



SUBJECT NAME -CHEMISTRY
GRADE- XII

WORKSHEET
SOLUTIONS

MULTIPLE CHOICE QUESTIONS:

1. The volume occupied by a single gas in a mixture at the same temperature and pressure is referred to as the single-gas volume.
 - a. Absolute volume
 - b. Partial volume
 - c. Total volume of a gas mixture
 - d. None of the mentioned
2. The pressure that a single component in a gaseous mixture would exert if it existed alone in the same volume as the mixture and at the same temperature as the mixture is referred to as.
 - a. Absolute pressure
 - b. Partial pressure
 - c. Total pressure of a gas mixture
 - d. None of the mentioned
3. _____ obeys Raoult's law in all stages of concentration.
 - a. Ideal Solution
 - b. Non-Ideal solution
 - c. Real Solution
 - d. None of the mentioned
4. When two perfect solutions with volume V each are combined, What is the volume of the solution as a result?
 - a. V
 - b. $2V$
 - c. Greater than $2V$
 - d. Less than $2V$
5. The heat of solution or mixing has a negative side.
 - a. Heat of solution
 - b. Heat of dissolution



- c. Heat of reaction
 - d. Heat of mixing
6. A solution made up of numerous components in which each component's property is the weighted sum of its separate properties. The answer is
- a. Ideal Solution
 - b. Non-Ideal solution
 - c. Real Solution
 - d. None of the mentioned
7. What is an example of camphor in N₂ gas?
- a. Solid in gas solution
 - b. Gas in gas solution
 - c. Solid in liquid solution
 - d. Liquid in gas solution
8. What happens when a solute crystal is added to a supersaturated solution?
- a. It becomes a colloidal solution
 - b. The solute dissolves in the solution
 - c. The solution desaturates
 - d. The solute precipitates out of the solution
9. Which of the following options is not a viable option?
- a. Brass
 - b. Bronze
 - c. Hydrated salts
 - d. Aerated drinks
10. What makes a solution?
- a. Solute and solvent
 - b. Solute and solute
 - c. Solvent and solvent
 - d. None of the above

Short Answer Type Questions

1. (a) Explain the following phenomena with the help of Henry's law.
- (i) Painful condition known as bends.
 - (ii) Feeling of weakness and discomfort in breathing at high altitude.
- (b) Why does soda water bottle kept at room temperature fizzes on opening?



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2. Explain why on the addition of 1 mol of NaCl to 1 litre of water, the boiling point of water increases, while the addition of 1 mol of methyl alcohol to one litre of water decreases its boiling point.

Long Answer Type Questions

1. Using Raoult's law, explain how the total vapour pressure over the solution is related to the mole fraction of components in the following solutions.

(i) $\text{CHCl}_3 (l)$ and $\text{CH}_2\text{Cl}_2(l)$ (ii) $\text{NaCl}(s)$ and $\text{H}_2\text{O} (l)$

2. Discuss the biological and industrial importance of osmosis.