1. ____ Why does chewing food speed up digestion?

A Bacteria in the food are killed.

B Food is mixed with protease.

~~C The surface area of the food is increased.~~

D The taste of food is improved.

2. ____ Why is digestion necessary?

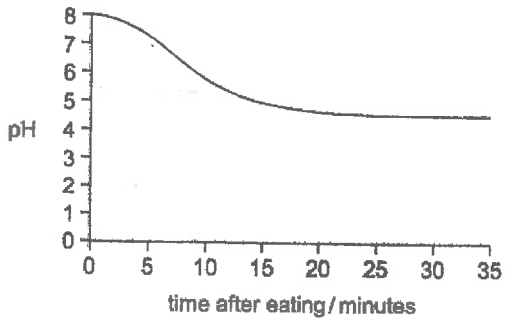
A to destroy harmful microorganisms in the food

~~B to make food pass easily through the alimentary canal~~

C to make nutrient molecules small enough to be absorbed

D to release the energy from nutrients

3. ____ The graph shows pH changes in the mouth after eating.



Why is it a good idea to brush teeth after eating?

A Acidic conditions help bacteria to grow.

B Acids dissolve tooth enamel.

C Alkaline conditions help bacteria to grow.

~~D Alkalis dissolve tooth enamel.~~

Name: _____

4. ____ How do bile salts help with digestion?

A They break large droplets of fat into smaller ones.

B They contain lipase, which digests fats.

~~C They kill bacteria in the food.~~

D They neutralise the acidic contents of the stomach.

5. ____ What is the name for the muscular contractions that move food through the alimentary canal?

A assimilation

B digestion

C peristalsis

D sphincter muscle

6. ____ Which component of pancreatic juice provides a suitable pH for the enzymes to work in the duodenum?

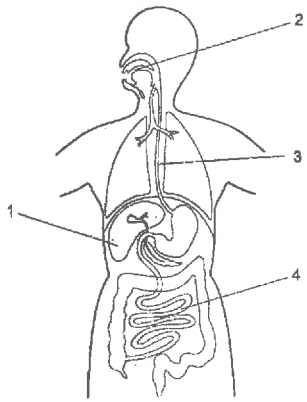
A mucus

B lipase

C protease

D sodium hydrogencarbonate

7. ____ The diagram shows the human alimentary canal.



In which parts does peristalsis take place?

A 1 and 2 B 2 and 3 C 3 and 4 D 4 and 1

igcse biology
digestion unit
summative

8. ____ Which chemical reaction takes place in the stomach?

A Proteins are digested by protease.

B Proteins are digested into fatty acids.

C Starch is digested into amino acids.

~~D Starch is digested by lipase.~~

9. ____ Small molecules are used as the basic units in the synthesis of large food molecules.

Which statement is correct?

A Amino acids are basic units of carbohydrates.

~~B Fatty acids are basic units of glycogen.~~

C Glycerol is a basic unit of oils

D Simple sugar is a basic unit of protein.

10. ____ Dietary fibre passes through several structures after leaving the stomach.

In which order does the dietary fibre pass through these structures?

A duodenum → ileum → colon → rectum

B duodenum → ileum → rectum → colon

~~C ileum → duodenum → colon → rectum~~

D ileum → duodenum → rectum → colon

11. ____ Which is a role of the microvilli on the surface of villi?

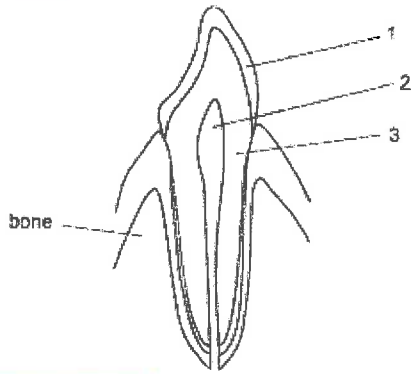
~~A to destroy bacteria~~

B to increase the surface area for absorption

C to move food through the alimentary canal

D to secrete hydrochloric acid

12. ____ The diagram shows a tooth.



What are the parts labelled 1, 2 and 3?

	1	2	3
A	dentine	enamel	pulp
B	enamel	dentine	pulp
C	enamel	pulp	dentine
D	pulp	dentine	enamel

13. Fig. 6.1 shows a diagram of the alimentary canal.

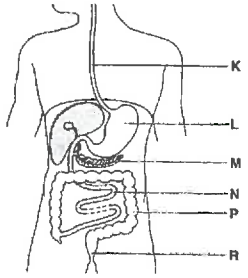


Fig. 6.1

(a) Use the letters on Fig. 6.1 to identify:

the colon, ...

the pancreas, ...

the stomach. .....

(i) On Fig. 6.1 draw a line to show where bile is made. Label it **X**. [1]

(ii) State the action that bile has on fats in the Small intestine.

.....

.....

.....

.....

..... [1]

14.

Label Fig. 3.1 using the following terms:

Anus **Liver** **Gall bladder** **Small intestine** **Large intestine**
Stomach **Pancreas** **Salivary gland** **Esophagus**

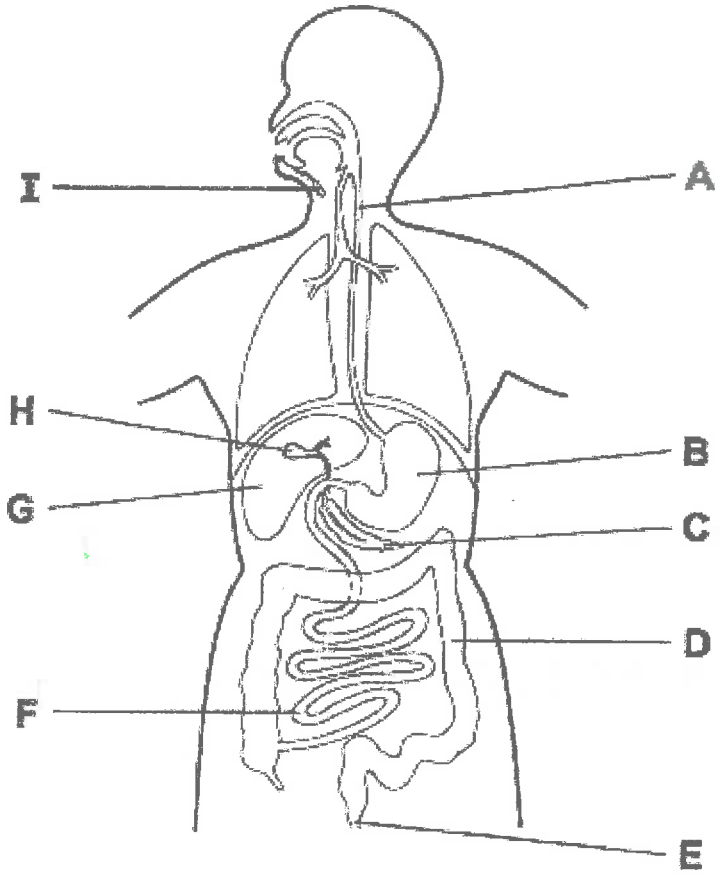


Fig. 3.1

[9]

15. Enzyme activity is vital in human digestion. Complete Table 4.1.

Table 4.1

substrate	enzyme	product
fat	.....	glycerol + ...
.....	protease	.....
.....	.....	maltose

[6]

Use the words to fill in the boxes directly above them.

protein starch | amylase lipase | amino acids fatty acids

14. Saliva contains an enzyme that digests starch.

A group of students used saliva to investigate the digestion of starch at different pH values.

Their results are shown in Fig. 3.1.

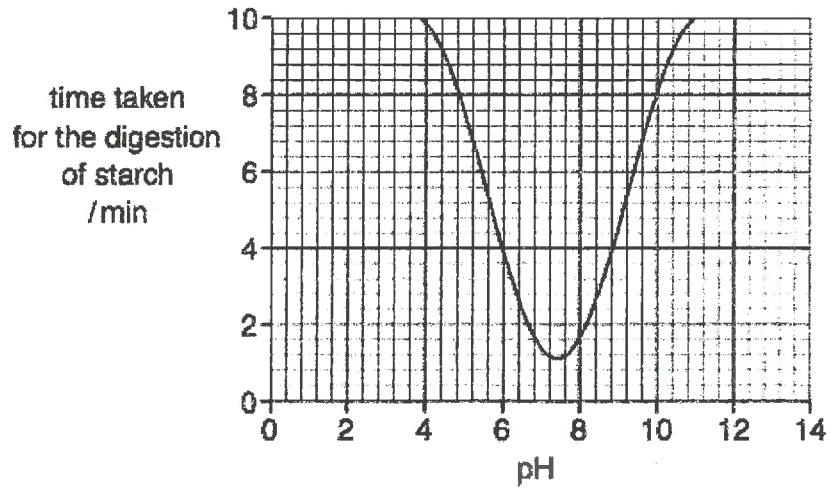


Fig. 3.1

(i) At which pH does the enzyme in saliva work the fastest?

..... [1]

(ii) How long does it take for the starch to be digested at pH 6?

..... min [1]

(iii) The stomach produces hydrochloric acid.

Use the graph to suggest why the enzyme found in saliva does not work inside the stomach.

.....

.....

.....

.....

.....[2]

(iv) Name the enzyme that digests starch and state where this enzyme is produced.

name of enzyme .....

where produced .....
[2]

(c) Name one factor, other than pH, which can change the rate of enzyme activity.

.....[1]

17. State one function for each of these parts of the alimentary canal.

colon .....

.....

pancreas .....

.....

stomach .....

.....

[3]

18. Explain the roles of chewing and of enzymes in the process of digestion.

.....

.....

.....

.....

..... [4]

19.(a) Name the organ that makes bile.

..... [1]

(b) State where bile is stored until it is released into the small intestine.

..... [1]

(c) Name the organ that produces lipase and is joined to the small intestine.

..... [1]

20. Suggest and explain the effects on a person of a diet with: choose one:

(i) too little fibre,

.....

.....

.....

..... [2]

(ii) too much animal fat.

.....

.....

.....

..... [2]

21. Digested food is absorbed as it passes along the small intestine.

Explain how this absorption takes place.

.....

.....

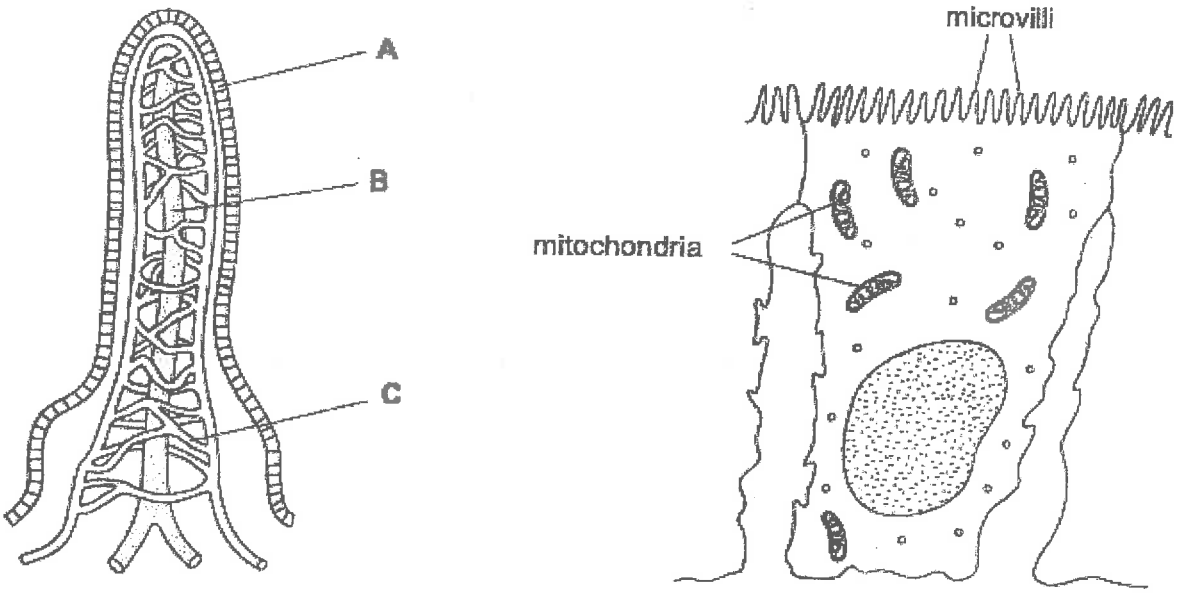
.....

.....

.....

..... [3]

22. Fig. 6.1 shows a villus from the small intestine of a mammal and an enlarged view of a cell from region A.



magnification ×110

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Fig. 6.1

(a) Name regions A, B and C.

A .....

B .....

C ..... [3]

(b) Explain why the cells from A have many microvilli and mitochondria.

.....

.....

..... [3]