

Guess Paper – 2014
Class – XII
Subject – Chemistry

PRACTICE PROBLEMS TOPIC - SOLUTION

Attempt all questions.

- Q-1** The partial pressure of O_2 in air is 0.20 bar. The solubility of O_2 in water is 3.5×10^{-4} at $25^\circ C$. Calculate Henry's constant.
- Q-2** Explain term.
(i) Molality (ii) PPM
(iii) reverse osmosis (iv) Vant's Hoff factor
- Q-3** Suggest a reason why salt water fish die when they are suddenly transferred to a fresh water aquarium.
- Q-4** What is the relative lowering, lowering of vapour pressure in terms of Raoult's law.
- Q-5** Why soda water bottle fizzes out when cap is opened.
- Q-6** What would be the value of Vant's Hoff factor for a dilute solution of K_2SO_4 in water.
- Q-7** An antifreeze solution is prepared from 222.6g of ethylene glycol $C_2H_4(OH)_2$ and 200g of water. Calculate the molality of the solution. If the density of this solution be 1.072 gml^{-1} . What will be the molarity of solution.

Q-8 Calculate the osmotic pressure of a decimolar solution of cane sugar at 25°C $R = 0.0821 \text{ L atm k}^{-1} \text{ mol}^{-1}$

FORMULA

Vant's Hoff factor = $\frac{\text{Normal molar mass}}{\text{Observed molar mass}}$

Degree of dissociation $\alpha = \frac{i - 1}{n - 1}$ Degree of association $\alpha = \frac{i - 1}{1/n - 1}$



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