

Name: _____ Date: _____ Period: _____

Chemistry Quiz

Chemical Reactions

Part I.

Identify the following reactions as synthesis, decomposition, single replacement, double replacement or combustion. The reactions may or may not be balanced. [10 pts. each]

1. $\text{CH}_3\text{OH(l)} + \text{O}_2\text{(g)} \rightarrow \text{CO}_2\text{(g)} + \text{H}_2\text{O(g)}$
2. $\text{CaCO}_3\text{(s)} \rightarrow \text{CaO(s)} + \text{CO}_2\text{(g)}$
3. $\text{Al(s)} + \text{CuCl}_2\text{(aq)} \rightarrow \text{Cu(s)} + \text{AlCl}_3\text{(aq)}$

Part II.

Balance the following reactions by filling in the blanks with the correct coefficients. Any _____, 10 pts. each]

4. _____ $\text{C}_3\text{H}_8 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
5. _____ $\text{Fe} + \text{O}_2 \rightarrow \text{Fe}_3\text{O}_4$
6. _____ $\text{Pb(NO}_3)_2 \rightarrow \text{PbO} + \text{NO}_2 + \text{O}_2$

Part III.

Short answer questions. Provide the best answer in the space provided.

7. Will the following reaction occur? [10 pts]
 $\text{Cu(s)} + \text{HCl(aq)} \rightarrow \text{Products}$
8. Consider the following reactants:
 $\text{Pb(NO}_3)_2\text{(aq)} + \text{Na}_2\text{SO}_4\text{(aq)}$
 - a. What type of reaction will take place when these reactants are mixed? [5 pts]
 - b. Predict the products of this reaction and balance this reaction. [15 pts]
 $\text{Pb(NO}_3)_2\text{(aq)} + \text{Na}_2\text{SO}_4\text{(aq)} \rightarrow$
 - c. Will this reaction occur? Explain. [10 pts]