

Name: _____ Date: _____ Period: _____

Elements, Ions, and Nomenclature

I. MONATOMIC IONS Write the formula for each of the following ions.

- | | |
|-----------------------|------------------------|
| a. iodide ion _____ | e. phosphide ion _____ |
| b. oxide ion _____ | f. bromide ion _____ |
| c. chloride ion _____ | g. sulfide ion _____ |
| d. nitride ion _____ | f. fluoride ion _____ |

II. IONIC COMPOUNDS

A. BINARY IONIC COMPOUNDS Write the formula for each of the following simple binary ionic compounds.

- | | |
|---------------------------|--------------------------------|
| a. lithium bromide _____ | f. copper (I) iodide _____ |
| b. sodium iodide _____ | g. mercury (II) chloride _____ |
| c. silver sulfide _____ | h. lead (II) oxide _____ |
| d. cesium oxide _____ | i. potassium oxide _____ |
| e. beryllium iodide _____ | j. aluminum fluoride _____ |

B. IONIC COMPOUNDS CONTAINING POLYATOMIC IONS Write the formula for each of the following compounds, which contain polyatomic ions. Be sure to enclose the polyatomic ion in parentheses if more than one such ion is needed to balance the oppositely charge ion(s).

- | | |
|-------------------------------|-------------------------------|
| a. tin (IV) acetate _____ | e. ammonium nitrate _____ |
| b. potassium sulfite _____ | f. copper (I) hydroxide _____ |
| c. mercury (II) sulfate _____ | g. barium sulfate _____ |
| d. calcium phosphate _____ | h. iron (II) nitrate _____ |

III. BINARY MOLECULAR COMPOUNDS Write the formula for each of the following binary compounds of nonmetallic elements.

- | | |
|--------------------------------|---------------------------------|
| a. phosphorous triiodide _____ | f. carbon dioxide _____ |
| b. silicon tetrachloride _____ | g. sulfur trioxide _____ |
| c. dinitrogen pentoxide _____ | h. carbon tetraiodide _____ |
| d. iodine monobromide _____ | i. carbon monoxide _____ |
| e. diboron trioxide _____ | j. phosphorous pentaoxide _____ |

IV. ACIDS Write the formula for each of the following acids.

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|-----------------------|---------------------------|
| a. nitrous acid _____ | e. sulfurous acid _____ |
| b. acetic acid _____ | f. hydrocyanic acid _____ |

c. hydrosulfuric acid

d. chloric acid

g. bromous acid

h. hydrobromic acid
