

Chapter – 9 | The Amazing World of Solutes, Solvents, and Solutions

QUIZ-01

1. What is a solution?

- A. A non-uniform mixture
- B. A uniform mixture
- C. A pure solid
- D. A gas only (B)

Explanation : A solution is formed when substances mix uniformly throughout.

2. In salt water, salt is the:

- A. Solvent
- B. Solute
- C. Solution
- D. Mixture only (B)

Explanation : Salt dissolves in water, so salt is the solute.

3. In salt water, water is the:

- A. Solute
- B. Solvent
- C. Solid
- D. Gas (B)

Explanation : Water dissolves the salt, so it is the solvent.

4. A solution that can dissolve more solute is called:

- A. Saturated
- B. Unsaturated
- C. Dense
- D. Non-uniform (B)

Explanation : An unsaturated solution can still dissolve more solute at a given temperature.

5. For most solids, solubility in water increases with:

- A. Decrease in temperature
- B. Increase in temperature
- C. Decrease in volume
- D. Increase in pressure (B)

Explanation : Most solids dissolve more in water when temperature increases.

6. Oxygen dissolved in water is important for:

- A. Making oil float
- B. Aquatic life
- C. Making water salty
- D. Measuring volume (B)

Explanation : Dissolved oxygen supports fishes, plants, and other aquatic organisms.

7. Solubility of gases in liquids generally decreases when:

- A. Temperature increases
- B. Temperature decreases
- C. Water freezes
- D. Salt is removed (A)

Explanation : Warmer water holds less dissolved gas such as oxygen.

8. Density is defined as:

- A. Volume \times Mass
- B. Mass \div Volume
- C. Volume \div Mass
- D. Mass + Volume (B)

Explanation : Density is mass per unit volume.

9. Which instrument is used to measure volume of liquids?

- A. Balance
- B. Thermometer
- C. Measuring cylinder
- D. Compass (C)

Explanation : A measuring cylinder is used to measure liquid volume accurately.

10. Why does ice float on water?

- A. Ice is denser than water
- B. Ice has no mass
- C. Ice is less dense than liquid water
- D. Ice dissolves in water (C)

Explanation : Ice has lower density than liquid water, so it floats.