Science 10: Ionic Compounds

1. Name the following simple ionic compounds:

 A. LiF B. BeCl2

 C. Na3N D. MgO

 E. Ca3P2 F. MgF2

 G. K3N H. Li2O

 I. BeS J. Mg3N2

2. Name the following ionic compounds involving a multi-valent metal:

 A. CoO B. Co2O3

 C. FeN D. Fe3N2

 E. Fe2S3 F. FeS

 G. MnCl2 H. MnCl4

 I. Ti3N4 J. TiN

3. Name the following ionic compounds involving a polyatomic ion:

 A. NaNO3 B. Mg(NO3)2

 C. Mg3(PO3)2 D. LiOH

 E. KNO3 F. NH4Cl

 G. Na2CrO4 H. BeSO4

 I. Li3PO4 J. Ca(CN)2

4. Write the name for the following ionic compounds:

 A. CrO B. MgF2

 C. K2SO4 D. Fe2S3

 E. Ca(ClO2)2 F. BeCl2

 G. (NH4)2S H. Cu2O

5. Write the chemical formula for each of the following simple ionic compounds:

 A. Sodium oxide B. Calcium Fluoride

 C. Lithium Nitride D. Magnesium Chloride

 E. Aluminum Bromide F. Beryllium phosphide

 G. Potassium Sulphide H. Scandium oxide

6. Write the chemical formula for each of the following ionic compounds involving a multi-valent metal:

 A. Iron(II) chloride B. Iron(III) chloride

 C. Copper(I) oxide D. Copper(II) oxide

 E. Nickel(II) sulphide F. Nickel(III) sulphide

 G. Titanium(IV) fluoride H. Titanium(III) fluoride

7. Write the chemical formula for each of the following ionic compounds involving a polyatomic ion:

 A. Sodium sulphite B. Magnesium hypochlorite

 C. Calcium Nitrate D. Calcium Nitrite

 E. Potassium chromate F. Ammonium dichromate

 G. Lithium sulphate H. Beryllium carbonate

8. Write the chemical formula for the following ionic compounds:

 A. Copper(II) chloride B. Magnesium Iodide

 C. Iron(III) Phosphate D. Iron (III) perchlorate

 E. Ammonium oxide F. Potassium fluoride

 G. Scandium sulphide H. Chromium(II) bromide

9. A new element has been discovered! It is called Reallystinkium (it smells simply awful). The chemical symbol is Rs.

Reallystinkium forms **ONLY ONE** ionic compound with chlorine with the chemical formula RsCl3.

 A. How many electrons are in the valence shell of a neutral Reallystinkium ion?

 B. What is the ionic charge of a stable reallysinkium ion?

 C. What is the chemical formula of the compound formed between reallystinkium and oxygen?

 D. What is smallest possible atomic number for reallystinkium?

Science 10: Ionic Compounds

1. Name the following simple ionic compounds:

 A. LiF **lithium fluoride** B. BeCl2 **beryllium chloride**

 C. Na3N **sodium nitride** D. MgO **magnesium oxide**

 E. Ca3P2 **calcium phosphide** F. MgF2 **magnesium fluoride**

 G. K3N **potassium nitride** H. Li2O **lithium oxide**

 I. BeS **beryllium sulfide** J. Mg3N2 **magnesium nitride**

2. Name the following ionic compounds involving a multi-valent metal:

 A. CoO **cobalt(II) oxide** B. Co2O3 **cobalt(III) oxide**

 C. FeN **iron(III) nitride** D. Fe3N2 **iron(II) nitride**

 E. Fe2S3 **iron(III) sulfide** F. FeS **iron(II) sulfide**

 G. MnCl2 **manganese(II) chloride** H. MnCl4 **manganese(IV) chloride**

 I. Ti3N4 **tin(IV) nitride** J. TiN **tin(III) nitride**

3. Name the following ionic compounds involving a polyatomic ion:

 A. NaNO3 **sodium nitrate** B. Mg(NO3)2 **magnesium nitrate**

 C. Mg3(PO3)2 **magnesium phosphite** D. LiOH **lithium hydroxide**

 E. KNO3 **potassium nitrate** F. NH4Cl **ammonium chloride**

 G. Na2CrO4 **sodium chromate** H. BeSO4 **beryllium sulfate**

 I. Li3PO4 **lithium phosphate** J. Ca(CN)2 **calcium cyanide**

4. Write the name for the following ionic compounds:

 A. CrO **chromium(II) oxide** B. MgF2 **magnesium fluoride**

 C. K2SO4 **potassium sulfate** D. Fe2S3 **iron(III) sulfide**

 E. Ca(ClO2)2 **calcium chlorite** F. BeCl2 **beryllium chloride**

 G. (NH4)2S **ammonium sulfide** H. Cu2O **copper(I) oxide**

5. Write the chemical formula for each of the following simple ionic compounds:

 A. Sodium oxide **Na2O** B. Calcium Fluoride **CaF2**

 C. Lithium Nitride **Li3F** D. Magnesium Chloride **MgCl2**

 E. Aluminum Bromide **AlBr3** F. Beryllium phosphide **Be3P2**

 G. Potassium Sulphide **K2S** H. Scandium oxide **Sc2O3**

6. Write the chemical formula for each of the following ionic compounds involving a multi-valent metal:

 A. Iron(II) chloride **FeCl2** B. Iron(III) chloride **FeCl3**

 C. Copper(I) oxide **Cu2O** D. Copper(II) oxide **CuO**

 E. Nickel(II) sulphide **NiS** F. Nickel(III) sulphide **Ni2S3**

 G. Titanium(IV) fluoride **TiF4** H. Titanium(III) fluoride **TiF3**

7. Write the chemical formula for each of the following ionic compounds involving a polyatomic ion:

 A. Sodium sulphite **Na2SO3** B. Magnesium hypochlorite **Mg(ClO)2**

 C. Calcium Nitrate **Ca(NO3)2** D. Calcium Nitrite **Ca(NO2)2**

 E. Potassium chromate **K2CrO4** F. Ammonium dichromate **(NH4)2Cr2O7**

 G. Lithium sulphate **Li2SO4** H. Beryllium carbonate **BeCO3**

8. Write the chemical formula for the following ionic compounds:

 A. Copper(II) chloride **CuCl2** B. Magnesium Iodide **MgI2**

 C. Iron(III) Phosphate **FePO4** D. Iron (III) perchlorate **Fe(ClO4)3**

 E. Ammonium oxide **(NH4)2O** F. Potassium fluoride **KF**

 G. Scandium sulphide **Sc2S3** H. Chromium(II) bromide **CrBr2**

9. A new element has been discovered! It is called Reallystinkium (it smells simply awful). The chemical symbol is Rs.

Reallystinkium forms **ONLY ONE** ionic compound with chlorine with the chemical formula RsCl3.

 A. How many electrons are in the valence shell of a neutral Reallystinkium ion? **3**

 B. What is the ionic charge of a stable reallysinkium ion? **+3**

 C. What is the chemical formula of the compound formed between reallystinkium and oxygen? **Rs2O3**

 D. What is smallest possible atomic number for reallystinkium? **121**