

Foundations of Chemistry

Chemistry · Answer Key · 15 Questions

1. What is the dense, central region of an atom called?

- A) Electron cloud
- B) Nucleus**
- C) Orbit
- D) Neutron star

2. Which subatomic particle carries a negative electric charge?

- A) Proton
- B) Neutron
- C) Electron**
- D) Positron

3. What is the pH level of a neutral substance, such as pure water at 25°C?

- A) 0
- B) 1
- C) 7**
- D) 14

4. Which element is represented by the chemical symbol 'Fe'?

- A) Fluorine
- B) Iron**
- C) Francium
- D) Fermium

5. Which type of chemical bond involves the sharing of electron pairs between atoms?

- A) Ionic bond
- B) Covalent bond**
- C) Hydrogen bond
- D) Metallic bond

6. What is the most abundant gas in Earth's atmosphere?

- A) Oxygen
- B) Carbon Dioxide
- C) Hydrogen
- D) Nitrogen**

7. Which state of matter has a definite volume but takes the shape of its container?

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

8. What is the atomic number of Carbon?

- A) 1
- B) 6**
- C) 12
- D) 14

9. Which group of elements on the periodic table is known for being largely unreactive?

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

10. What is the standard SI unit for the amount of a substance?

- A) Gram
- B) Liter
- C) Mole**
- D) Pascal

11. Which process describes a solid changing directly into a gas without becoming a liquid?

- A) Evaporation
- B) Sublimation**
- C) Condensation
- D) Melting

12. What is the name of the law stating that mass is neither created nor destroyed in a chemical reaction?

- A) Boyle's Law
- B) Law of Conservation of Mass**
- C) Charles's Law
- D) Avogadro's Law

13. Which subatomic particle's quantity determines the identity of an element?

- A) Neutron
- B) Electron
- C) Proton**
- D) Photon

14. What is the chemical formula for common table salt?

- A) H₂O
- B) CO₂
- C) NaCl**
- D) CH₄

15. What type of reaction releases energy, usually in the form of heat, to its surroundings?

- A) Endothermic
- B) Exothermic**
- C) Decomposition
- D) Synthesis