

Test-Taking Tip

As you briefly scan the questions, mark those that may require pure guesswork on your part and save them for last. (Do not write in this book.) Use whatever time you have left for those questions to eliminate as many answers as possible through reasoning.

Questions 1–3 Each of the lettered choices below refers to the following numbered statements. Select the best lettered choice. A choice may be used once, more than once, or not at all.

- | | |
|---------------|---------------|
| (A) Cohesion | (D) Reactants |
| (B) Adhesion | (E) Products |
| (C) Catalysts | |

1. An attraction between different substances
2. Lower a chemical reaction's activation energy
3. The elements or compounds that enter into a chemical reaction

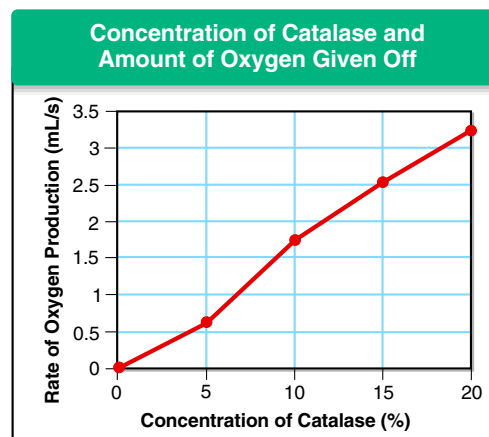
Directions: Choose the letter that best answers the question or completes the statement.

4. Which one of the following is NOT an organic molecule found in living organisms?
(A) protein (D) sodium chloride
(B) nucleic acid (E) lipid
(C) carbohydrate
5. Which combination of particle and charge is correct?
(A) proton: positively charged
(B) electron: positively charged
(C) neutron: negatively charged
(D) proton: negatively charged
(E) electron: no charge
6. In which of the following ways do isotopes of the same element differ?
(A) in number of neutrons only
(B) in number of protons only
(C) in numbers of neutrons and protons
(D) in number of protons and in mass
(E) in number of neutrons and in mass
7. Which of the following molecules is made up of glycerol and fatty acids?
(A) sugars (D) nucleic acids
(B) starches (E) proteins
(C) lipids

8. Nucleotides consist of a phosphate group, a nitrogenous base, and a
(A) fatty acid. (D) 5-carbon sugar.
(B) starch. (E) 6-carbon sugar.
(C) lipid.

Questions 9–10 Study the graph to answer the questions that follow.

The enzyme catalase speeds up the chemical reaction that changes hydrogen peroxide into oxygen and water. The amount of oxygen given off is an indication of the rate of the reaction.



9. Based on the graph, what can you conclude about the relationship between enzyme concentration and reaction rate?
(A) Reaction rate decreases with increasing enzyme concentration.
(B) Reaction rate increases with decreasing enzyme concentration.
(C) Reaction rate increases with increasing enzyme concentration.
(D) The variables are indirectly proportional.
(E) The variables are not related.
10. Which concentration of catalase will produce the fastest reaction rate?
(A) 0% (D) 15%
(B) 5% (E) 20%
(C) 10%

Standardized Test Prep

- | | | |
|------|------|-------|
| 1. B | 5. A | 9. C |
| 2. C | 6. A | 10. E |
| 3. D | 7. C | |
| 4. D | 8. D | |

Writing in Science

Students' paragraphs may vary. All students, though, should explain that a polymer is a macromolecule made up of monomers joined together. Students should also briefly describe the four groups of organic compounds found in living things: carbohydrates, lipids, nucleic acids, and proteins. For each of these groups, students should describe the composition and list important functions in the human body.

Performance-Based Assessment

A good speech will be both imaginative and scientifically accurate. Students should describe these events: being a part of an O_2 molecule, being in a polar water molecule with two hydrogen atoms, experiencing the decomposition of a water molecule into a hydrogen ion and a hydroxide ion, and being in the blood when carbon dioxide and water react and produce carbonic acid. Students should demonstrate knowledge of chemical compounds, chemical bonds, solutions, and chemical reactions.

Go online

PHSchool.com

Your students can independently test their knowledge of the chapter and print out their test results for your files.