5. Enzymes

Starter Quiz · 课前小测

IGCSE Biology Name: _____ Score: _____

1. An enzyme is a biological catalyst, which means it:
   - ☐ speeds up a reaction without being used up
   - ☐ is used up in the reaction
   - ☐ slows reactions down
   - ☐ is a type of sugar
2. The temperature at which an enzyme works fastest is its:
   - ☐ optimum temperature
   - ☐ denaturing point
   - ☐ freezing point
   - ☐ boiling point
3. Enzymes are made of:
   - ☐ protein
   - ☐ starch
   - ☐ fat
   - ☐ glucose
4. If an enzyme gets too hot, it:
   - ☐ denatures and stops working
   - ☐ speeds up forever
   - ☐ turns into a sugar
   - ☐ works at the same rate
5. The part of an enzyme where the substrate binds is the:
   - ☐ active site
   - ☐ nucleus
   - ☐ membrane
   - ☐ product
6. The optimum temperature of most human enzymes is about how many °C?

   _____

7. Each enzyme is specific to one type of substrate.

   ☐ True ☐ False

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

   _____

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

   ☐ True ☐ False

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

    ☐ slow or stop the enzyme

    ☐ always speed it up

    ☐ have no effect

    ☐ turn it into a substrate

IGCSE Biology

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**

   High temperature denatures the enzyme, destroying its active site.

5. **active site**

   The substrate fits into the active site.

6. **37**

   Human body temperature is about 37 °C.

7. **True**

   Only a matching substrate fits the active site.

8. **lock**

   Lock-and-key explains enzyme specificity.

9. **False**

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

10. **slow or stop the enzyme**

    The wrong pH changes the active site shape.