Ionic Compounds

1. **Oxidation Number (Charge)**

Predict the oxidation numbers for the following elements:

1. Al 3. Cl 5. S 7. K 9. Ga
2. Se 4. N 6. Mg 8. Na 10. O
3. **Naming Binary Compounds**

Name the following binary ionic compounds:

1. Na2S \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. KI \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Li2O \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 7. LiCl2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. MgBr2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 8. Na3P \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. AlN \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 9. K2Se \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. CaF2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 10. Rb3N \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. **Writing Chemical Formulas**

Write formulas for the following binary ionic compounds:

1. Sodium fluoride \_\_\_\_\_\_\_\_\_\_\_\_ 6. Strontium fluoride \_\_\_\_\_\_\_\_\_\_\_\_\_
2. Potassium chloride \_\_\_\_\_\_\_\_\_\_\_\_ 7. Aluminum fluoride \_\_\_\_\_\_\_\_\_\_\_\_\_
3. Rubidium bromide \_\_\_\_\_\_\_\_\_\_\_\_ 8. Aluminum oxide \_\_\_\_\_\_\_\_\_\_\_\_\_
4. Potassium oxide \_\_\_\_\_\_\_\_\_\_\_\_ 9. Calcium sulfide \_\_\_\_\_\_\_\_\_\_\_\_\_
5. Lithium sulfide \_\_\_\_\_\_\_\_\_\_\_\_ 10. Cesium nitride \_\_\_\_\_\_\_\_\_\_\_\_\_
6. **Drawing Electron Dot notation**

Draw the electron dot notations for the following binary ionic compounds:

1. NaCl 4. Al2O3
2. Cs3N 5. BeCl2
3. KI 6. MgBr2
4. **Compounds of transition Elements**

Write the formulas for the following compounds – they will all have Roman numerals!

1. Manganese (III) chloride \_\_\_\_\_\_\_\_\_\_\_ 6. Lead (II) oxide \_\_\_\_\_\_\_\_\_\_\_\_\_
2. Iron (III) bromide \_\_\_\_\_\_\_\_\_\_\_ 7. Tin (IV) oxide \_\_\_\_\_\_\_\_\_\_\_\_\_
3. Tin (IV) chloride \_\_\_\_\_\_\_\_\_\_\_ 8. Manganese (I) oxide \_\_\_\_\_\_\_\_\_\_\_\_\_
4. Copper (II) chloride \_\_\_\_\_\_\_\_\_\_\_ 9. Chromium (III) oxide \_\_\_\_\_\_\_\_\_\_\_\_\_
5. Mercury (I) oxide \_\_\_\_\_\_\_\_\_\_\_ 10. Titanium (IV) bromide \_\_\_\_\_\_\_\_\_\_\_\_\_

Write the names of the following compounds – they will all have Roman numerals!

1. FeBr2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. NiBr2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. TiCl2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 7. Cu2O3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. PbO2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 8. SnCl4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. PbI2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 9. CuCl2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. CrO \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 10. AgCl \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**VI. Polyatomic Ions**

Write the formulas for the following compounds:

1. Sodium cyanide \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. Calcium hydroxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Barium chromate \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 7. Calcium nitrate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Sodium bromate \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 8. Copper (II) sulfate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Cadmium iodate \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 9. Potassium hydroxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Calcium nitrate \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 10. Sodium sulfate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Write the names of the following compounds:

1. MgSO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. KOH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. NH4OH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 7. MnSO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. BaCO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 8. KNO2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. KClO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 9. KNO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. AgNO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 10. H2SO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_