**IUPAC Practice Test: Science 10**

1. Identify the following as elements, ionic compounds, or covalent compounds. Then, write their names.

|  |  |  |
| --- | --- | --- |
| Identification | Formula  | Name |
|  | BeCl2 |  |
|  | Br2 |  |
|  | SO3 |  |
|  | CaF2 |  |
|  | Ti |  |
|  | CO2 |  |
|  | Co(CH3COO)3 |  |
|  | Ne |  |
|  | AlP |  |
|  | H2O2 (hydrogen is a non-metal**)** |  |
|  | Ni3N2 |  |
|  | Cl2 |  |
|  | FeCr2O­7 |  |
|  | XeF6 |  |
|  | Mg(OH)2 |  |
|  | CCl4 |  |
|  | F2 |  |
|  | CaH2 (hydrogen is a non-metal**)** |  |
|  | N2O |  |
|  | (NH4)2SO4 |  |
|  | SiO2 |  |
|  | MnCrO4 |  |

1. Identify the following as elements, ionic compounds, or covalent compounds. Then, write their formulas.

|  |  |  |
| --- | --- | --- |
| Identification | Name | Chemical Formula |
|  | potassium chloride |  |
|  | niobium(V) oxide |  |
|  | nitrogen  |  |
|  | manganese(IV) sulfate |  |
|  | dinitrogen heptaoxide |  |
|  | zinc hypochlorite |  |
|  | chromium(II) iodide |  |
|  | chlorine  |  |
|  | trisulfur monoxide |  |
|  | molybdenum (II) sulfite  |  |
|  | ammonium nitride |  |
|  | dicarbon trifluoride |  |
|  | silver sulfide |  |
|  | nickel  |  |
|  | trinitrogen dioxide  |  |
|  | yttrium  |  |
|  | germanium cyanide |  |
|  | oxygen monofluoride |  |
|  | copper(II) hydrogen sulfate |  |
|  | titanium(III) phosphide |  |
|  | phosphorus dichloride  |  |
|  | sodium bisulfite |  |

**IUPAC Practice Test: Science 10 (KEY)**

|  |  |  |
| --- | --- | --- |
| Identification | Formula  | Name |
| Ionic | BeCl2 | beryllium chloride |
| Element | Br2 | bromine  |
| Covalent | SO3 | sulfur trioxide |
| Ionic | CaF2 | calcium fluoride |
| Element | Ti | titanium |
| Covalent | CO2 | carbon dioxide |
| Ionic | Co(CH3COO)3 | cobalt(III) acetate |
| Element | Ne | neon |
| Ionic | AlP | aluminum phosphide |
| Covalent | H2O2 (hydrogen is a non-metal here) | dihydrogen dioxide (note: common name ‘hydrogen peroxide’) |
| Ionic | Ni3N2 | nickel(II) nitride |
| Element | Cl2 | chlorine |
| Ionic | FeCr2O­7 | iron(II) dichromate |
| Covalent | XeF6 | xenon hexafluoride |
| Ionic | Mg(OH)2 | magnesium hydroxide |
| Covalent | CCl4 | carbon tetrachloride |
| Element | F2 | fluorine |
| Ionic | CaH2 (hydrogen is a non-metal here) | calcium hydride |
| Covalent | N2O | dinitrogen monoxide |
| Ionic | (NH4)2SO4 | ammonium sulfate |
| Covalent | SiO2 | silicon dioxide |
| Ionic  | MnCrO4 | manganese(II) chromate |

|  |  |  |
| --- | --- | --- |
| Identification | Name | Formula |
| Ionic | potassium chloride | KCl |
| Ionic | niobium(V) oxide | Nb2O5 |
| Element | nitrogen  | N2 |
| Ionic | manganese(IV) sulfate | Mn(SO4)2 |
| Covalent | dinitrogen heptaoxide | N2O7 |
| Ionic | zinc hypochlorite | Zn(ClO)2 |
| Ionic | chromium(II) iodide | CrI2 |
| Element | chlorine  | Cl2 |
| Covalent | trisulfur monoxide | S3O |
| Ionic | molybdenum (II) sulfite  | MoSO3 |
| Ionic | ammonium nitride | (NH4)3N |
| Covalent | dicarbon trifluoride | C2F3 |
| Ionic | silver sulfide | Ag2S |
| Element | nickel  | Ni |
| Covalent | trinitrogen dioxide  | N3O2 |
| Element | yttrium  | Y |
| Ionic | germanium cyanide | Ge(CN)4 |
| Covalent | oxygen monofluoride | OF |
| Ionic | copper(II) hydrogen sulfate | Cu(HSO4)2 |
| Ionic | titanium(III) phosphide | TiP |
| Covalent | phosphorus dichloride  | PCl2 |
| Ionic  | sodium bisulfite | NaHSO3 |