CHEMISTRY CLASS 12 BATCH

SOLUTIONS

DPP-06

1. Fishes feel uncomfortable in warm water due to
(1) fishes do not like warmness
(2) higher amount of impurities
(3) low solubility of oxygen at higher temperature
(4) greater population of fishes

2. The gas for which Henry's law is not applicable in aqueous solution is
(1) HCl (2) N_2
(3) Xe (4) He

3. Unit of Henry's constant K_H is same as that of
(1) Volume (2) Temperature
(3) Energy (4) Pressure

4. If partial pressure of Gas A = 0.4 bar, Gas B = 0.2 bar and Gas C = 0.5 bar, then the gas having maximum solubility (neglecting other factors) is
(1) A (2) B
(3) C (4) All are equal soluble

5. Which law states that the amount of gas that is soluble in a liquid is directly proportional to the partial pressure of that gas above the liquid when the temperature is kept constant?
(1) Raoult's Law (2) Henry's Law
(3) Coloumb's Law (4) Dalton's Law

6. The value of Henry's constant (K_H) depends on
(1) nature of the gas
(2) nature of the solvent
(3) temperature and pressure
(4) all of these

7. The factor which decreases the solubility of gas in liquid is
(1) low temperature
(2) interaction between molecules of gas & liquid
(3) high temperature
(4) high pressure

8. The gas dissolved in carbonated drinks escapes an opening the bottle due to
(1) increase in temperature
(2) increase in pressure
(3) decrease in pressure over gas
(4) Increase in molecular interaction

9. A person feels more fatigue at high altitudes due to
(1) low pressure of oxygen
(2) low temperature
(3) nausea
(4) contraction of body

10. Henry's law is not applicable for aqueous solution of
(1) O_2 (2) N_2
(3) SO_3 (4) He

11. Henry's law is not applicable at
(1) low pressure
(2) high pressure
(3) gas does not react with liquid
(4) high temperature

12. O_2 is bubbled through water at 293K. Assume that O_2 exerts a partial pressure of 0.98 bar, find the solubility of O_2 in g L^{-1}. The value of Henry's law constant K_H for O_2 is 34.84 k bar.
(1) 0.05 (2) 0.08
(3) 0.07 (4) 0.01

13. Gases with their Henry's constant values are given. The gas having maximum solubility will be
Gas A K_H = 21.2 k bar
Gas B K_H = 11.2 k bar
Gas C K_H = 5.6 k bar
Gas D K_H = 2.4 k bar
(1) A (2) B
(3) C (4) D

14. An unopened soda has an aqueous concentration of CO_2 at 25°C equal to 0.05 mole kg^{-1}. The pressure of CO_2 gas in the can is (K_H = 0.34 mole/kg bar)
(1) 0.671 bar (2) 1.49 bar
(3) 0.147 bar (4) 1.71 bar

ANSWER KEY

1.	(3)	8.	(3)
2.	(1)	9.	(1)
3.	(4)	10.	(3)
4.	(3)	11.	(2)
5.	(2)	12.	(1)
6.	(4)	13.	(4)
7.	(3)	14.	(3)