

HOLIDAYS ASSIGNMENTS OF SUMMER BREAK 2022-23

CLASS:- XII (CHEMISTRY)

Q1. What do you expect to happen when Red blood corpuscles (RBC's) are placed in

(a) 1% NaCl solution (b) 0.5% NaCl solution

Q2. Two liquids A and B boil at 145° and 190°C respectively. Which of them has higher vapour pressure at 80°C ?

Q3. Calculate the molarity of a solution of CaCl_2 if on chemical analysis it is found that 200ml of CaCl_2 solution contains 3.01×10^{22} chloride ions.

Q4. A storage battery contains a solution of H_2SO_4 38% by weight. At this concentration, Van't Hoff factor is 2.50. What temperature will the battery contents freeze?

Q5. Define the following : (i) Hypertonic Solution (ii) Hypotonic solution (iii) Isotonic solution

Q6. What is anoxia?

Q7. 18 g of glucose $\text{C}_6\text{H}_{12}\text{O}_6$ is dissolved in 1 kg of water in a saucepan. At what temperature will water boil at 1.013 bar? K_b for water is $0.52 \text{ K kg mol}^{-1}$.

Q8. Calculate the amount of benzoic acid ($\text{C}_6\text{H}_5\text{COOH}$) required for preparing 250 ml of 0.15M solution in methanol.

Q9. What are bends? How can you avoid bends?

Q10A reaction is second order with respect to a reactant.

How is the rate of reaction affected if the concentration of the reactant is?

(i) Doubled (ii) reduced to half?

Q11 From the rate expression for the following reactions, determine their order of reaction and the dimensions of the rate constants.

(i) $3\text{NO}(\text{g}) \rightarrow \text{N}_2\text{O}(\text{g})$ Rate = $k [\text{NO}]^2$

(ii) $\text{H}_2\text{O}_2(\text{aq}) + 3\text{I}^-(\text{aq}) + 2\text{H}^+ \rightarrow 2\text{H}_2\text{O}(\text{l}) + \text{I}_3^-$ Rate = $k [\text{H}_2\text{O}_2] [\text{I}^-]$

(iii) $\text{CH}_3\text{CHO}(\text{g}) \rightarrow \text{CH}_4(\text{g}) + \text{CO}(\text{g})$ Rate = $k [\text{CH}_3\text{CHO}]^{(3/2)}$

(iv) $\text{C}_2\text{H}_5\text{Cl}(\text{g}) \rightarrow \text{C}_2\text{H}_4(\text{g}) + \text{HCl}(\text{g})$ Rate = $k [\text{C}_2\text{H}_5\text{Cl}]$

- **Make two charts.**
- **Make innovative projects.**

Suresh Kumar

Principal

PGT(CHEMISTRY)