**Quiz 5A**

# Directions: Answer each of the following questions. Be sure to use complete sentences where appropriate. For full credit be sure to show all of your work. Where appropriate answers should be boxed for clarity, written to the correct number of significant figures, and, include the proper units.

1. Complete the following table (10 points)

|  |  |  |
| --- | --- | --- |
| Name | Covalent or Ionic Compound | Formula |
| Copper(II) fluoride | Ionic | CuF2 |
| Dinitrogen trioxide | Covalent | N2O3 |
| Magnesium sulfate | Ionic | MgSO4 |
| Sodium phosphite | Ionic | Na3PO3 |
| Tetraiodine nonaoxide | Covalent | I4O9 |

1. Using on the periodic table arrange the following elements in order of increasing atomic radius: lead, silicon, carbon, germanium (4 points).

carbon < silicon < germanium < lead

1. Draw Lewis structures for the following compounds (4 points):
   1. Cl2 
   2. HF 
2. Are the following statements true or false (2 points)?
   1. VSEPR stands for Valence Shell Electron Pair Repulsion \_\_\_true\_\_\_\_\_\_\_\_\_
   2. Polarity is based on the number of atoms. \_\_\_false\_\_\_\_\_\_\_\_\_

**Quiz 5B**

# Directions: Answer each of the following questions. Be sure to use complete sentences where appropriate. For full credit be sure to show all of your work. Where appropriate answers should be boxed for clarity, written to the correct number of significant figures, and, include the proper units.

1. Are the following statements true or false (2 points)?
   1. VSEPR stands for Valence Shell Electronegativity Repulsion \_\_\_false\_\_\_\_\_
   2. The bond angle only looks at the shape of the bonding atoms. \_\_\_true\_\_\_\_\_
2. Complete the following table (10 points)

|  |  |  |
| --- | --- | --- |
| Name | Covalent or Ionic Compound | Formula |
| Silver sulfide | Ionic | Ag2S |
| Dinitrogen pentahydride | Covalent | N2H5 |
| Calcium nitrite | Ionic | Ca(NO2)2 |
| Iron(II) acetate | Ionic | Fe(C2H3O2)2 |
| Tetraphosphorus decaoxide | Covalent | P4O10 |

1. Draw Lewis structures for the following compounds (4 points):
   1. Br2 
   2. HI 
2. Using on the periodic table arrange the following elements in order of increasing ionization energy: phosphorus, silicon, aluminum, argon (4 points).

aluminum < silicon < phosphorus < argon