**Chapter 17 Pretest**

**Pretest: Atomic Structure & The periodic Table**

1. Isotopes are atoms that have different
   1. Number of protons
   2. Mass number
   3. Number of neutrons
   4. Atomic mass
2. Al, Cu, N, and O or symbols for
   1. Compounds
   2. Elements
   3. Mixtures
   4. Gases
3. The noble gas family of elements is located in Group \_\_\_\_\_\_\_\_ on the periodic table.
   1. 1
   2. 14
   3. 17
   4. 18
4. Almost all of the mass of an atom is found
   1. Inside the nucleus
   2. In the electron cloud
   3. Outside the nucleus
   4. In the energy levels
5. All atoms are electrically
   1. Positive
   2. Negative
   3. Neutral
6. The elements on the periodic table are arranged according to increasing
   1. Atomic mass
   2. Stability
   3. Activity
   4. Atomic number
7. How many electrons maybe contained in the energy level closest to the nucleus (First level)?
   1. 0
   2. 2
   3. 8
   4. 18
8. The mass of an atom depends on the number of
   1. Protons and neutrons
   2. Protons and electrons
   3. Electrons and neutrons
   4. Electrons and isotopes
9. The elements on the extreme left side of the periodic table are
   1. Metals
   2. Nonmetals
   3. Metalloids
   4. Gases
10. Each energy level of an atom has a maximum number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ it can hold.
    1. Neutrons
    2. Quarks
    3. Protons
    4. Electrons
11. Dot Diagrams are used to represent
    1. The structure of the nucleus
    2. Atomic number
    3. Isotopes
    4. Outer electrons
12. A chemical symbol represents the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the element.
    1. Name
    2. Structure
    3. Reactions
    4. Type
13. Elements in groups 3 to 12 are called
    1. Metalloids
    2. Transition elements
    3. Noble gases
    4. Halogens
14. A certain atom has 26 protons, 26 electrons, and 30 neutrons. Its mass number is
    1. 26
    2. 30
    3. 52
    4. 56
15. The positively (+) charged central part of the atom is called the \_\_\_\_\_\_\_\_\_\_\_\_
16. The negatively (-) charged region surrounding the nucleus is called the electron \_\_\_\_\_\_\_\_\_\_\_\_\_
17. Which region contains almost all of the mass of an atom? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
18. The positively charged atomic particles found in the nucleus of the atom are called \_\_\_\_\_\_\_\_\_\_\_\_\_.
19. The electrically neutral atomic particles found in the nucleus of the atom are called \_\_\_\_\_\_\_\_\_\_\_\_.
20. The number of protons in the nucleus on an atom is called the \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_.
21. State the maximum number of electrons which can be located in each of the following energy levels.
    1. Level 1 = \_\_\_\_\_\_\_ electrons
    2. Level 2 = \_\_\_\_\_\_\_ electrons
    3. Level 3 = \_\_\_\_\_\_\_ electrons
    4. Level 4 = \_\_\_\_\_\_\_ electrons
22. The horizontal rows of elements in Periodic table are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
23. Vertical columns of elements in the Periodic table are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
24. A total count of the neutrons and protons in an atom is the \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_
25. Atoms of the same element but with different number of neutrons are \_\_\_\_\_\_\_\_\_\_\_\_\_\_
26. Elements that are found on the left side of the periodic table are \_\_\_\_\_\_\_\_\_\_\_
27. Elements that have the same properties of both metals and nonmetals are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
28. A charge that shows the classification of elements is called the \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_
29. The symbol for an element and dots to represent the outer energy level of electrons (valence electrons) is called \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_
30. Write the formula to find the number of neutrons in an atom

Complete the table below

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Information** | **Calcium** | **Magnesium** | **Chlorine** | **Silicon** |
| **Symbol** |  |  |  |  |
| **Atomic number** |  |  |  |  |
| **Atomic mass (round)** |  |  |  |  |
| **Number of electrons** |  |  |  |  |
| **Number of protons** |  |  |  |  |
| **Number of neutrons** |  |  |  |  |
| **Period** |  |  |  |  |
| **Group or Family** |  |  |  |  |
| **Dot Diagram** |  |  |  |  |

Complete the table Below by putting the correct number of electrons in each Energy Level

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Elements** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| **Neon** |  |  |  |  |
| **Calcium** |  |  |  |  |