

- ___ 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.