Answers

- 1) High specific; each enzyme acts only on a specific substrate.
 - Most are globular proteins and are coded for by DNA.
 - Can be used over and over again.
 - They are required in small amounts.
 - Lowers the activation energy needed for a reaction to take place.
 - Does not alter the nature or properties of the end products of the reaction.

- The catalyzed reaction is reversible; the same enzyme usually catalyzes both the forward and reverse of a reversible reaction.

-Speed up the rate of reaction without themselves being used up or permanently altered. - Enzymes' activity can be affected by factors such as temperature, pH, inhibitor, substrate concentration, and enzyme concentration.

(any 3 relevant points are accepted)

- 2) Cleft or depression n the surface of an enzyme molecule to which a substrate molecule attaches in order for a reaction to take place.
- 3) The shape and structure of the active site change due to the breaking of bonds within 4) It is the attachment of the substrate molecule to the enzyme CO.UK
 5) Activation
- 5) Activation energy is the minim rt a reaction.
- 6) Lock and ke
- In the lock and key mechanism, the shape of the active site is complementary and fits well with the substrate whereas, in the induced-fit mechanism, the active site alters itself to fit with the substrate.
- 8) pH2, pH 7.8. The pH for these two enzymes differs because both the enzymes need to work in two different environments with different pH ranges.
- 9) A change in pH affects the rate of enzymatic reaction by changing the charges at the active site and on the substrate so that they cannot fit each other anymore / changing the shape of the enzymes because H+ ions affect the ionic bonds that maintain the shape of the enzymes.

10) Ionic bonds