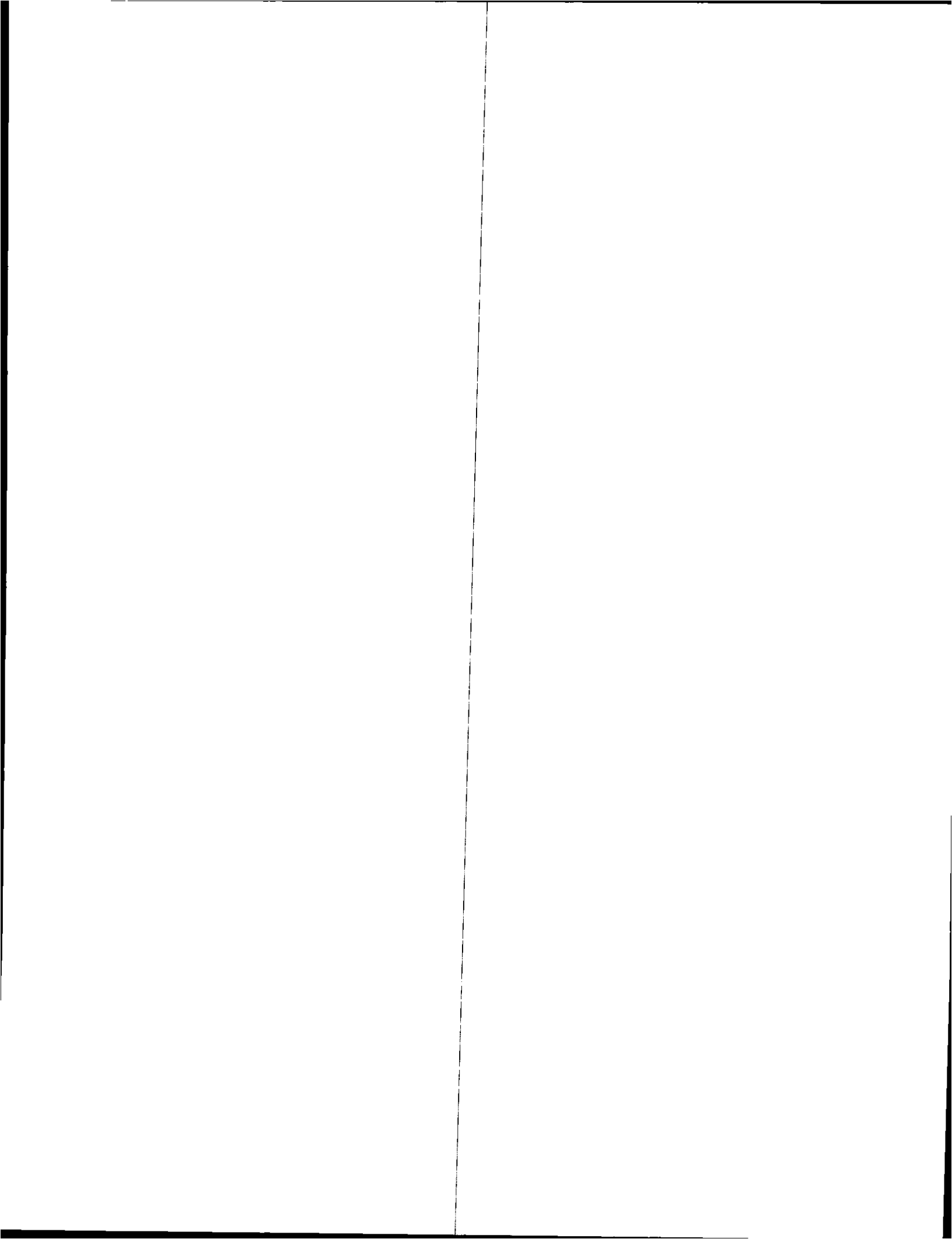


Ch. 6 Review

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

- _____ 1. A change in the color of a solution is a sign that
- a chemical change is taking place.
 - a physical change has just occurred.
 - oxygen is present.
 - organic chemicals are present.
- _____ 2. A substance that undergoes a change in a chemical reaction is
- a product.
 - a chemical.
 - a reactant.
 - an enzyme.
- _____ 3. What happens in a chemical reaction?
- Atoms are destroyed.
 - Atoms are created.
 - Molecules are destroyed.
 - Atoms are rearranged.
- _____ 4. In an exothermic reaction, energy is released from
- the reactants to the surroundings.
 - the surroundings to the reactants.
 - one reactant to another.
 - the container to the chemicals.
- _____ 5. Chemical energy is energy that is
- added to a reaction in the form of heat.
 - present within the bonds of compounds.
 - caused by the movement of electricity.
 - released only when oxygen is present.
- _____ 6. The energy source in photosynthesis is
- light energy.
 - chemical energy.
 - heat energy.
 - kinetic energy.
- _____ 7. The product of the synthesis reaction between sodium and chlorine gas is
- polyethylene.
 - carbon dioxide.
 - sodium chloride.
 - copper (II) chloride.
- _____ 8. When methane burns in the presence of oxygen, the products are
- carbon dioxide and water.
 - hydrochloric acid and water.
 - soot and water.
 - simple sugar and oxygen.
- _____ 9. When water is broken down by electrolysis, the products are
- water and carbon dioxide.
 - hydrogen and oxygen ions.
 - hydrogen gas and oxygen gas.
 - oxygen and methane.
- _____ 10. A chemical equation is balanced by changing or adding
- chemical symbols.
 - subscripts.
 - coefficients.
 - reactants.
- _____ 11. A balanced chemical equation shows the proportions of reactants and products necessary for
- the reaction to occur.
 - mass to be conserved.
 - energy use to be minimized.
 - electrolysis to occur.
- _____ 12. In the reaction $2\text{H}_2\text{O}_2 \rightarrow 2\text{H}_2\text{O} + \text{O}_2$, if you start with 4 mol of H_2O_2 , how many moles of O_2 will you end up with?
- 4 mol
 - 3 mol
 - 2 mol
 - 1 mol
- _____ 13. In a balanced chemical reaction, the total mass of the products always equals the
- molar mass of the reactants.
 - atomic mass of the reactants.
 - total mass of the reactants.
 - proportional masses of the reactants.

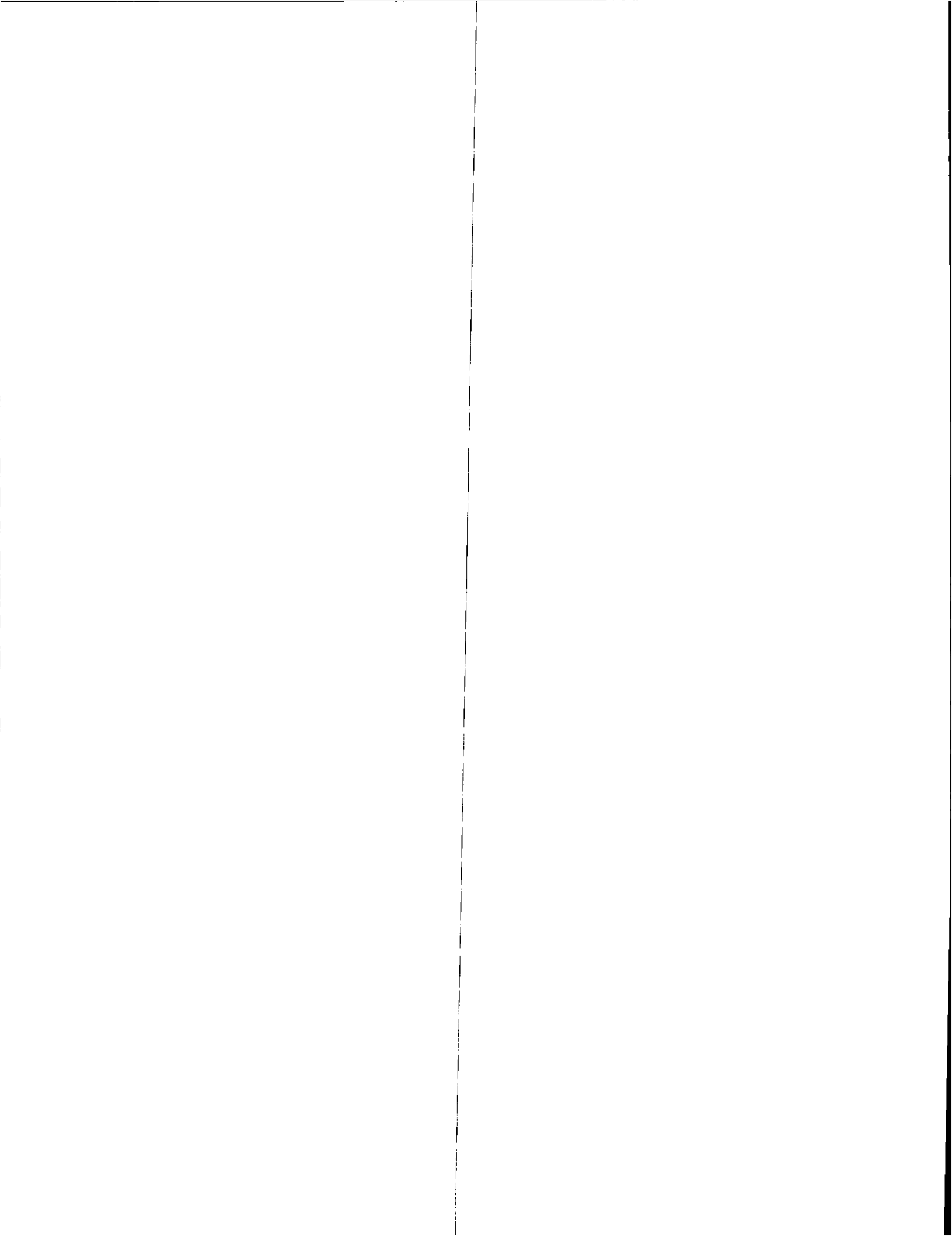


Name: _____

14. Which of the following factors may speed up a chemical reaction?
- a. smaller surface area.
 - b. stirring.
 - c. higher temperature.
 - d. all of the above.
15. An enzyme is a special kind of catalyst that works to
- a. speed up a specific biological reaction.
 - b. break down chemical elements.
 - c. slow down a chemical reaction.
 - d. maintain the correct temperature for a reaction.

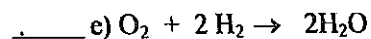
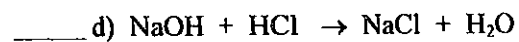
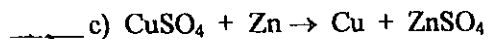
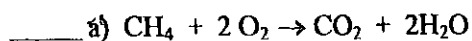
Completion*Complete each sentence or statement.*

16. When bread rises, this is a sign that a chemical reaction is producing (a gas an odor).
17. A change of color is a sign that a (chemical change) physical change is taking place.
18. The changes that are visible during a chemical reaction are signs that the (atoms protons) in the reactants have been rearranged.
19. In a chemical reaction, atoms are (rearranged, doubled) but they are not created or destroyed.
20. A chemical reaction that transfers energy from the reactants to the surroundings is referred to as (endothermic, exothermic).
21. Photosynthesis is an example of a(n) (endothermic, exothermic) chemical reaction in which plants use sunlight to make glucose and oxygen.
22. In a(n) (decomposition, synthesis) reaction, the reactants are broken down into other substances.
23. In a combustion reaction, (nitrogen, oxygen) must be present for the reactants to burn.
24. Aluminum undergoes a single-displacement reaction with copper (II) sulfate provided that aluminum is (less, more) reactive than copper.
25. A catalyst that slows a reaction is called a(n) (enzyme, inhibitor)



essay

26. 16. Identify the following as being synthesis (S), decomposition (D), single replacement (SR), double replacement (DR) or combustion.



27. What does it mean to say that chemical reactions obey the law of conservation?

28. List three things that are evidence that a chemical reaction has taken place.

29. Why is it incorrect to balance a chemical equation by changing the subscripts? Explain.

30. List three forms of energy that might be absorbed or released during a chemical reaction.

