

NAME \_\_\_\_\_  
HOUR \_\_\_\_\_

MIDTERM STUDY GUIDE 2017

1. What are the properties of covalent compounds?
2. When an atom loses an electron, it becomes a \_\_\_\_\_.
3. Potassium oxide is an ionic compound with the chemical formula  $K_2O$ . What does the "2" tell you?
4. In the chemical formula for an ionic compound, what is written first the metal or nonmetal?
5. The chemical name for the compound with the formula  $Ag_2S$  is \_\_\_\_\_.
6. What is a double bond?
7. Electrons involved in bonding between atoms are \_\_\_\_\_ electrons.
8. What is an alloy?
9. If something is malleable it means what?
10. Which group on the periodic table of elements is the most reactive metals group?  
Which group on the periodic table of elements is the most reactive nonmetal group?

11. What are the properties of ionic compounds?
  
  
  
  
  
  
  
  
  
  
12. An ionic bond is the attraction between \_\_\_\_\_ and \_\_\_\_\_ ions.
13. What are polyatomic ions?
  
  
  
  
  
  
  
  
  
  
14. What is a covalent bond?
  
  
  
  
  
  
  
  
  
  
15. What is a metal crystal?
  
  
  
  
  
  
  
  
  
  
16. Chemistry is the study of \_\_\_\_\_ and how matter changes.
  
  
  
  
  
  
  
  
  
  
17. The only sure evidence for a chemical reaction is the production of one or more \_\_\_\_\_ substances.
18. NaCl represents a chemical \_\_\_\_\_.
19. The principle of conservation of mass is true for reactions in both \_\_\_\_\_ and \_\_\_\_\_ systems.
20. What does the conservation of mass mean?
  
  
  
  
  
  
  
  
  
  
21. A bottle of hydrogen peroxide that eventually turns into a bottle of water and oxygen gas is an example of what type of reaction?

22. Give an example of each of the 4 chemical reactions: **Do not use pictures**

Synthesis:

Decomposition:

Single Replacement:

Double Replacement:

23. What happens when chemical bonds break and new bonds form?

24. What is a chemical equation?

25. What is a reactant?

26. What two chemical reactions are opposite of each other?

27. What happens in an endothermic reaction and give an example?

28. Describe an open system.

29. Every chemical reaction involves a change in \_\_\_\_\_.

30. Who created the first periodic table of elements and how was it arranged?
31. The atomic number of an element is based on the \_\_\_\_\_.
32. From an element's location in the periodic table, you can predict its \_\_\_\_\_.
33. What are the properties of metals?
34. Name the alkaline earth metals.
35. At room temperature, more than half of the nonmetal elements are \_\_\_\_\_.
36. The elements that do not ordinarily form compounds are \_\_\_\_\_.
37. Describe the characteristics of a column of the periodic table of elements.
38. On the periodic table of elements, where are the most reactive **metals** found?
39. Which group contains the most element on the periodic table of elements?
40. Describe ductile.
41. In an atom, the number of protons equals the number of \_\_\_\_\_.
42. The elements in a row of the periodic table have properties that change in a \_\_\_\_\_.
43. What information on the periodic table indicates the number of protons in an atom?
44. Which part of the atom move around the nucleus?

45. What is a metalloid?
  
46. Describe an electron.
  
47. Describe the halogen family.
  
48. What is a chemical formula?
  
49. What is a physical change and give an example?
  
50. What is a chemical change and give an example?
  
51. What is an exothermic change and give an example?
  
52. What is an atom?
  
53. Describe a physical property and a chemical property.

54. The properties of solid metals can be explained by the \_\_\_\_\_ of and the bonding among the metal atoms.
55. The amount of matter in a chemical reaction remains the \_\_\_\_\_.
56. A chemical reaction may be detected by observing changes in the \_\_\_\_\_ of matter.
57. The modern periodic table is organized according to \_\_\_\_\_.
58. The horizontal rows in the periodic table are known as \_\_\_\_\_.
59. Most nonmetals can be found on the \_\_\_\_\_ side of the periodic table.
60. Atoms with the same number of protons and different numbers of neutrons are called \_\_\_\_\_.

### **Use your Earth Structure Book**

61. What is the correct order (starting from the surface) of Earth's layers? inner core, crust, mantle and outer core
62. Using data from seismic waves, geologists have learned that Earth's interior is made up of several \_\_\_\_\_.
63. Which of Earth's layers is the thickest?
64. Which part of Earth contains most of its mass?
65. Earth's inner core is a dense ball of solid \_\_\_\_\_.
66. Which part of the Earth contains continental plates?
67. How do geologists study the interior of the earth?
68. The outermost layer of the Earth is the \_\_\_\_\_.
69. Pressure \_\_\_\_\_ from Earth's surface toward the center of Earth.
70. What provides us with direct evidence about the interior of our planet?

