

Chapter 7

CONCEPT REVIEW

Write the names of the elements represented by the following symbols.

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|----------|-----------------|-------|--------------------|
| 1. a. Cu | <u>Copper</u> | i. Ca | <u>Calcium</u> |
| b. Al | <u>Aluminum</u> | j. K | <u>Potassium</u> |
| c. C | <u>Carbon</u> | k. Mg | <u>Magnesium</u> |
| d. H | <u>Hydrogen</u> | l. Br | <u>Bromine</u> |
| e. O | <u>Oxygen</u> | m. P | <u>Phosphorous</u> |
| f. N | <u>Nitrogen</u> | n. F | <u>Fluorine</u> |
| g. Cl | <u>Chlorine</u> | o. Ne | <u>Neon</u> |
| h. Na | <u>Sodium</u> | p. Ag | <u>Silver</u> |

Write the names of the following ions.

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|------------------------|-----------------------|-----------------------|------------------|
| 2. a. Si^{4+} | <u>Silicon IV ion</u> | f. O^{2-} | <u>oxide</u> |
| b. Cu^+ | <u>Copper I ion</u> | g. S^{2-} | <u>Sulfide</u> |
| c. Co^{2+} | <u>Cobalt II ion</u> | h. NO_2^- | <u>Nitrite</u> |
| d. Li^+ | <u>Lithium ion</u> | i. CO_3^{2-} | <u>Carbonate</u> |
| e. Ag^+ | <u>Silver ion</u> | j. IO_3^- | <u>Iodate</u> |

Write the symbols and charges of the following ions.

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|----------------|-----------------------------------|--------------|--------------------------------------|
| 3. a. sodium | <u>Na^+</u> | f. phosphate | <u>PO_4^{3-}</u> |
| b. thallium(I) | <u>Tl^+</u> | g. iron(III) | <u>Fe^{3+}</u> |
| c. bromide | <u>Br^-</u> | h. sulfate | <u>SO_4^{2-}</u> |
| d. nitride | <u>N^{3-}</u> | i. cyanide | <u>CN^-</u> |
| e. ammonium | <u>NH_4^+</u> | j. hydride | <u>H^-</u> |

Write the names of the following ions.

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|------------------------|----------------------|------------------------|-----------------------|
| 4. a. Ba^{2+} | <u>Barium ion</u> | f. Sn^{2+} | <u>Tin II ion</u> |
| b. K^+ | <u>Potassium ion</u> | g. Hg^{2+} | <u>Mercury II ion</u> |
| c. Pb^{4+} | <u>Lead IV ion</u> | h. ClO_3^- | <u>Chlorate</u> |
| d. Cs^+ | <u>Cesium ion</u> | i. OH^- | <u>Hydroxide</u> |
| e. Cu^{2+} | <u>Copper II ion</u> | j. SiO_3^{2-} | <u>Silicate</u> |

Write the symbols and charges of the following ions.

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|------------------|-----------|-------------|---------------|
| 5. a. magnesium | Mg^{2+} | f. carbide | C^{4-} |
| b. manganese(II) | Mn^{2+} | g. fluoride | F^{-} |
| c. aluminum | Al^{3+} | h. acetate | CH_3COO^{-} |
| d. zinc | Zn^{2+} | i. arsenate | AsO_4^{3-} |
| e. chromium(III) | Cr^{3+} | j. nitrate | NO_3^{-} |

Write formulas for the following compounds, using the tables in Chapter 7 and the Appendix of your textbook if you need help.

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|------------------------|------------|-------------------------|-----------------|
| 6. a. zinc chloride | $ZnCl$ | i. copper(II) cyanide | $Cu(CN)_2$ |
| b. lead(IV) oxide | PbO_2 | j. hydrogen selenide | H_2Se |
| c. silver bromide | $AgBr$ | k. copper(I) nitride | Cu_3N |
| d. sodium phosphate | Na_3PO_4 | l. nickel(II) acetate | $Ni(CH_3COO)_2$ |
| e. magnesium sulfide | MgS | m. potassium arsenite | K_2AsO_3 |
| f. cobalt(II) fluoride | CoF_2 | n. nickel(II) oxalate | NiC_2O_4 |
| g. barium oxide | BaO | o. gallium(III) acetate | $Ga(CH_3COO)_3$ |
| h. calcium phosphide | Ca_3P_2 | p. ammonium chloride | NH_4Cl |

Name the following compounds.

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|----------------------|---------------------|---------------|------------------------|
| 7. a. $Pb_3(PO_4)_2$ | Lead II Phosphate | g. HgI_2 | Mercury II Iodide |
| b. $Cu(IO_3)_2$ | Copper II Iodate | h. $AgNO_3$ | Silver Nitrate |
| c. Cr_2O_3 | Chromium III Oxide | i. $CuSO_4$ | Copper II Sulfate |
| d. $Bi_2(SO_4)_3$ | Bismuth III sulfate | j. $NaCl$ | Sodium Chloride |
| e. $RbNO_3$ | Rubidium Nitrate | k. $CsClO$ | Cesium Hypochlorite |
| f. $CaTe$ | Calcium Telluride | l. $Th(OH)_4$ | Thorium (IV) Hydroxide |