

## Parishram (2025)

## Chemistry

## Solutions

DPP: 4

- Q1** The gas for which Henry's law is not applicable in aqueous solution is;  
(A) HCl (B)  $N_2$   
(C) Xe (D) He
- Q2** A person feels more fatigue at high altitudes due to;  
(A) low pressure of oxygen  
(B) low temperature  
(C) nausea  
(D) contraction of body
- Q3** The factor which decreases the solubility of gas in liquid is;  
(A) low temperature  
(B) interaction between molecules of gas & liquid  
(C) high temperature  
(D) high pressure
- Q4** 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  
(A) A (B) B  
(C) C (D) D
- Q5**  $H_2S$ , a toxic gas with rotten egg like smell, is used for the qualitative analysis. If the solubility of  $H_2S$  in water at STP is 0.195 m, calculate Henry's law constant.
- Q6** Henry's law constant for  $CO_2$  in water is  $1.67 \times 10^8$  Pa at 298 K. Calculate the quantity of  $CO_2$  in 500 mL of soda water when packed under 2.5 atm  $CO_2$  pressure at 298 K.



## Answer Key

Q1 (A)

Q2 (A)

Q3 (C)

Q4 (D)

Q5 (285.6 to 285.9)

Q6 (1.84 to 1.85)

