Chem 1010-009 Homework

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9. Give the name of each of the following simple binary ionic compounds.

   (a) $NaBr$ - Sodium bromide

   (b) $MgCl_2$ - Magnesium(II) chloride

   (c) AlP - Aluminum phosphoride

   (d) $SrBr_2$ - Strontium(II) bromide

   (e) AgI - Silver iodide

   (f) K_2S - Potassium sulfide

18. Write the name of each of the following binary compounds of nonmetallic elements.

   (a) ClF_5 - Chlorine pentaflouride

   (b) $XeCl_2$ - Xeon dichloride

   (c) SeO_2 - Selenium dioxide

   (d) N_2O_3 - Dinitrogen trioxide

   (e) I_2Cl_6 - Diiodide hexachloride

   (f) CS_2 - Carbon disulfide

19. Name each of the following binary compounds, using the periodic table to determine whether the compound is likely to be ionic (containing a metal and a nonmetal) or nonionic (containing only nonmetals).

    (a) Fe_3P_2 - Iron phosphoride

    (b) $CaBr_2$ - Calcium bromide

    (c) N_2O_5 - Dinitrogen pentaoxide

    (d) $PbCl_4$ - Lead(IV) chloride

    (e) S_2F_{10} - Disulfur deciflouride

    (f) Cu_2O Copper oxide

27. Complete the following list by filling in the missing names or formulas of the oxyanions of chlorine.

    (a) ClO_4^- - perchlorate

    (b) ClO^- - hypochlorite

    (c) ClO_3^- - chlorate

    (d) ClO_2^- - chlorite

34. Give the name of each of the following polyatomic ions.

    (a) NH_4^+ - Ammonium

    (b) $H_2PO_4^-$ - Dihydrogen phosphate

    (c) SO_4^{2-} - Sulfate

    (d) HSO_3^- - Hydrogen sulfite

    (e) ClO_4^- - Perchlorate

(f) IO_3^- - Iodate

39. Name each of the following acids.

(a) HCl - Hydrochloric acid

(b) H_2SO_4 - Sulfuric acid

(c) HNO_3 - Nitric acid

(d) HI - Hydroiodic acid

(e) HNO_2 - Nitrous acid

(f) $HClO_3$ - Chloric acid

(g) HBr - Hydrobromic acid

(h) HF - Hydroflouric acid

(i) $HC_2H_3O_2$ - Acetic acid

46. Write the formula for each of the following compounds that contain polyatomic ions. Be sure to enclose the polyatomic ion in parentheses if more than one such ion is needed to balance the oppositely charged ions.

(a) ammonium acetate - $NH_4C_2H_3O_2$

(b) ferrous hydroxide - $FeOH$

(c) cobalt(III) carbonate - $Co_2(CO_3)_3$

(d) barium dichromate - $BrCr_2O_7$

(e) lead(II) sulfate - $PbSO_4$

(f) potassium dihydrogen phosphate - KH_2PO_4

(g) lithium peroxide - Li_2O_2

(h) zinc chlorate - $ZnClO_3$