

IGCSE Biology

Name: _____ Score: _____

1. An enzyme is a biological catalyst, which means it:
 - ☐ slows reactions down
 - ☐ is used up in the reaction
 - ☐ is a type of sugar
 - ☐ speeds up a reaction without being used up
2. The temperature at which an enzyme works fastest is its:
 - ☐ boiling point
 - ☐ freezing point
 - ☐ optimum temperature
 - ☐ denaturing point
3. Enzymes are made of:
 - ☐ protein
 - ☐ glucose
 - ☐ starch
 - ☐ fat
4. If an enzyme gets too hot, it:
 - ☐ speeds up forever
 - ☐ denatures and stops working
 - ☐ turns into a sugar
 - ☐ works at the same rate
5. The part of an enzyme where the substrate binds is the:
 - ☐ product
 - ☐ membrane
 - ☐ active site
 - ☐ nucleus
6. An enzyme is tested at 20, 30, 40 and 50 °C. Its measured rates are 2, 5, 8 and 1 arbitrary units respectively. Which tested temperature gives the highest rate, in °C?

7. Each enzyme can break down many different types of substrate.

☐ True ☐ False

8. A denatured enzyme can recover its shape once it cools down.

☐ True ☐ False

9. The model where only a matching substrate fits an enzyme is the _____-and-key model.

10. Moving the pH far from an enzyme's optimum will:

☐ slow or stop the enzyme

☐ turn it into a substrate

☐ always speed it up

☐ have no effect

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1. speeds up a reaction without being used up

Catalysts speed up reactions and are reusable.

2. optimum temperature

The optimum is where the rate is highest.

3. protein

Enzymes are proteins.

4. denatures and stops working

Excessive heating can change the active-site shape, so the substrate no longer fits effectively.

5. active site

The substrate fits into the active site.

6. 40

The largest measured rate is 8 at 40 °C. This is the best tested temperature; the exact optimum could lie between tested temperatures.

7. False

False. Each enzyme is specific: only a substrate with a complementary shape fits its active site.

8. False

Denaturing is permanent; cooling does not restore the active site.

9. lock

Lock-and-key explains enzyme specificity.

10. slow or stop the enzyme

The wrong pH changes the active site shape.