

Names and Formulas

Name - _____

1.) In the space after each of the following species, indicate which of the terms below apply to each species. There is more than one term which applies to each species.

N (neutral) C (cation) A (anion) M (monatomic) D (diatomic) P (polyatomic)

a.) SO_4^- A and P c.) Sr^{2+} C and M e.) NH_4^+ C and P

b.) H_2O N and P d.) OH^- A, D and P f.) Ar N and M

2.) Write the formula for the following compounds.

a.) tin (IV) sulphate $\text{Sn}(\text{SO}_4)_2$ k.) potassium dihydrogen phosphate KH_2PO_4

b.) ammonium oxalate $(\text{NH}_4)_2\text{C}_2\text{O}_4$ l.) uranium (IV) sulphate $\text{U}(\text{SO}_4)_2$

c.) lithium oxide Li_2O m.) ammonium dichromate $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$

d.) copper (I) nitride Cu_3N n.) copper (I) phosphate Cu_3PO_4

e.) mercury (I) nitride Hg_3N o.) calcium hydroxide $\text{Ca}(\text{OH})_2$

f.) iron (II) hydroxide $\text{Fe}(\text{OH})_2$ p.) sodium bisulphite NaHSO_3

g.) silver sulphate Ag_2SO_4 q.) magnesium permanganate $\text{Mg}(\text{MnO}_4)_2$

h.) lead (II) perchlorate $\text{Pb}(\text{ClO}_4)_2$ r.) tungsten (V) bromide WBr_5

i.) chromium (III) oxide Cr_2O_3 s.) ammonium phosphate $(\text{NH}_4)_3\text{PO}_4$

j.) manganese (II) fluoride MnF_2 t.) mercury (I) acetate HgCH_3COO

3.) Write the name of the following compounds.

a.) Ag_3PO_4 silver phosphate e.) $(\text{NH}_4)_2\text{CO}_3$ ammonium carbonate

b.) $\text{Al}_2(\text{SO}_4)_3$ aluminum sulphate f.) VCl_3 vanadium (III) chloride

c.) Fe_2S_3 iron (III) sulphide g.) Hg_2CO_3 mercury (I) carbonate

d.) CuCl copper (I) chloride h.) CuSO_4 copper (II) sulphate

- i.) $(\text{NH}_4)_2\text{S}$ ammonium sulphide o.) $\text{Al}(\text{OH})_3$ aluminum hydroxide
- j.) NH_4HCO_3 ammonium bicarbonate p.) CrI_3 chromium (III) iodide
- k.) FeC_2O_4 iron (II) oxalate q.) SnO_2 tin (IV) oxide
- l.) $\text{Mg}(\text{HSO}_3)_2$ magnesium bisulphite r.) ZnCr_2O_7 zinc dichromate
- m.) LiClO_2 lithium chlorite s.) V_2O_5 vanadium (V) oxide
- n.) Na_2HPO_4 sodium monohydrogen phosphate t.) Sr_3N_2 strontium nitride

4.) Write the name of the following hydrated compounds.

- a.) $\text{FeBr}_3 \cdot 6\text{H}_2\text{O}$ iron (III) bromide hexahydrate
- b.) $\text{Li}_2\text{Cr}_2\text{O}_7 \cdot 2\text{H}_2\text{O}$ lithium dichromate dihydrate
- c.) $\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$ aluminum oxide trihydrate
- d.) $\text{CoF}_2 \cdot 4\text{H}_2\text{O}$ cobalt (II) fluoride tetrahydrate
- e.) $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$ sodium carbonate monohydrate
- f.) $\text{Na}_2\text{S} \cdot 9\text{H}_2\text{O}$ sodium sulphide nonahydrate
- g.) $\text{Ni}_3(\text{PO}_4)_2 \cdot 8\text{H}_2\text{O}$ nickel (II) phosphate octahydrate

5.) Write the formula for the following hydrated compounds.

- a.) iron (II) phosphate octahydrate $\text{Fe}_3(\text{PO}_4)_2 \cdot 8\text{H}_2\text{O}$
- b.) cadmium (II) nitrate tetrahydrate $\text{Cd}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$
- c.) copper (II) phosphate trihydrate $\text{Cu}_3(\text{PO}_4)_2 \cdot 3\text{H}_2\text{O}$
- d.) chromium (II) oxalate monohydrate $\text{CrC}_2\text{O}_4 \cdot \text{H}_2\text{O}$
- e.) nickel (II) chloride hexahydrate $\text{NiCl}_2 \cdot 6\text{H}_2\text{O}$
- f.) aluminum nitrate nonahydrate $\text{Al}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$

6.) Name the following.

a.) NO_2 nitrogen dioxidee.) N_2O_3 dinitrogen trioxideb.) ClF_3 chlorine trifluoridef.) SF_4 sulphur tetrafluoridec.) S_4N_2 tetrasulphur dinitrideg.) BrF bromine monofluorided.) P_2O_6 diphosphorous hexaoxideh.) SF_6 sulphur hexafluoride

7.) Write the formula for the following.

a.) sulphur trioxide SO_3 f.) carbon tetrachloride CCl_4 b.) phosphorus pentachloride PCl_5 g.) tetraphosphorus trisulphide P_4S_3 c.) xenon hexafluoride XeF_6 h.) dinitrogen pentasulphide N_2S_5 d.) oxygen difluoride OF_2 i.) trisilicon tetranitride Si_3N_4 e.) carbon monoxide CO j.) carbon dioxide CO_2