

CHAPTER TWO

Nomenclature (Naming Inorganic Compound)

2.38 What is the difference between inorganic compounds and organic compounds?

2.39 What are the four major categories of inorganic compounds?

2.40 Give an example each for a binary compound and a ternary compound.

2.41 What is the Stock system? What are its advantages over the older system of naming cations?

2.42 Explain why the formula HCl can represent two different chemical systems.

2.43 Define the following terms: acids, bases, oxoacids, oxoanions, and hydrates.

2.44 Name the following compounds: (a) KH_2PO_4 , (b) K_2HPO_4 , (c) HBr (gas), (d) HBr (in water), (e) Li_2CO_3 , (f) $\text{K}_2\text{Cr}_2\text{O}_7$, (g) NH_4NO_2 , (h) HIO_3 , (i) PF_5 , (j) P_4O_6 , (k) CdI_2 , (l) SrSO_4 , (m) $\text{Al}(\text{OH})_3$.

2.45 Name the following compounds: (a) KClO , (b) Ag_2CO_3 , (c) HNO_2 , (d) KMnO_4 , (e) CsClO_3 , (f) KNH_4SO_4 , (g) FeO , (h) Fe_2O_3 , (i) TiCl_4 , (j) NaH , (k) Li_3N , (l) Na_2O , (m) Na_2O_2 .

2.46 Write the formulas for the following compounds: (a) rubidium nitrite, (b) potassium sulfide, (c) sodium hydrogen sulfide, (d) magnesium phosphate, (e) calcium hydrogen phosphate, (f) potassium dihydrogen phosphate, (g) iodine heptafluoride, (h) ammonium sulfate, (i) silver perchlorate, (j) boron trichloride.

2.47 Write the formulas for the following compounds: (a) copper(I) cyanide, (b) strontium chlorite, (c) perbromic acid, (d) hydroiodic acid, (e) disodium ammonium phosphate, (f) lead(II) carbonate, (g) tin(II) fluoride, (h) tetraphosphorus decasulfide, (i) mercury(II) oxide, (j) mercury(I) iodide, (k) selenium hexafluoride.

2.48 Why is magnesium chloride (MgCl_2) not called magnesium(II) chloride?

2.49 Some compounds are better known by their common names than by their systematic chemical names. Give the chemical formulas of the following substances: (a) dry ice, (b) table salt, (c) laughing gas, (d) marble (chalk, limestone), (e) quicklime, (f) slaked lime, (g) baking soda, (h) washing soda, (i) gypsum, (j) milk of magnesia.