

1. What is the  chemical formula of hydrogen peroxide?

- A) H_2O
- B) H_2O_2
- C) HO
- D) H_3O

Answer: B) H_2O_2

Explanation: Hydrogen peroxide is a compound with the formula H_2O_2 .

2. Which of the following is the most abundant gas in the Earth's atmosphere?

- A) Oxygen
- B) Carbon dioxide
- C) Nitrogen
- D) Argon

Answer: C) Nitrogen

Explanation: Nitrogen makes up about 78% of the Earth's atmosphere.

3. What is the chemical symbol for potassium?

- A) P
- B) K
- C) Pt
- D) Po

Answer: B) K

Explanation: The chemical symbol for potassium is K, derived from its Latin name "Kalium."

4. Which of the following is a property of metals?

- A) Brittle
- B) Poor conductors of electricity
- C) Malleable
- D) Low melting point

Answer: C) Malleable

Explanation: Metals are malleable, meaning they can be hammered or rolled into thin sheets.

5. What is the chemical formula of calcium carbonate?

- A) CaCO_3
- B) CaCl_2
- C) CaO
- D) Ca(OH)_2

Answer: A) CaCO_3

Explanation: Calcium carbonate is a common compound with the formula CaCO_3 .

6. Which of the following is a greenhouse gas?

- A) Oxygen
- B) Nitrogen
- C) Methane
- D) Argon

Answer: C) Methane

Explanation: Methane is a potent greenhouse gas that traps heat in the atmosphere.

7. What is the chemical formula of nitric acid?

- A) HNO_3
- B) HCl
- C) H_2SO_4
- D) H_3PO_4

Answer: A) HNO_3

Explanation: Nitric acid is a strong acid with the formula HNO_3 .

8. Which of the following is a non-metal?

- A) Sodium
- B) Chlorine
- C) Magnesium
- D) Aluminum

Answer: B) Chlorine

Explanation: Chlorine is a non-metal, while the others are metals.

9. What is the chemical formula of sodium hydroxide?

- A) NaOH
- B) NaCl
- C) Na₂CO₃
- D) NaHCO₃

Answer: A) NaOH

Explanation: Sodium hydroxide is a strong base with the formula NaOH.

10. Which of the following is a property of non-metals?

- A) Good conductors of heat
- B) Shiny appearance
- C) Brittle
- D) High density

Answer: C) Brittle

Explanation: Non-metals are generally brittle and lack the properties of metals

11. What is the chemical formula of hydrochloric acid?

- A) HCl
- B) H_2SO_4
- C) HNO_3
- D) H_3PO_4

Answer: A) HCl

Explanation: Hydrochloric acid is a strong acid with the formula HCl.

12. Which of the following is a property of acids?

- A) Turn red litmus blue
- B) Have a pH greater than 7
- C) React with bases to form salts
- D) Are slippery to touch

Answer: C) React with bases to form salts

Explanation: Acids react with bases in a neutralization reaction to form salts and water.

13. What is the chemical formula of methane?

- A) CH_4
- B) C_2H_6
- C) C_3H_8
- D) C_4H_{10}

Answer: A) CH_4

Explanation: Methane is the simplest hydrocarbon with the formula CH_4 .

14. Which of the following is a property of bases?

- A) Sour taste
- B) Turn blue litmus red
- C) Have a pH less than 7
- D) Feel slippery

Answer: D) Feel slippery

Explanation: Bases feel slippery to the touch, like soap.

15. What is the chemical formula of carbon dioxide?

- A) CO
- B) CO₂
- C) C₂O
- D) C₂O₂

Answer: B) CO₂

Explanation: Carbon dioxide consists of one carbon atom and two oxygen atoms.

16. Which of the following is a transition metal?

- A) Sodium
- B) Iron
- C) Calcium
- D) Aluminum

Answer: B) Iron

Explanation: Iron is a transition metal, found in the d-block of the periodic table.

21. What is the chemical formula of glucose?

- A) $C_6H_{12}O_6$
- B) $C_{12}H_{22}O_{11}$
- C) C_2H_5OH
- D) CH_4

Answer: A) $C_6H_{12}O_6$

Explanation: Glucose is a simple sugar with the formula $C_6H_{12}O_6$.

22. Which of the following is a halogen?

- A) Sodium
- B) Chlorine
- C) Calcium
- D) Magnesium

Answer: B) Chlorine

Explanation: Chlorine is a halogen, found in Group 17 of the periodic table.

23. What is the chemical formula of methane?

- A) CH_4
- B) C_2H_6
- C) C_3H_8
- D) C_4H_{10}

Answer: A) CH_4

Explanation: Methane is the simplest hydrocarbon with the formula CH_4 .

24. Which of the following is a strong base?

- A) Sodium hydroxide
- B) Ammonia
- C) Water
- D) Acetic acid

Answer: A) Sodium hydroxide

Explanation: Sodium hydroxide (NaOH) is a strong base that dissociates completely in water.