30 Equations for Fun and Points!!

Include State Symbols and simplify to NET IONIC REACTIONS where possible (single and double replacements). Assume constant oxidation states during synthesis reactions and for all decompositions except those of chlorates.

A couple of things to think about when considering state symbols:

- When not aqueous, ionic compounds should exist in what phase of matter?
- Potentially acidic compounds become acidic when placed in water
- Small molecular compounds will have weak IMF's, so they generally will exist as.....

A couple more things to consider when writing net reactions.

- Molecules do not dissociate unless they are strong acids
- Soluble ionic compounds dissociate in solution.
- Insoluble ionic compounds do not dissociate
- Dissociation only occurs in solution.
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	 When determining state of non-metal oxides, assume room temperature. melting and boiling points. 	You may need to look up
1.	Aqueous aluminum chloride + aqueous silver nitrate	
2.	Solid nickel(III) carbonate is heated	
3.	Aluminum + aqueous zinc chloride	
4.	Chlorine + aqueous potassium iodide	
5.	Aqueous Sodium chloride + aqueous barium nitrate	

6. Lead(IV) chlorate is heated	
7. Phosphoric acid _(aq) is heated	
8. Tin(IV) hydroxide is heated	
9. Aluminum oxide is added to water	
10. Gaseous dinitrogen trioxide is bubbled through water.	
11. Dinitrogen $trioxide_{(g)}$ is combined with lead(II) oxide	
12. Gaseous diphosphorus pentoxide + lithium oxide	
13. Sodium carbonate is heated	

14.	Stibnic hydroxide is heated
15.	Sulfur dioxide gas is combined with aluminum oxide
16.	zinc is added to hydrochloric $\operatorname{acid}_{(aq)}$
17.	aluminum reacts with aqueous magnesium chloride
18.	aqueous calcium nitrate is added to aqueous sodium sulfate
19.	nitric acid is added to solid aluminum hydroxide
20.	nickelic chlorate is heated
21.	aluminum carbonate is heated

22.	muric acid decomposes
23.	chlorine gas is bubbled through aqueous sodium iodide
24.	plumbic hydroxide decomposes
25.	sodium oxide reacts with water
26.	diphosphorus pentoxid $e_{(g)}$ reacts with water
27.	nickelic oxide is added to carbon dioxide
28.	plumbic oxide reacts with diphosphorus $pentoxide_{(g)}$
29.	$sodium\ phosphate_{(aq)}\ \ reacts\ with\ magnesium\ nitrate_{(aq)}$
30.	aluminum reacts with oxygen