

Name \_\_\_\_\_

Date \_\_\_\_\_

## Atomic Structure Study Guide

### Atomic Structure

1. Which subatomic particle has a positive charge? \_\_\_\_\_
2. Which subatomic particle has a neutral charge? \_\_\_\_\_
3. Which subatomic particle has a negative charge? \_\_\_\_\_
4. Which two subatomic particles are found inside the nucleus? \_\_\_\_\_  
\_\_\_\_\_
5. Which subatomic particle orbits the nucleus? \_\_\_\_\_

### Periodic Table

6. How are atoms arranged on the periodic table? \_\_\_\_\_  
\_\_\_\_\_
7. How do you find the number of protons in an element? \_\_\_\_\_
8. How do you find the number of electrons in an element? \_\_\_\_\_
9. How do you find the mass number of an element? \_\_\_\_\_  
\_\_\_\_\_
10. How do you find the number of neutrons in an element? \_\_\_\_\_  
\_\_\_\_\_
11. Where are metals located on the periodic table? \_\_\_\_\_
12. Where are non-metals located on the periodic table? \_\_\_\_\_
13. Where are metalloids located on the periodic table? \_\_\_\_\_

### Electron Arrangement

14. How many electrons can the first energy level hold? \_\_\_\_\_

15. How many electrons can the second energy level hold? \_\_\_\_\_

16. How many electrons can the third energy level hold? \_\_\_\_\_

17. What determines the periods (rows) on the periodic table? \_\_\_\_\_

\_\_\_\_\_

18. What is a valence electron? \_\_\_\_\_

\_\_\_\_\_

19. What is the Octet Rule? \_\_\_\_\_

\_\_\_\_\_

20. What determines the groups (columns) on the periodic table? \_\_\_\_\_

\_\_\_\_\_

21. Draw the Bohr diagram for Sulfur:

22. Draw the Lewis Structure for Sulfur:

23. Why is knowing the number of valence electrons for any element important? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

24. Which of the following elements will behave the same way as sulfur, during a chemical reaction?

a. Hydrogen

b. Magnesium

c. Oxygen

d. Neon