## : Mixed Types of Reactions

Directions: For each of the following reactions:

- 1) Identify the type of reaction (Single Replacement, combination, double replacement, decomposition, or combustion)
- 2) Complete the reaction (Put NR if no reaction takes place)
- 3) Balance it
- 4) Indicate states of matter for each substance (solid, liquid, gas, aqueous)
- 1)  $NaCl_{(aq)} + AgNO_{3(aq)} \rightarrow$
- 2)  $Fe_{(s)} + CuSO_{4(aq)} \rightarrow$
- 3)  $C_4H_{10(g)} + O_{2(g)} \rightarrow$
- 4) Ba(NO<sub>3</sub>)<sub>2(aq)</sub> + Na<sub>2</sub>SO<sub>4 (aq)</sub>  $\rightarrow$
- 5)  $AgNO_{3(aq)} + Li_{(s)} \rightarrow$
- 6)  $LiBr_{(aq)} + Cu_{(s)} \rightarrow$
- 7)  $MgS_{(s)} + NaOH \rightarrow$

- NA
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8) 
$$Hg_{(l)} + LiCl$$

9) 
$$Li_{(s)} + HgCl_{2(aq)} \rightarrow$$

10) 
$$C_3H_{8(g)}$$
 +  $O_{2(g)}$   $\rightarrow$ 

- 11) Ammonium Nitrate is added to sodium chloride
- 12) Lithium Chloride is added to Zinc Phosphate
- 13) Zinc is added to lithium chloride
- 14) Iron is added to a solution of silver nitrate

15) A solution of copper II sulfate is added to an iron nail
16) Octane (C <sub>8</sub> H <sub>18</sub> ) is burned in air
17) A solution of Tin IV sulfate is added to a solution of ammonium hydroxide
18) Sodium hydroxide is added to hydrochloric acid
19) Calcium hydroxide is added to sulfuric acid
20) Nickel is added to hydrochloric acid
21) Strontium is added to water
22) Hydrochloric acid is added to copper metal

- 23) Solid bismuth is added to a solution of barium hydroxide.
- 24) Methanol (CH<sub>3</sub>OH) is burned in air
- 25) Solid gold is added to hydrochloric acid

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