**Unit four EOC concepts**

1. **Element groups.** Draw a sketch of periodic table and identify where the following areas are: main group metals, main group nonmetals, and transition metals
2. **Classification of compounds.** copy the table

|  |  |  |  |
| --- | --- | --- | --- |
|  | ionic |  | covalent |
| Type 1 | Main group metal and nonmetal | No types  no exceptions | Non metal and non metal |
| Type 2 | Main group metal and PAI |
| Type 3 | Transition metal and nonmetal |
| Type 4 | Transition metal and PAI |
| exceptions | Zn, Ag, Pb, Sn, Bi |

1. **Rules for naming compounds.** Fill in the table with name and instructions for naming compounds using type one as a template.

|  |  |  |
| --- | --- | --- |
| **How to name compounds** | | |
| **Type** | **Example** | **Instructions** |
| **Type 1 Ionic** | Mg3N2 | Magnesium nitride; give proper name of metal, change nonmetal ending to -ide |
| **Type 2 Ionic** | NaC2H3O2 |  |
| **Type 3 Ionic** | CuBr2 |  |
| **Type 4 Ionic** | FeSO4 |  |
| **Exceptions Ionic** | AgCl  PbI2 |  |
| **Covalent** | P2S7 |  |

1. **Rules for writing formulas.** Fill in table with formula and instructions for writing formulas using type one as a template.

|  |  |  |
| --- | --- | --- |
| **How to write formula** | | |
| **Type** | **Example** | **Instructions** |
| **Type 1 Ionic** | Sodium chloride | NaCl compound must be neutral, use subscripts accordingly. |
| **Type 2 Ionic** | Magnesium chlorate |  |
| **Type 3 Ionic** | Nickel (II) chloride |  |
| **Type 4 Ionic** | Cobalt (II) nitrate |  |
| **Exceptions Ionic** | Zinc oxide  Bismuth (II) sulfide |  |
| **Covalent** | Dinitrogen pentaoxide |  |