

## CHM1045 – Nonmetal (fixed charged) ion names (you must know)

|                 |         |                 |           |                 |         |                  |          |
|-----------------|---------|-----------------|-----------|-----------------|---------|------------------|----------|
| H <sup>-1</sup> | hydride | N <sup>-3</sup> | nitride   | O <sup>-2</sup> | oxide   | F <sup>-1</sup>  | fluoride |
|                 |         | P <sup>-3</sup> | phosphide | S <sup>-2</sup> | sulfide | Cl <sup>-1</sup> | chloride |
|                 |         |                 |           |                 |         | Br <sup>-1</sup> | bromide  |
|                 |         |                 |           |                 |         | I <sup>-1</sup>  | iodide   |

## Selected (some of the) Metal Fixed Charged Ions:

|                  |             |                  |               |
|------------------|-------------|------------------|---------------|
| Na <sup>+</sup>  | sodium ion  | K <sup>+</sup>   | potassium ion |
| Li <sup>+</sup>  | lithium ion | Mg <sup>+2</sup> | magnesium ion |
| Ca <sup>+2</sup> | calcium ion | Ba <sup>+2</sup> | barium ion    |
| Zn <sup>+2</sup> | zinc ion    | Al <sup>+3</sup> | aluminum ion  |

## Selected (some of the) Metal Variable Charged Ions:

(the Roman number is equal to the charge on the ion)

|                  |                |                  |                 |
|------------------|----------------|------------------|-----------------|
| Fe <sup>+2</sup> | iron (II) ion  | Fe <sup>+3</sup> | iron (III) ion  |
| Pb <sup>+2</sup> | lead (II) ion  | Pb <sup>+4</sup> | lead (IV) ion   |
| Cu <sup>+1</sup> | copper (I) ion | Cu <sup>+2</sup> | copper (II) ion |

## CHM1045 – Polyatomic Ions (you must know)

|   |                  |
|---|------------------|
| NH <sub>4</sub> <sup>+</sup>                              | ammonium ion     |
| ClO <sup>-</sup>  | hypochlorite ion |
| ClO <sub>2</sub> <sup>-</sup>                             | chlorite ion     |
| ClO <sub>3</sub> <sup>-</sup>                             | chlorate ion     |
| ClO <sub>4</sub> <sup>-</sup>                             | perchlorate ion  |
| NO <sub>2</sub> <sup>-</sup>                              | nitrite ion      |
| NO <sub>3</sub> <sup>-</sup>                              | nitrate ion      |
| HCO <sub>3</sub> <sup>-</sup>                             | bicarbonate ion  |
| HSO <sub>3</sub> <sup>-</sup>                             | bisulfite ion    |
| HSO <sub>4</sub> <sup>-</sup>                             | bisulfate ion    |
| OH <sup>-</sup>   | hydroxide ion    |
| CN <sup>-</sup>   | cyanide ion      |
| MnO <sub>4</sub> <sup>-</sup>                             | permanganate ion |
| C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> <sup>-</sup> | acetate ion      |
| CO <sub>3</sub> <sup>-2</sup>                             | carbonate ion    |
| SO <sub>3</sub> <sup>-2</sup>                             | sulfite ion      |
| SO <sub>4</sub> <sup>-2</sup>                             | sulfate ion      |
| PO <sub>4</sub> <sup>-3</sup>                             | phosphate ion    |