

Science 9 Chemistry Practice Multiple Choice



1. What does this symbol tell you about the contents of the container?
  - a. They are explosive.
  - b. They are poisonous.
  - c. They are corrosive.
  - d. They are flammable.
2. A symbol like the one shown is printed on the label of the container. What do you conclude about the solid in the container?
  - a. It is explosive.
  - b. It is poisonous.
  - c. It is corrosive.
  - d. It is flammable.
3. Which of the following properties of sugar is not a physical property?
  - a. Sugar turns black when it is heated.
  - b. Sugar dissolves readily in water.
  - c. Sugar has a sweet taste.
  - d. Sugar is a white solid at room temperature.
4. Which of the following is a chemical property of sulphur?
  - a. It is bright yellow in colour.
  - b. It is a solid at room temperature.
  - c. It is brittle.
  - d. It is combustible.
5. All of the following are properties of magnesium. Identify the physical property.
  - a. Magnesium burns in air with a brilliant white flame.
  - b. Magnesium reacts with hydrochloric acid to produce a gas.
  - c. Magnesium is a good conductor of electricity.
  - d. Magnesium combines with nitrogen to form a black powder.
6. Which property is described by the statement that aluminum can be bent into various shapes?
  - a. density
  - b. malleability
  - c. hardness
  - d. viscosity
7. Diamond can scratch glass. Which property of both substances is described by this statement?
  - a. ductility
  - b. crystal form
  - c. hardness
  - d. density
8. Identify the chemical change in the following list:
  - a. the crushing of stones
  - b. the formation of clouds
  - c. the separation of cream from milk
  - d. the burning of a candle
9. An example of a physical change is
  - a. toasting a piece of bread
  - b. the explosion of dynamite
  - c. boiling oil
  - d. the rusting of iron
10. Matter can exist in one of three states. These are
  - a. physical, chemical, metal
  - b. alloy, crystal, hydrocarbon
  - c. reactant, product, precipitate
  - d. solid, liquid, gas



11. The reaction of iron to form rust is called
- combustion
  - precipitate
  - a physical change
  - corrosion
12. Several methods are used to prevent or slow the rusting of iron. Which is not likely to be used for this purpose
- spraying water on the iron
  - attaching another metal that reacts with oxygen faster than iron reacts
  - covering the iron with a coating of oil
  - covering the iron by painting it
13. Many substances undergo combustion. What is common to all combustion reactions?
- nitrogen is used up and energy is produced
  - oxygen is used up and energy is produced
  - oxygen and energy are used up
  - energy is used up and oxygen is produced
14. The three parts of the triangle are:
- heat, fuel, oxygen
  - heat, fuel, hydrogen
  - light, fuel, oxygen
  - reactants, products, fossil fuels
15. All of the following statements are part of the particle theory of matter except one. Identify the exception.
- Different substances are made of different particles.
  - The particles in solids are harder than the particles in liquids.
  - The particles are always moving.
  - There are forces of attraction between the particles.
16. A pure substance consisting of two or more kinds of atoms is considered to be
- an element.
  - a solution.
  - a compound.
  - a heterogeneous mixture.
17. Which one of the following substances is an element?
- Water
  - Salt
  - Helium
  - Milk
18. Which substance in the following list is a compound?
- Salt
  - Carbon
  - Sulphur
  - Neon
19. Which of the following lists consists *only* of metals?
- titanium, zinc, copper, lead, aluminum
  - silver, chromium, oxygen, tin, copper
  - gold, mercury, carbon, iron, lead
  - nickel, chlorine, aluminum, silver
20. You have a sample that is solid, yellow in colour, not shiny, and it breaks when you try to bend it. What is a reasonable conclusion for you to reach based on these observations?
- The element is a metal.
  - The element will conduct electricity.
  - The element is not a metal.
  - The element is malleable.

21. The total number of atoms represented by the formula  $K_2Cr_2O_7$  is
- a. 1
  - b. 3
  - c. 11
  - d. 28
22.  $KCl$ ; The name of this compound is
- a. chlorine potassium.
  - b. potassium chlorine.
  - c. potassium chloride.
  - d. potassium chlorate.
23. Protons are
- a. positively charged particles
  - b. negatively charged particles
  - c. neutral particles
  - d. positively charged particles
24. The symbol  $Cl$  represents an atom with
- a. 17 protons, 20 electrons, 20 neutrons.
  - b. 17 protons, 17 electrons, 17 neutrons.
  - c. 20 protons, 20 electrons, 17 neutrons.
  - d. 17 protons, 17 electrons, 20 neutrons.
25. In which group of the periodic table are the halogens found?
- a. 1
  - b. 2
  - c. 15
  - d. 17
26. How many groups of elements are there in the modern periodic table?
- a. 3
  - b. 18
  - c. 7
  - d. 14
27. Which of the following sets of elements belong to the same group in the periodic table?
- a. calcium, iron, magnesium
  - b. oxygen, nitrogen, sulphur
  - c. lithium, potassium, sodium
  - d. carbon, manganese, silicon
28. The noble gases are very unreactive because
- a. they are very rare.
  - b. their outer orbits are filled.
  - c. they have very low densities.
  - d. they have low boiling points.
29. An atom becomes an ion with a charge of  $2+$  when it
- a. gains 2 protons
  - b. loses 2 neutrons
  - c. loses 2 electrons
  - d. loses 2 protons
30. Elements either lose or gain electrons in order to:
- a. Remain stable
  - b. Have an unfilled outermost shell
  - c. Remain unstable
  - d. Have a filled outermost shell