Multiple-choice test
Chapter 5: Enzymes

Click on the correct answer to each question.

1 Which statement about enzymes is true?

A All enzymes are proteins.

B All enzymes have an optimum temperature of about 38 °C.

C Enzymes are denatured at low temperatures.

D Enzymes are killed at high temperatures.

2 Which statement is **not** true for **all** enzymes?

A Enzymes break down large molecules to small ones.

B Enzymes remain unchanged at the end of a reaction.

C Enzymes are affected by pH.

D Enzymes catalyse reactions.

3 Where are enzymes found?

A only in the digestive system

B in animals but not in plants

C in all living cells

D in plants but not in animals

4 Some catalase was added to some hydrogen peroxide. Bubbles of oxygen were given off. After a while, the reaction stopped. Why did the reaction stop?

A The catalase was all used up.

B The catalase was denatured by the reaction.

C The hydrogen peroxide was all broken down.

D The oxygen given off inhibited the catalase.

5 Which type of enzyme digests starch?

A catalase

B carbohydrase

C lipase

D protease

S

6 A student investigated the effect of temperature on the rate of activity of a protease enzyme.
Which variable should she change, and which should she keep constant?

	Change	Keep constant
A	enzyme concentration	substrate concentration
B	substrate concentration	temperature
C	temperature	pH
D	pH	enzyme concentration

7 Catalase catalyses a reaction in which hydrogen peroxide is broken down to water and oxygen.
What are the substrate and product in this reaction?

	Substrate	Product
A	catalase	hydrogen peroxide
B	hydrogen peroxide	water and oxygen
C	oxygen and water	catalase
D	water	oxygen

8 What is an active site?

A a gland that secretes a particular enzyme

B a part of an enzyme molecule into which a substrate molecules fits

C a part of the substrate to which an enzyme molecule attaches

D a place in the body where an enzyme works

9 Why does the rate of an enzyme-catalysed reaction increase as temperature is raised from 0–40 °C?

A The enzyme and substrate molecules have more kinetic energy, so they collide more frequently.

B The shape of the active site changes so that the substrate fits into it better.

C Enzymes are denatured at low temperatures.

D The shape of the substrate changes at high temperatures.

10 Why does pH affect enzyme activity?

A Changes in pH affect the shape of the active site.

B Changes in pH affect the frequency of collisions between enzyme and substrate.

C Changes in pH affect enzyme concentration.

D Changes in pH affect the enzyme's optimum temperature.