**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.** |