 M solution of potassium sulphate? [**Answer. $\pi = 8.01$ atm]**

Q3. The osmotic pressure of 0.01 molar solution of an electrolyte is found to be 0.65 atm at 27°C. Calculate the Van't Hoff factor. What conclusion you draw about the molecular state of the solute in the solution? [**Answer. $i = 2.639$**] (As $i > 1$ in the above case, it tells that the electrolyte is an ionic compound and undergoes dissociation in solution)