

# Honors Chemistry

## Covalent Bonding Study Guide 1

hcmolgeoprac1\_08.doc

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Period: \_\_\_\_\_

*Instructions: Answer the following. Remember, you may have to use your textbook as a resource to answer some of these questions.*

1. Differentiate between the following types of bonds (see page 180-181 and the index):

Ionic: \_\_\_\_\_

Nonpolar Covalent: \_\_\_\_\_

Polar Covalent: \_\_\_\_\_

2. In chapter 6, we discussed the trend in electronegativity on the periodic table. What is electronegativity and what does it help determine?

\_\_\_\_\_  
\_\_\_\_\_

3. Determine the difference in electronegativity ( $\Delta EN$ , see page 154 in textbook for chart) between each of the following pairs of elements:

a. Cl and Cl \_\_\_\_\_      b. H and F \_\_\_\_\_      c. O and N \_\_\_\_\_      d. K and F \_\_\_\_\_

4. For each of the pairs in question 3, circle the element symbol that has the larger draw on electrons in a bond between those elements

5. Rank the pairs of elements in question 3 in order of increasingly polar bonds that would form between them (e.g.  $d < a < b < c$ )

\_\_\_\_\_ < \_\_\_\_\_ < \_\_\_\_\_ < \_\_\_\_\_

6. Determine the number of valence electrons in each of the following atoms:

a. Sr \_\_\_\_\_      b. Br \_\_\_\_\_      c. Li \_\_\_\_\_      d. S \_\_\_\_\_      e. As \_\_\_\_\_

7. Explain what a Lewis dot diagram illustrates:

\_\_\_\_\_

