

Metals and Nonmetals



Multiple Choice Questions (MCQs) on Chemical Properties of Metals and Nonmetals

1. What is the process called when metals lose electrons to form positive ions?

- a) Reduction
- b) Oxidation
- c) Ionization
- d) Electrolysis

2. Which of the following metals forms a positive ion by losing one electron?

- a) Calcium
- b) Magnesium
- c) Sodium
- d) Aluminum

3. When magnesium burns in oxygen, what compound is formed?

- a) Magnesium sulfate
- b) Magnesium chloride
- c) Magnesium oxide
- d) Magnesium hydroxide

4. Which nonmetal reacts with oxygen to form sulfur dioxide?

- a) Phosphorus
- b) Carbon
- c) Sulfur
- d) Nitrogen

5. What is the product when sodium reacts with water?

- a) Sodium hydroxide and oxygen
- b) Sodium oxide and hydrogen
- c) Sodium hydroxide and hydrogen
- d) Sodium chloride and oxygen

6. Which gas is released when zinc reacts with hydrochloric acid?

- a) Oxygen
- b) Nitrogen
- c) Hydrogen
- d) Carbon dioxide

7. Which metal is the most reactive according to the reactivity series?

- a) Zinc
- b) Calcium
- c) Potassium
- d) Aluminum

8. Which metal is least reactive according to the reactivity series?

- a) Iron
- b) Copper
- c) Silver
- d) Gold

9. What is the primary purpose of creating alloys?

- a) To decrease the cost of metals
- b) To enhance the properties of metals
- c) To increase the weight of metals
- d) To change the color of metals

10. Which of the following is an example of an alloy?

- a) Zinc
- b) Copper
- c) Brass
- d) Iron

11. Which of the following metals does not react with water at room temperature?

- a) Sodium
- b) Calcium
- c) Iron
- d) Potassium

12. What happens when a metal reacts with dilute hydrochloric acid?

- a) Metal chloride and oxygen are formed
- b) Metal chloride and hydrogen are formed
- c) Metal hydroxide and hydrogen are formed
- d) Metal oxide and water are formed

13. Which metal reacts with oxygen to form an oxide layer that protects it from further corrosion?

- a) Iron
- b) Aluminum
- c) Copper
- d) Gold

14. Which metal is used to galvanize iron to protect it from rusting?

- a) Copper
- b) Zinc
- c) Lead
- d) Magnesium

15. What type of reaction occurs when a more reactive metal displaces a less reactive metal from its compound?

- a) Synthesis reaction
- b) Decomposition reaction
- c) Displacement reaction
- d) Double displacement reaction

Answer Key

1. c) Ionization
2. c) Sodium
3. c) Magnesium oxide
4. c) Sulfur
5. c) Sodium hydroxide and hydrogen
6. c) Hydrogen
7. c) Potassium
8. d) Gold
9. b) To enhance the properties of metals
10. c) Brass
11. c) Iron
12. b) Metal chloride and hydrogen are formed
13. b) Aluminum
14. b) Zinc
15. c) Displacement reaction