5 Temperature and pH – Part 2 — Answers

Answers

Work through these after trying the questions yourself.

5.6 About 37 °C.
5.7 The molecules have more kinetic energy, so they move faster and collide more often.
5.8 The active site has changed shape, so the substrate no longer fits and the enzyme stops working.
5.9 No — it is permanent.
5.10 Too high a temperature; the wrong pH (too high or too low).

5.11 (a) At 10 °C the rate is **low** — the molecules have less kinetic energy, so they collide less often. (b) At 70 °C the rate is **very low or zero** — the enzyme has been **denatured** (the active site has lost its shape, so the substrate no longer fits).