SCH 3U

# NOMENCLATURE OF BINARY IONIC COMPOUNDS

1. Write IUPAC names for the following compounds.

 a) Li2O b) MgF2 c) CuI d) Fe2O3 e) Na2S f) KBr

 g) HgCl2 h) SnBr2 i) Ag2O j) ZnF2 k) CuO l) Sb2S3

 m) Ba3P2 n) CaBr2 o) FeCl3 p) HgS q) Al2O3 r) BaI2

 s) PtO2 t) Cr2O3

2. Write formulas for the following compounds.

 a) sodium fluoride b) silver sulfide c) tin(II) oxide

 d) copper(II) chloride e) aluminum bromide f) zinc chloride

 g) iron(II) oxide h) iron(III) oxide i) zinc sulfide

 j) potassium oxide k) tin(IV) oxide l) mercury(I) iodide

 m) aluminum sulfide n) cadmium chloride o) lead(II) oxide

 p) antimony(V) oxide q) cesium sulfide r) sodium carbide

 s) gold(III) nitride t) nickel(II) iodide

# NOMENCLATURE OF TERNARY IONIC COMPOUNDS

1. Write IUPAC names for the following compounds.

 a) KNO3 b) (NH4)3PO4 c) Mg(ClO3)2 d) FeSO4

 e) Ca(C2H3O2)2 f) ZnSO3 g) Ba(OH)2 h) NaHCO3

 i) K2Cr2O7 j) FeS2O3 k) NaBrO2 l) Rb3PO3

2. Write formulas for the following compounds.

 a) mercury(II) cyanide b) vanadium(III) carbonate

 c) potassium hypochlorite d) copper(II) sulfate

 e) barium hydrogen sulfate f) lithium hydroxide

 g) ammonium thiocyanate h) sodium acetate

 i) aluminum phosphite j) lead(II) periodate

 k) iron(III) nitrite l) magnesium bromite

**ALCHEMISTS METHOD**

Write formulas for the following compounds named by an outdated method.

 a) cuprous hydride b) plumbous sulfide c) cobaltic chlorate

 d) mercuric sulfate e) aurous oxide f) ferrous fluoride

 g) plumbic nitrate h) stannous acetate i) cupric iodide

 j) ferric phosphite k) mercurous nitride l) auric bromide

Reminder: You never use this method to name compounds.

# NOMENCLATURE OF ACIDS

# 1. Write IUPAC names for the following compounds.

 a) HC2H3O2 b) HBrO4 c) H2SO3 d) HBr

 e) H3PO4 f) HClO3

2. Write formulas for the following compounds.

 a) chlorous acid b) hydroiodic acid c) hypobromous acid

d) phosphorous acid e) nitric acid f) hydrochloric acid

 g) carbonic acid

# NOMENCLATURE OF HYDRATED COMPOUNDS

1. Write IUPAC names for the following compounds.

 a) Ca(MnO4)25H2O b) Fe(NO3)39H2O c) Pb(C2H3O2)23H2O

d) Li2CrO42H2O e) MgCl26H2O f) NaHSO4H2O

2. Write formulas for the following compounds.

 a) barium thiocyanate dihydrate b) nickel(II) bromate hexahydrate

 c) calcium nitrate tetrahydrate d) potassium sulfite dihydrate

e) chromium(III) nitrate nonahydrate f) sodium hydrogen phosphate dodecahydrate

**NOMENCLATURE OF COVALENT COMPOUNDS**

1. Write IUPAC names for the following compounds.

 a) SF6 b) IF7 c) N2O3 d) BF3 e) NO2 f) P2S5

 g) PCl3 h) PCl5

2. Write formulas for the following molecules.

 a) chlorine b) carbon monoxide c) nitrogen dioxide

 d) nitrogen monoxide e) dinitrogen monoxide f) sulfur dioxide

 g) diiodine pentoxide h) silicon tetrafluoride i) boron trifluoride

 j) phosphorus triiodide k) sulfur tetrabromide l) phosporus pentachloride

 m) disulfur dichloride n) chlorine dioxide m) carbon tetrafluoride

**NOMENCLATURE PRACTICE QUIZ**

PART A: Write the IUPAC names of the following substances.

1. PbS2 2. Hg(C2H3O2)2 3. Al4C3

4. Fe(NO3)2**.**6H2O 5. Na2O 6. SO3

7. RbCN 8. P2O4 9. Pb3(PO4)2

10. Ca(ClO2)2

PART B: Write the formulas of the following substances.

1. cesium bromide 2. ammonium chloride 3. stannous fluoride

4. chlorine monoxide 5. cobalt(III) carbonate 6. nitric acid

7. nitrogen gas 8. copper(I) bromide 9. sulfur hexafluoride

10. germanium disulfide