

Chapter – 8 | Nature of Matter: Elements, Compounds, and Mixtures**QUIZ-01**

1. Which of the following is a uniform mixture?

- A. Sprout salad
- B. Poha
- C. Sugar dissolved in water
- D. Mixture of sand and iron filings (C)

Explanation: Sugar dissolved in water is a uniform mixture where components cannot be seen separately.

2. Which substance is a compound formed by combining sodium and chlorine?

- A. Baking soda
- B. Sodium hydroxide
- C. Sodium chloride
- D. Chlorine dioxide (C)

Explanation: Sodium chloride is formed by the chemical combination of sodium and chlorine in a 1:1 ratio.

3. Which gas causes lime water to turn milky?

- A. Oxygen
- B. Hydrogen
- C. Nitrogen
- D. Carbon dioxide (D)

Explanation: Carbon dioxide reacts with lime water to form calcium carbonate, making the solution milky.

4. What kind of mixture is air?

- A. Non-uniform mixture
- B. Uniform mixture
- C. Compound
- D. Element (B)

Explanation: Air is a uniform mixture of gases like nitrogen, oxygen, argon, and carbon dioxide.

5. Which of the following is a compound?

- A. Iron
- B. Water
- C. Air
- D. Sulfur (B)

Explanation: Water is a compound formed from hydrogen and oxygen in a fixed ratio.

6. What is the ratio of hydrogen to oxygen in a water molecule?

- A. 1:1
- B. 1:2
- C. 2:1
- D. 3:1 (C)

Explanation: Water has two atoms of hydrogen and one atom of oxygen, giving a 2:1 ratio.

7. Which of the following is a pure substance?

- A. Sea water
- B. Fruit juice
- C. Glucose
- D. Air (C)

Explanation: Glucose is a pure substance made of only one type of molecule.

8. What is formed when iron and sulfur are heated together?

- A. A mixture of iron and sulfur
- B. Iron sulfide (compound)
- C. Iron oxide
- D. Sulfur dioxide (B)

Explanation: On heating, iron and sulfur react to form iron sulfide, a compound with new properties.

9. Which of the following is an alloy?

- A. Sodium chloride
- B. Air
- C. Stainless steel
- D. Water (C)

Explanation: Stainless steel is a uniform mixture of iron, nickel, chromium, and carbon.

10. Which material shows magnetic attraction before heating but not after?

- A. Sulfur
- B. Sample A (iron + sulfur mixture)
- C. Sample B (iron sulfide)
- D. Charcoal (B)

Explanation: Sample A contains iron, which is attracted by a magnet. Sample B (iron sulfide) does not show magnetic properties.