

TEST NAME: **Chemistry**
TEST ID: **199257**
GRADE: **08**
SUBJECT: **Life and Physical Sciences**
TEST CATEGORY: **My Classroom**

Student: _____

Class: _____

Date: _____

1. How can mixtures **best** be described?
 - A. made of one element
 - B. made of different elements that are all chemically bonded together
 - C. made of different elements that are not all chemically bonded together

2. Sodium (Na) and chlorine (Cl) combine to form table salt (NaCl). How many sodium (Na) atoms are there for every chlorine atom (Cl)?
 - A. two sodium (Na) atoms for every one chlorine (Cl) atom
 - B. one sodium (Na) atom for every one chlorine (Cl) atom
 - C. one sodium (Na) atom for every two chlorine (Cl) atoms

3. Which chemical formula is an example of a compound?
 - A. O_2
 - B. $2Cl$
 - C. H_2SO_4

4. Water (H_2O) and table salt (NaCl) can be combined to form salt water. How can this combination be classified?
 - A. as a compound because the water (H_2O) and table salt (NaCl) are chemically combined
 - B. as a compound because the water (H_2O) and table salt (NaCl) form a new pure substance
 - C. as a mixture because the water (H_2O) can be evaporated and physically separated from the table salt (NaCl)

5. Which **best** explains how atoms combine to form compounds?
- A. The atoms in the compound share electrons.
 - B. The atoms in the compound share neutrons.
 - C. The atoms in the compound share protons.
6. In which state of matter will the atoms of an element be tightly packed together?
- A. gas
 - B. liquid
 - C. solid
7. Hydrogen peroxide (H_2O_2) and water (H_2O) both contain hydrogen (H) and oxygen (O). Why are they different compounds?
- A. Hydrogen peroxide contains one more oxygen than water.
 - B. Hydrogen peroxide contains two more oxygens than water.
 - C. Hydrogen peroxide contains one less oxygen than water.
8. Which is **best** represented by the equation?
 $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$
- A. Law of Conservation of Energy
 - B. Law of Conservation of Mass
 - C. Law of Superposition
9. $\text{Mg}(\text{OH})_2$ is a compound. How many different elements are found in this compound?
- A. 1
 - B. 2
 - C. 3

10. How many elements are in the compound sulfuric acid, H_2SO_4 ?
- A. 1
 - B. 2
 - C. 3
11. Which substance is composed of only one type of atom?
- A. element
 - B. mixture
 - C. solution
12. Which is the **best** description of one particle of table salt (NaCl)?
- A. atom
 - B. compound
 - C. element
13. Sodium reacts with water. Which element is **most likely** to have a similar effect to sodium if it is exposed to water?
- A. carbon
 - B. oxygen
 - C. lithium
14. When chemicals react in a closed container, which must be true?
- A. The mass both before and after the reaction is the same.
 - B. The mass both before and after the reaction is variable.
 - C. The same number of compounds is present both before and after the reaction.

15. Where on the periodic table are you **most likely** to find elements that do not react with other elements?
- A. group 1
 - B. group 17
 - C. group 18
16. Why does reactivity in non-metals **most likely** increase from left to right in the periodic table?
- A. atomic radius increases
 - B. attraction for electrons increases
 - C. attraction for electrons decreases
17. Which elements are **most likely** to react in the same manner in a chemical reaction?
- A. elements in the same group
 - B. elements in the same period
 - C. elements with similar atomic masses
18. Which **best** explains how elements are arranged on the modern periodic table?
- A. Elements are arranged from fewest protons to most protons.
 - B. Elements are arranged from most protons to fewest protons.
 - C. Elements are arranged from fewest neutrons to most neutrons.
19. If an element has no electrons to share and is stable, what family is it found in?
- A. alkali metals
 - B. noble gases
 - C. halogens

20. What is the significance of metalloids in the periodic table?
- A. They separate liquids from solids.
 - B. They separate metals from nonmetals.
 - C. They combine elements and compounds.
21. Which subatomic particles determine the reactivity of groups of elements in the periodic table?
- A. electrons
 - B. neutrons
 - C. protons
22. Why are certain elements placed into the same column on the periodic table?
- A. They have the same number of protons in their nuclei.
 - B. They have the same number of electrons in their nuclei.
 - C. They have the same number of electrons in their outer energy level.
23. What chemical reaction results in the formation of a solid?
- A. acid base reaction
 - B. endothermic
 - C. precipitate
24. What is the **best** evidence for a chemical reaction?
- A. color change
 - B. cutting a metal
 - C. change of state

25. What is the **best** way to measure the gas produced in a chemical reaction?
- A. Perform the experiment in a beaker.
 - B. Perform the experiment in a room.
 - C. Perform the experiment in a closed system.
26. Which **best** represents a balanced equation?
- A. $\text{Mg(s)} + 2\text{O}_2(\text{g}) \rightarrow 2\text{MgO(s)}$
 - B. $\text{Mg(s)} + \text{O}_2(\text{g}) \rightarrow 2\text{MgO(s)}$
 - C. $2\text{Mg(s)} + \text{O}_2(\text{g}) \rightarrow 2\text{MgO(s)}$
27. Which **best** represents a physical property of a substance?
- A. Acids act as a corrosive to metal.
 - B. Gold has a density of 19.3 g/cm^3 .
 - C. Sodium combines with chlorine to create sodium chloride.
 - D. Hydrochloric acid reacts with zinc metal, creating hydrogen gas.
- 28.
- 29.
- 30.
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