Comprehensive Introduction to Chemistry

Chemistry · Answer Key · 15 Questions

1. What is the smallest building block unit of matter?

A) Molecule
B) Atom
C) Electron
D) Element

2. Which state of matter has a fixed volume but takes the shape of its container?

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

3. What is the process called when a solid turns directly into a gas?

A) Evaporation
B) Deposition
C) Sublimation
D) Condensation

4. Which type of mixture has a completely uniform composition throughout?

A) Heterogeneous
B) Compound
C) Element
D) Homogeneous

5. What is the formula for calculating density?

A) Mass / Volume
B) Volume / Mass
C) Mass * Volume
D) Mass + Volume

6. Which physical property describes a metal's ability to be stretched into wires?

A) Malleability
B) Brittleness
C) Ductility
D) Luster

7. Which of the following is a chemical property?

A) Texture
B) Combustibility
C) Density
D) Clarity

8. What is a sign of a chemical change?

A) Melting ice
B) Crushing chalk
C) Gas formation
D) Dissolving sugar

9. The modern periodic table arranges elements by increasing what?

A) Atomic mass
B) Atomic number
C) Density
D) Boiling point

10. Which group of the periodic table is known for being unreactive due to full valence shells?

A) Alkali Metals
B) Halogens
C) Noble Gases
D) Transition Metals

11. Where are metalloids located on the periodic table?

A) Far left
B) Far right
C) Along the staircase line
D) Bottom section

12. What do the periods (horizontal rows) on the periodic table indicate?

A) Valence electrons
B) Electron shells
C) Reactivity
D) Atomic mass

13. Which element is essential for oxygen transport in hemoglobin?

A) Carbon
B) Iron
C) Calcium
D) Sodium

14. What happens to the atomic radius as you move down a group?

A) It decreases
B) It stays the same
C) It increases
D) It fluctuates

15. Which subatomic particles are found in the nucleus and have a positive charge?

A) Protons
B) Neutrons
C) Electrons
D) Ions