Chapter 5

Enzymes

01. 0610_p20_qp_30 Q: 4

Fig. 4.1 shows a model of how an enzyme works.

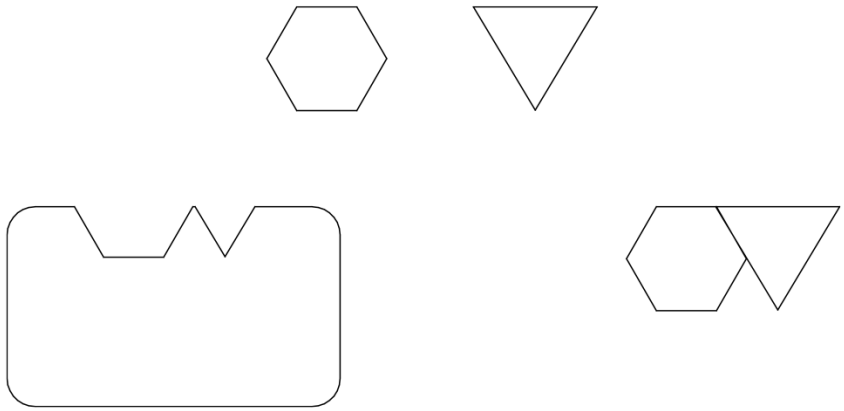


Fig. 4.1

(a) Label the enzyme molecule on Fig. 4.1.

[1]

(b) Enzymes are biological catalysts.

(i) Explain what is meant by the term *catalyst*.

.....

.....

.....

..... [2]

(ii) State why enzymes are important in organisms.

.....

..... [1]

[Total: 4]

02. 0610_m18_qp_32 Q: 6

This question is about enzymes.

Choose words from the list to complete the sentences.

Each word may be used once, more than once, or not at all.

amino acids	**amylase**	**bacteria**	**biological**
fatty acids	**glucose**	**humidity**	**lipase**
living	**protease**	**salivary**	**temperature**

All enzymes are proteins. Proteins are made of ..... .

An enzyme acts as a ..... catalyst.

In order to work rapidly, enzymes need the correct ..... and pH.

An example of an enzyme that works in the acidic conditions in the stomach is

..... .

Acidic conditions will kill many of the ..... present in food.

Salivary ..... stops working in acidic conditions.

Fats are broken down by ..... .

[7]

[Total: 7]

03. 0610_w16_qp_33 Q: 5

(a) The body uses enzymes to digest food.

Define the term *enzyme*.

.....

.....

.....

.....[2]

(b) Give **one** example of a digestive enzyme and the substrate it acts on.

enzyme .....

substrate .....

[1]

(c) Suggest why the human digestive system must make many different enzymes.

.....

.....

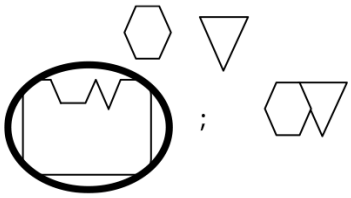
.....

.....[2]

[Total: 5]

01. 0610_p20_MS_30 Q: 4

(a)



allow: labels on enzyme or on label line to enzyme [1]

(b) (i) speeds up / increases the rate of a chemical reaction;
is not changed by the reaction / owtte; [2]

(ii) without enzymes reactions would be too slow to sustain life / owtte; [1]

02. 0610_m18_MS_32 Q: 6

	Answer	Mark	Partial Marks
	amino acids ; biological ; temperature ; protease ; bacteria ; amylase ; lipase ;	7	

03. 0610_w16_MS_33 Q: 5

	Answer	Mark	Partial Marks
(a)	biological catalyst; made of protein;	2	
(b)	amylase – starch; protease / pepsin – protein; lipase – fats;	1	
(c)	(enzymes) are specific / have a complementary shape; there are many different, foods / nutrients / substrates, to break down;	2	
		Total: 5	