CHEMISTRY CLASS 12 BATCH

SOLUTIONS

DPP-06

1. Find elevation in boiling point of a solution obtained by dissolving 90 g of glucose in 200 g of water. (K_b of H2O = 0.52 K kg/mole(1) 2 6 14 (a) = a 14

(1) 2.6 K	(2) 5.3 K
(3) 1.3 K	(4) 4.2 K

- 2. Find molar mass of a non-volatile solute whose 20 g on dissolving in 500 g of water produces a solution having boiling point = 105.2°C. (1) 8 g mol-1 (2) 6 g mol-1
 - (3) 4 g mol-1 (4) 12 g mol-1
- 3. Find boiling points of deci molal aqueous solution of glucose. (K_b = 0.52 K kg/mole) (1) 272 052 (2) 472 052

(1) 575.052	(2) 475.052
(3) 573.052	(4) 273.052

4. Find the molality of an aqueous solution of urea which has a boiling point of 102.08°C. (Take K_b 0.52 K kg mol⁻¹)

(1) 1	(2) 2
(3) 3	(4) 4

5. The boiling point of 0.1 molal aqueous solution of urea is 100.18°C at 1 atm. The molal elevation constant of water is

(1) 0.2 K kg mol⁻¹ (2) 0.8 K kg mol⁻¹ (3) 1.2 K kg mol⁻¹ (4) 1.8 K kg mol⁻¹

6. A centimolal non aqueous solution of a nonelectrolyte has elevation in boiling point of 0.6°C. Find elevation in boiling point of the same solution if molality is 0.4 mole/kg.

(1) 12°C	(2) 24°C
(3) 6°C	(4) 36°C

- 7. The freezing point of the solution obtained by dissolving 0.5 moles of glucose in 500 g of water will be
 - (1) -1.86°C (2) -3.2°C (3) -0.92°C (4) -2.24°C
- 8. Find depression in freezing point of a glucose solution in which mole fraction of glucose is 0.25.

(1) 34.4 K	(2) 18.2 K
(3) 24.6 K	(4) 6.2 K

9. Elevation in boiling point of an aqueous solution of glucose is 2K. Find the depression in freezing point of the same solution. ($K_f = 1.86 \text{ K kg/mole}$ and $K_b = 0.52$ K kg/mole)

(1) 2.16 K	(2) 7.14 K
(3) 3.38 K	(4) 6.28 K