____ 11. Which of the following statements about metals is true?
a. Metals show a wide range of chemical properties.
b. Metals are highly reactive substances.
c. Metals need to be stored in sealed containers for safety.
d. Metals do not react with oxygen.

____ 12. At room temperature, more than half of the nonmetal elements are
a. liquids.
b. gases.
c. alloys.
d. solids.

____ 13. The elements in a column (up and down) of the periodic table
a. are in the same period.
b. have the same chemical symbols.
c. are in the same family/group.
d. have the same atomic mass.

____ 14. Across a period of eight elements in the periodic table, the number of valence electrons
a. is equal to the period's number.
b. depends on the atomic numbers of the elements.
c. increases from 1 to 8.
d. is the same for all eight elements.

____ 15. Which group contains the elements used to make semiconductors?
a. metals
b. metalloids
c. nonmetals
d. transition elements

____ 16. Most metals are **(pick all that apply)**
a. liquid at room temperature.
b. malleable.
c. ductile.
d. good conductors of heat and electricity.

____ 17. Which elements have two valence electrons in their atoms?
a. metal alloys
b. transition metals
c. alkali metals
d. alkaline earth metals

____ 18. Which of these particles has a positive charge?
a. proton
b. atom
c. neutron
d. electron

____ 19. Very energetic particles that move in all directions around the nucleus of an atom are
a. electrons.
b. charges.
c. protons.
d. neutrons.

____ 20. Which member of the carbon family is a nonmetal?
a. lead
b. carbon
c. silicon
d. tin

____ 21. In a period of eight elements in the periodic table, the properties of those elements
a. are exactly the same.
b. are related to the number of valence electrons.
c. do not show any kind of pattern.
d. are extremely similar to one another.

____ 22. From an element's location in the periodic table, you can predict
a. its chemical name.
b. when it was discovered.
c. its chemical symbol.
d. its properties.