**Name: Period: Seat#:**

**Worksheet #2**

**Answer the following questions about compounds and molecules:**

|  |
| --- |
| 1. Fill in each blank with the word *high* or *low* – you can use the same word multiple times if needed.

Covalent bonds form when you have two (or more) atoms with \_\_\_\_\_\_\_\_\_\_\_\_ electronegativity and \_\_\_\_\_\_\_\_\_\_\_\_ ionization energy |
| 1. Fill in each blank with the word *high* or *low* – you can use the same word multiple times if needed.

Ionic bonds form when you have one type of atom with \_\_\_\_\_\_\_\_\_\_\_\_ electron affinity and one type of atom with \_\_\_\_\_\_\_\_\_\_\_\_ ionization energy |
| 1. Draw a diagram of a metallic substance, showing what is unique about the electrons in such a material. Then draw a second drawing showing how the electrons behave when a charge is applied to the material.
 |

 **Write the names of the following covalent molecules:**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. P4S5
 |  | 1. O2
 |  |
| 1. SeF6
 |  | 1. Si2Br2
 |  |
| 1. SC*l*4
 |  | 1. CH4
 |  |
| 1. B2Si
 |  | 1. NF3
 |  |
| 1. PC*l*3
 |  | 1. H2O
 |  |

**Write the formulas for the following covalent molecules:**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. Antimony tribromide
 |  | 1. Hexaboron monosilicide
 |  |
| 1. Chlorine dioxide
 |  | 1. Hydrogen monoiodide
 |  |
| 1. Iodine pentafluoride
 |  | 1. Dinitrogen trioxide
 |  |
| 1. Phosphorus triiodide
 |  | 1. Disulfur decafluoride
 |  |
| 1. Dicarbon hexahydride
 |  | 1. Iodine heptafluoride
 |  |

**Write the names of the following ionic compounds:**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. Ni3(PO4)2
 |  | 1. FeI2
 |  |
| 1. MnF2
 |  | 1. NaCN
 |  |
| 1. CuS
 |  | 1. Li2O
 |  |
| 1. BeCl2
 |  | 1. TiN
 |  |
| 1. MgO
 |  | 1. NH4NO3
 |  |
| 1. Ag2CO3
 |  | 1. Zn(OH)2
 |  |
| 1. Ca(C2H3O2)2
 |  | 1. NaHCO3
 |  |
| 1. Mg3P2
 |  | 1. Al2(CO3)3
 |  |

|  |  |
| --- | --- |
| 1. **Draw a graph that shows the relationship between the energy of two atoms and the distance between the two when forming a bond** *\*hint\* was in our notes!*

 | 1. **Explain the graph you just drew in the previous question.**
 |