CHE 101 - Extra Practice - Ch 15b Ionic and Net Ionic Reactions

Date: _____

Strong Electrolyte	Weak Electrolyte	Nonelectrolyte
Dissociate 100%	Dissociate $< 10\%$	Do not dissociate
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Strong Acids	Weak Acids	Molecular Compounds
Strong Bases	Weak Bases	Ionic - Insoluble (s)
Ionic - Soluble (aq)		
Written as Ions	Written as Molecules	Written as Molecules

1. Classify each of the following compounds as either a (S)trong electrolyte, (W)eak electrolyte or (N)onelectrolyte.

(a) HF	1(a)
(b) NaOH	1(b)
(c) $BaCl_2$	1(c)
(d) H_2SO_4	1(d)
(e) BaCO ₃	1(e)
(f) $CaSO_4$	1(f)
(g) $\operatorname{Zn}(C_2H_3O_2)_2$	1(g)
(h) $PbCl_2$	1(h)
(i) CH_3CH_2OH	1(i)
(j) Al_2O_3	1(j)
(k) KOH	1(k)
(l) KNO ₃	1(l)
(m) AgCl	1(m)
(n) $C_6H_{12}O_6$	1(n)

Name: _____

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Molecular Equation:

- Write everything as molecules or compounds.
- Include states.
- Balance the reaction.

Total Ionic Equation:

- Write SE as ions. Include charges and states.
- Write WE and Nonelectrolytes as molecules. Include states.

Net Ionic Equation:

- Only include atoms, ions, and molecules that change states or charges.
- Do **not** include (cross out) spectator ions.
- Include states and balance the reaction.

On a separate sheet of paper write the Molecular, Ionic and Net Ionic equations for each of the following reactions.

2. potassium bromide + lead (III) nitrate \longrightarrow potassium nitrate + lead (III) bromide

3. sodium metal + hydrochloric acid \longrightarrow sodium chloride + hydrogen

4. ammonium sulfate + sodium hydroxide \longrightarrow sodium sulfate + water + nitrogen trihydride

5. hydrofluoric acid + magnesium chloride \longrightarrow magnesium fluoride + hydrochloric acid

6. aluminium nitrate + sodium hydroxide \longrightarrow aluminium hydroxide + sodium nitrate