

Matter, Chemical Properties, and Periodic Trends

Chemistry · Answer Key · 10 Questions

1. What is defined as anything that has mass and occupies space?

- A) Atom
- B) Matter**
- C) Energy
- D) Compound

2. Which state of matter has a fixed volume but takes the shape of its container as particles slide past each other?

- A) Solid
- B) Gas
- C) Liquid**
- D) Plasma

3. What is the direct transition of a substance from a gas to a solid without becoming a liquid?

- A) Sublimation
- B) Deposition**
- C) Condensation
- D) Freezing

4. Salt water and air are examples of which type of mixture?

- A) Heterogeneous mixture
- B) Compound
- C) Homogeneous mixture (Solution)**
- D) Element

5. What is a pure substance formed when two or more different elements are chemically combined in fixed ratios?

- A) Element
- B) Compound**
- C) Solution
- D) Heterogeneous mixture

6. Which term describes how well light passes through a substance (clear, cloudy, or opaque)?

- A) Luster
- B) Texture
- C) Clarity**
- D) Solubility

7. If an object has a mass of 6.00 g and a volume of 0.500 cm³, what is its density?

A) 3.00 g/cm³

B) 12.00 g/cm³

C) 0.083 g/cm³

D) 6.50 g/cm³

8. What property describes the ability of a metal to be stretched into long, thin wires?

A) Malleability

B) Brittleness

C) Ductility

D) Combustibility

9. Which of the following is considered a sign of a chemical change?

A) Change in shape

B) Precipitate formation

C) Melting

D) Dissolving in water

10. How did Dmitri Mendeleev arrange the elements in the first periodic table?

A) In order of increasing atomic number

B) In order of increasing atomic mass

C) By alphabetical order

D) By physical state at room temperature