Name _____ Date _____ Class _____

Chapter Review

Chemical Reactions

Part A. Vocabulary Review

Directions: *Match the items in Column II with the definitions in Column I. Write the letter of the correct term in the blank at the left.*

Column I	Column II
_____ 1. process that produces chemical change	a. activation energy
_____ 2. substance that slows down a chemical reaction	b. catalyst
_____ 3. reaction in which heat energy is absorbed	c. chemical reaction
_____ 4. substance that exists before a chemical reaction begins	d. endothermic reaction
_____ 5. minimum amount of energy needed in order for a reaction to begin	e. exothermic reaction
_____ 6. substance formed by a chemical reaction	f. inhibitor
_____ 7. substance that speeds up a chemical reaction	g. product
_____ 8. reaction in which heat energy is released	h. rate of reaction
_____ 9. a measure of how fast a reaction occurs	i. reactant

Part B. Concept Review

Directions: *In the space before each equation, write a* **B** *if the equation is balanced or a* **U** *if the equation is unbalanced.*

_____ 1. $MgCO_3 + 2HCl \rightarrow MgCl_2 + H_2CO_3$

_____ 2. $2H_2 + O_2 \rightarrow H_2O$

_____ 3. $CaCl_2 \rightarrow 2Ca + Cl_2$

_____ 4. $Zn + 2HCl \rightarrow ZnCl_2 + H_2$

Directions: *In the space at the left, write the letter of the answer that best completes the statement or answers the question.*

_____ 5. Evidence that a chemical change has occurred includes a _____.
- a. change in state
- b. change in size
- c. change in shape
- d. change in color

_____ 6. An oven's high temperature speeds up chemical reactions because heat _____.
- a. lowers the activation energy
- b. activates catalysts
- c. makes more molecules collide with each other
- d. reduces the particle size of the reactants

Chapter Review (continued)

_____ 7. You can slow down the rate of a reaction by _____.
- **a.** increasing concentration
- **b.** increasing temperature
- **c.** decreasing particle size
- **d.** adding an inhibitor

_____ 8. Which of the following is *not* an example of an exothermic reaction?
- **a.** the splitting of water into hydrogen and oxygen
- **b.** fireworks exploding
- **c.** fish that emit light
- **d.** propane and oxygen changing into carbon dioxide and water

_____ 9. In an exothermic reaction, heat is _____.
- **a.** absorbed
- **b.** conserved
- **c.** released
- **d.** destroyed

_____ 10. Activation energy is necessary for a chemical reaction to occur because _____.
- **a.** breaking bonds requires energy
- **b.** some reactions happen at cold temperatures
- **c.** all reactions are endothermic
- **d.** forming bonds requires energy

_____ 11. A chemical that keeps food from spoiling is an example of _____.
- **a.** a catalyst
- **b.** an enzyme
- **c.** a reactant
- **d.** an inhibitor

_____ 12. Presence of a catalyst _____.
- **a.** stops a reaction
- **b.** raises the activation energy needed
- **c.** slows down a reaction
- **d.** reduces the activation energy needed

_____ 13. To check whether an equation is balanced, _____.
- **a.** add the number of reactants to the number of products
- **b.** make sure the masses of the reactants and products are the same
- **c.** count the number of each type of atom on each side
- **d.** check to see if the reaction is endothermic or exothermic

_____ 14. Energy is usually only shown with the products in an equation for _____.
- **a.** an endothermic reaction
- **b.** a synthesis reaction
- **c.** an exothermic reaction
- **d.** activation energy

_____ 15. The only balanced equation shown is _____.
- **a.** $H_2 + O_2 \rightarrow H_2O$
- **b.** $AgNO_3 + NaI \rightarrow AgI + NaNO_3$
- **c.** $Ag + H_2S \rightarrow Ag_2S + H_2$
- **d.** $Na + Cl_2 \rightarrow NaCl$

Assessment