

**ANSWER THREE PARTS:** **1)** Identify the type of each equation in the blank to the left. **2)** Write the rule that applies to each in the blank beside the word equation. **3)** Complete and balance the chemical equations in the space below each.

\_\_\_\_\_ 1. Burning of magnesium in air \_\_\_\_\_

\_\_\_\_\_ 2. Decomposition of copper (II) carbonate \_\_\_\_\_

\_\_\_\_\_ 3. Neutralization of magnesium hydroxide and phosphoric acid \_\_\_\_\_

\_\_\_\_\_ 4. Addition of silver (I) to nitric acid \_\_\_\_\_

\_\_\_\_\_ 5. Decomposition of aluminum chlorate \_\_\_\_\_

\_\_\_\_\_ 6. Addition of calcium oxide to water \_\_\_\_\_

\_\_\_\_\_ 7. Addition of chlorine gas to ammonium iodide \_\_\_\_\_

\_\_\_\_\_ 8. Combustion of butane gas ( $C_4H_{10}$ ) \_\_\_\_\_

\_\_\_\_\_ 9. Reaction between mercury (II) sulfate and ammonium nitrate \_\_\_\_\_

\_\_\_\_\_ 10. Addition of aluminum to hydrochloric acid \_\_\_\_\_

\_\_\_\_\_ 11. Reaction between dinitrogen pentoxide and water \_\_\_\_\_

\_\_\_\_\_ 12. Decomposition of iron (III) hydroxide \_\_\_\_\_

\_\_\_\_\_ 13. Addition of aluminum to copper (II) sulfate \_\_\_\_\_

\_\_\_\_\_ 14. Burning propane ( $\text{C}_3\text{H}_8$ ) gas in air \_\_\_\_\_

\_\_\_\_\_ 15. Reaction between sodium sulfate and barium nitrate \_\_\_\_\_

\_\_\_\_\_ 16. Reaction between aluminum and bromine gas \_\_\_\_\_

\_\_\_\_\_ 17. Decomposition of lithium oxide \_\_\_\_\_

\_\_\_\_\_ 18. Addition of zinc metal to steam \_\_\_\_\_

\_\_\_\_\_ 19. Lead (II) nitrate reacts with potassium iodide \_\_\_\_\_

\_\_\_\_\_ 20. Glucose ( $\text{C}_6\text{H}_{12}\text{O}_6$ ) burns in air \_\_\_\_\_