Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CHEMISTRY I**

**Test 3**

**Study Guide**

Period \_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Describe why NaCl (Sodium chloride) burns to produce a yellow or orange flame.

2. Write out the full electron configuration for each of the following elements. (4 pts each)

1. Mg

 b. Na

3. Write out the short hand electron configuration for each of the following elements. (4 pts each)

 a. Pt

 b. Sc

 c. Kr

4. Write out the spin diagram for each of the following elements. (5 pts each)

 a. Ge b. Si

5. Write out the Lewis dot structure for each of the following elements. (3 pts each)

 a. N

 b. Sr

1. C

6. How Many valence electrons does each of the following elements have?

(3 pts each)

 a. Na

1. N
2. He
3. Li
4. O
5. Ne

7. State the Pauli Exclusion Principle.

8. State the Aufbau Principle.

9. Draw the periodic table and tell where the s, p, d, and f blocks are. (5 pts)

10. What is Hund’s rule? (3pts)

11. What are valence electrons and why are they important? (4 pts)