CHEMISTRY CLASS 12 BATCH

SOLUTIONS

DPP-03

1. According to Raoult's law, vapour pressure of a solution containing non-volatile solute is directly proportional to mole fraction of
   (1) solute
   (2) solvent
   (3) both solute and solvent
   (4) none of these

2. Which of the following is not a characteristic of ideal solution?
   (1) ΔVmix = 0 (2) ΔSmix = +ve
   (3) ΔHmix = 0 (4) ΔGmix = +ve

3. Solutions in which both the component has nearly same polar nature as well as molecular size will form.
   (1) ideal solution (2) non-ideal solution
   (3) Both (1) & (2) (4) None of these

4. A solution consists of two components X and Y. Which of the following relation of interaction between molecules is true for ideal solution of X and Y?
   (1) X – X = Y – Y ≠ X – Y
   (2) X – X ≠ Y – Y = X – Y
   (3) X – X ≠ Y – Y ≠ X – Y
   (4) X – X = Y – Y = X – Y

5. Which of the following is the correct mathematical expression for ideal solution of A and B?
   (1) $P = P_A^o X_A + P_B^o X_B$
   (2) $P > P_A^o X_A + P_B^o X_B$
   (3) $P < P_A^o X_A + P_B^o X_B$
   (4) None

6. The correct expression for vapour pressure of a solution contain volatile solute A and solvent B is
   (1) P = $P_A^0 X_A + P_B^0 X_B$
   (2) P = $P_A^0 + (P_B^0 \times P_A^0)\, X_B$
   (3) P = $P_B^0 X_A + (P_B^0 - P_A^0)\, X_A$
   (4) None of the above

7. A container contains component A with P_A^0= 200 mm and component B of P_B^0 = 500 mm. If moles of A = 2 and moles of B = 3, find vapour pressure of solution if solute is volatile.
   (1) 120 mm (2) 520 mm
   (3) 380 mm (4) 420 mm