

# Lecture Worksheet: Names and Formulas of Ionic Compounds

## Part 1: Binary Compounds of Metals with Fixed Charges

Write the correct formula for:

- 1) magnesium oxide  $MgO$
- 2) lithium bromide  $LiBr$
- 3) calcium nitride  $Ca_3N_2$
- 4) aluminum sulfide  $Al_2S_3$
- 5) potassium iodide  $KI$
- 6) strontium chloride  $SrCl_2$
- 7) sodium sulfide  $Na_2S$
- 8) radium bromide  $RaBr_2$
- 9) magnesium sulfide  $MgS$
- 10) aluminum nitride  $AlN$

Write the correct name for:

- 11)  $K_2S$  Potassium sulfide
- 12)  $LiBr$  Lithium bromide
- 13)  $Sr_3P_2$  strontium phosphide
- 14)  $BaCl_2$  Barium chloride
- 15)  $NaBr$  Sodium bromide
- 16)  $MgF_2$  Magnesium fluoride
- 17)  $Na_2O$  Sodium oxide
- 18)  $SrS$  Strontium sulfide
- 19)  $BN$  Boron nitride
- 20)  $AlN$  Aluminum nitride

## Part 2: Ionic Compounds with Polyatomic Ions

Write the correct formula for:

- 1) silver carbonate  $Ag_2CO_3$
- 2) potassium hydrogen phosphate  $K_2HPO_4$
- 3) aluminum hydroxide  $Al(OH)_3$
- 4) sodium hydrogen carbonate  $NaHCO_3$
- 5) calcium acetate  $Ca(CH_3COO)_2$
- 6) potassium permanganate  $KMnO_4$
- 7) calcium perchlorate  $Ca(ClO_4)_2$
- 8) lithium carbonate  $Li_2CO_3$
- 9) magnesium hydrogen sulfite  $Mg(HSO_3)_2$
- 10) sodium hypochlorite  $NaClO$

Write the correct name for:

- 1)  $AlPO_4$  Aluminum phosphate
- 2)  $KNO_2$  Potassium nitrite
- 3)  $NaHCO_3$  Sodium hydrogen carbonate
- 4)  $CaCO_3$  Calcium carbonate
- 5)  $Mg(OH)_2$  Magnesium hydroxide
- 6)  $Na_2CrO_4$  Sodium chromate
- 7)  $Ba(CN)_2$  Barium cyanide
- 8)  $K_2SO_4$  Potassium sulfate
- 9)  $NaH_2PO_4$  Sodium dihydrogen phosphate
- 10)  $NH_4NO_3$  Ammonium nitrate

## Part III: Binary Compounds of Metals with Variable Charges (Stock System)

Write the correct formula for:

- 1) iron(II) chloride  $FeCl_2$
- 2) copper(I) sulfide  $Cu_2S$
- 3) lead(IV) iodide  $PbI_4$
- 4) tin(II) fluoride  $SnF_2$
- 5) mercury(I) bromide  $Hg_2Br_2$
- 6) tin(II) oxide  $SnO$
- 7) chromium(III) oxide  $Cr_2O_3$
- 8) copper(II) sulfide  $CuS$
- 9) tin(IV) chlorite  $Sn(ClO_2)_4$
- 10) mercury(II) phosphate  $Hg_3(PO_4)_2$

Write the correct name for:

- 1)  $CuS$  Copper (II) sulfide
- 2)  $PbBr_4$  Lead (IV) bromide
- 3)  $Pb_3N_2$  Lead (III) nitride
- 4)  $Fe_2O_3$  Iron (III) oxide
- 5)  $FeI_2$  Iron (II) iodide
- 6)  $Sn_3P_4$  Tin (IV) phosphide
- 7)  $Cu_2S$  Copper (I) sulfide
- 8)  $SnCl_2$  Tin (II) chloride
- 9)  $Sn(NO_3)_2$  Tin (II) nitrate
- 10)  $FePO_4$  Iron (III) phosphate