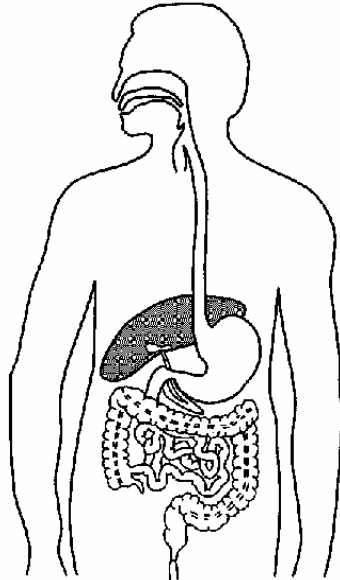


Enzymes

1. The diagram shows the digestive system.



(a) Complete the following sentences about digestive enzymes.

(i) Amylase works in the where it is involved in the digestion of to

(3)

(ii) Lipase works in the where it is involved in the digestion of to

(3)

(b) Which gland produces:

(i) amylase;

(1)

(ii) lipase?

(1)

(Total 8 marks)

2. Enzymes have many uses in the home and in industry.

(a) Which type of organism is used to produce these enzymes?

Tick (✓) **one** box.

Mammals

Microorganisms

Plants

(1)

Unit B2, B2.5.2

- (b) Babies may have difficulty digesting proteins in their food. Baby food manufacturers use enzymes to 'pre-digest' the protein in baby food to overcome this difficulty.

Use words from the box to complete the sentences.

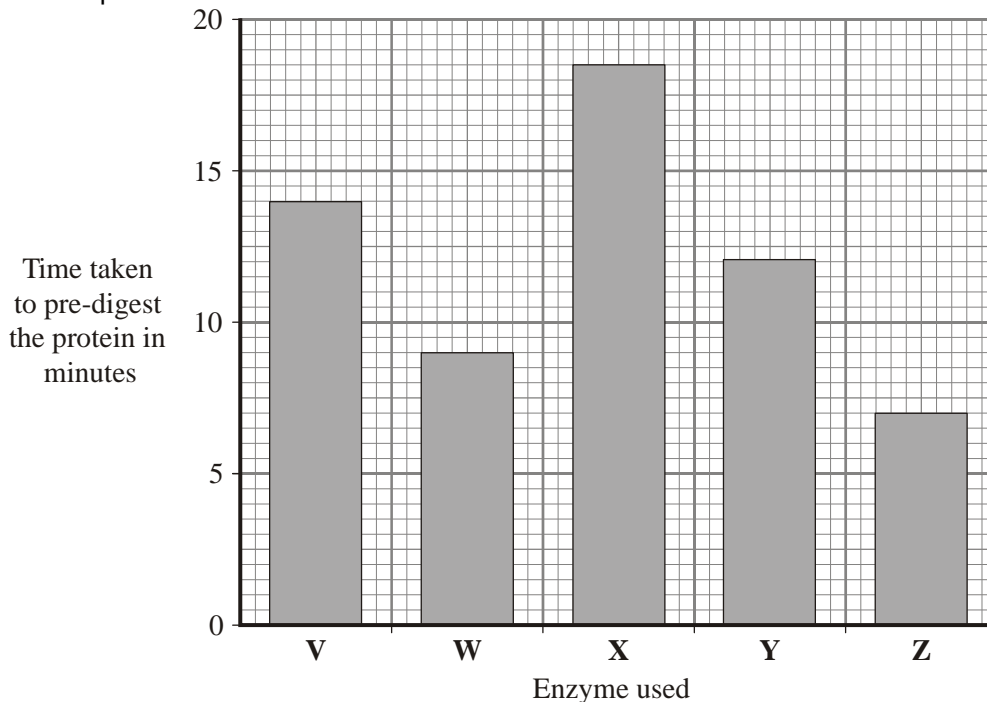
amino acids	amylases	proteases	sugars
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- (i) Proteins are 'pre-digested' using enzymes called (1)
- (ii) This pre-digestion produces (1)

- (c) A baby food manufacturer uses enzyme **V** to pre-digest protein. He tries four new enzymes, **W**, **X**, **Y** and **Z**, to see if he can reduce the time taken to pre-digest the protein.

The graph shows the time taken for the enzymes to completely pre-digest the protein.

The manufacturer uses the same concentration of enzyme and the same mass of protein in each experiment.



- (i) How long did it take enzyme **V** to pre-digest the protein? minutes (1)
- (ii) Which enzyme would you advise the baby food manufacturer to use? Draw a ring around your answer.

enzyme **V** enzyme **W** enzyme **X** enzyme **Y** enzyme **Z**

Give a reason for your answer.

.....

.....

(2)

- (iii) Give **two** factors which should be controlled in the baby food manufacturer's investigations.

Tick (✓) **two** boxes.

Oxygen concentration

Temperature

Light intensity

pH

(2)
(Total 8 marks)