1. What is a chemical bond?

2. Which bond would be stronger: NaCl or KCl? Why? (Provide a clear explanation)

3. Describe how the location of electrons differs between covalent, ionic, and metallic bonds by filling in the blanks below **(re-write the sentence on your own paper).**

In a covalent bond, electrons are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, but in an ionic bond electrons are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. In a metallic bond electrons are in a \_\_\_\_\_\_\_\_\_\_\_\_.

4. When drawing a Lewis structure, how do you determine which atom is in the middle of the molecule?

5. Write a sentence describing each type of compound (covalent, metallic and ionic). The first one is given as an example:

Metallic compounds are generally shiny and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ conductors of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. They are malleable, which means they can be hammered into sheets. They are \_\_\_\_\_\_\_\_\_\_\_\_, which means they can be stretched into wires.

Covalent compounds….

Ionic compounds…

6. In your own words, define the terms polar and non-polar. Then explain how to determine whether a compound is polar or non-polar.

7. Explain in your own words how to determine if a compound is ionic, covalent, or metallic.