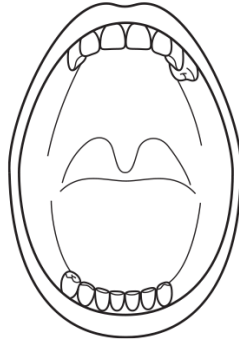


7.4. CHEMICAL DIGESTION

01. 0610_s17_qp_23 Q: 13

The diagram shows a person's teeth. Some of their teeth are missing.



What would the person find difficult?

- A biting apples
- B drinking water
- C grinding meat
- D tearing dry bread

7.4 Chemical digestion

02. 0610_m22_qp_22 Q: 14

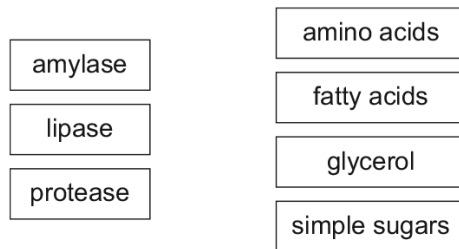
In which test-tube will the breakdown of fat be fastest?

A **B** **C** **D**

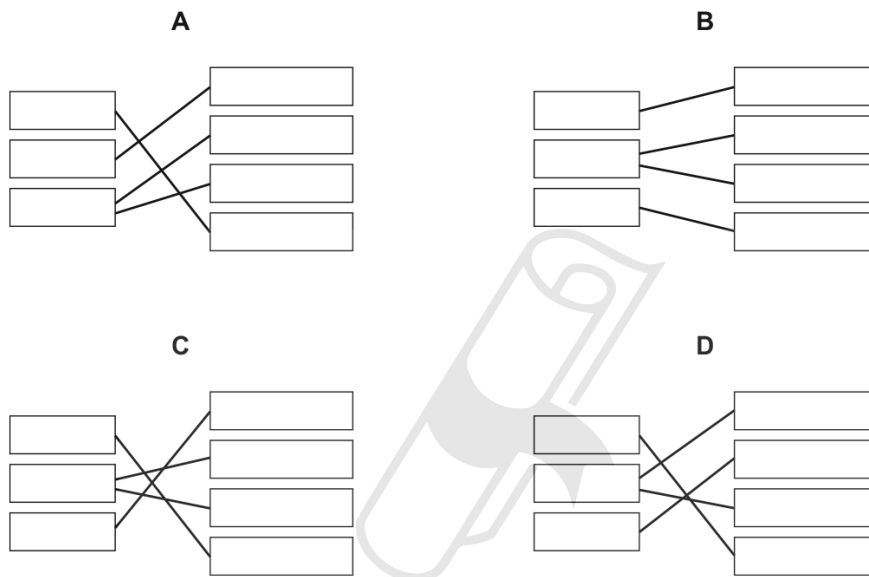
milk, lipase and bile milk and lipase milk and bile milk, boiled lipase and bile

03. 0610_m21_qp_22 Q: 16

The diagram shows enzymes and the products of the reactions they catalyse.



Which diagram matches the enzymes with the correct products?



04. 0610_s21_qp_21 Q: 16

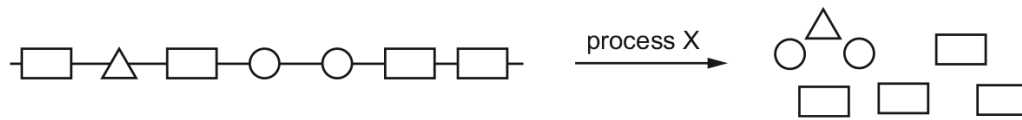
What are the products when proteins are broken down?

- A amino acids
- B fatty acids
- C glycerol
- D simple sugars

7.4. CHEMICAL DIGESTION

05. 0610_w21_qp_21 Q: 15

The diagram shows a large food molecule changing into smaller molecules.



What is process X?

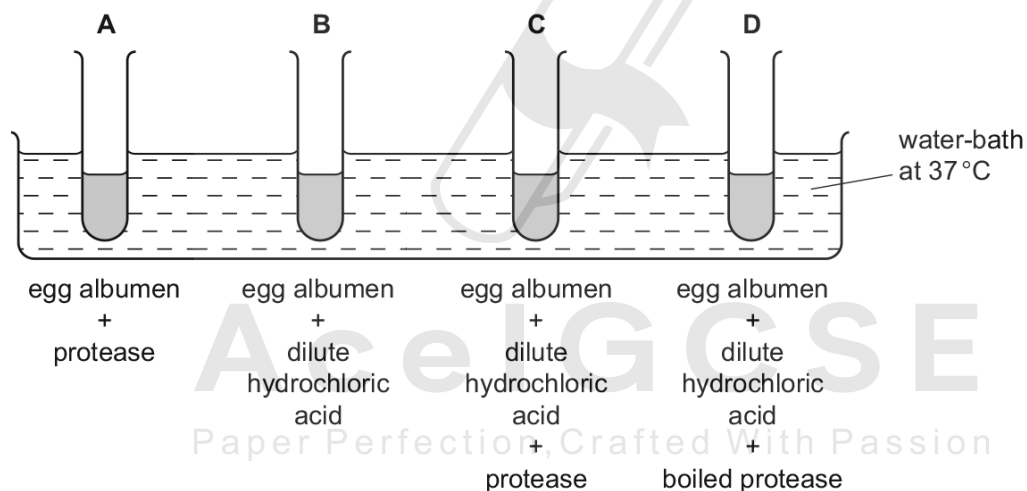
- A absorption
- B chewing
- C digestion
- D secretion

06. 0610_m20_qp_22 Q: 10

The diagram shows an experiment on the digestion of the protein in egg albumen by protease.

The protease was taken from a human stomach.

In which test-tube will the protein be digested most quickly?



07. 0610_m20_qp_22 Q: 16

Which food group is chemically digested in the mouth, passes through the stomach and continues to be broken down by chemical digestion in the small intestine?

- A carbohydrates
- B mineral salts
- C proteins
- D vitamins

08. 0610_s20_qp_21 Q: 13

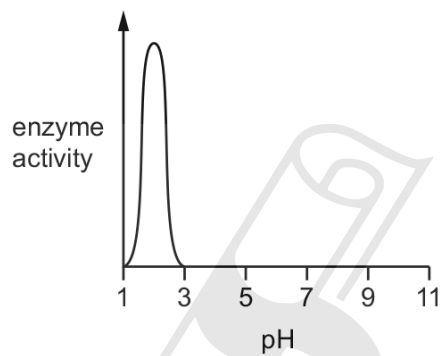
The activity of amylase is measured in four parts of the alimentary canal.

Which two parts have the most amylase activity?

- A colon and duodenum
- B colon and stomach
- C mouth and duodenum
- D stomach and mouth

09. 0610_s20_qp_22 Q: 13

The graph shows the effect of pH on the activity of an enzyme.



In which part of the alimentary canal would this enzyme be **most** active?

- A large intestine
- B mouth
- C small intestine
- D stomach

AcelGCSE
Paper Perfection, Crafted With Passion

10. 0610_w20_qp_21 Q: 14

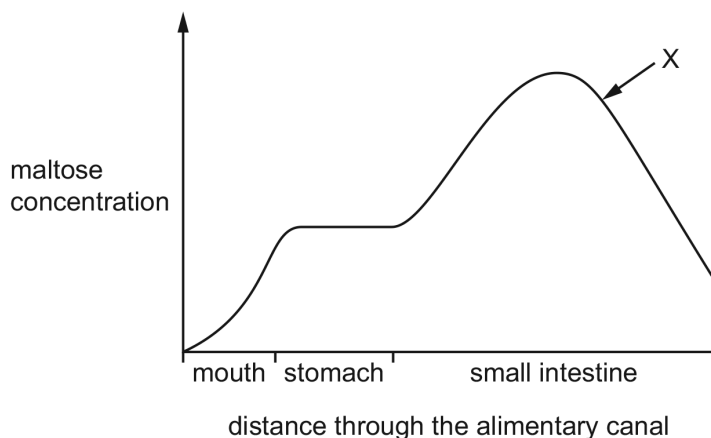
What is the definition of chemical digestion?

- A Large insoluble molecules are changed into smaller soluble molecules.
- B Large soluble molecules are changed into smaller soluble molecules.
- C Small insoluble molecules and ions are passed through the wall of the small intestine.
- D Small soluble molecules and ions are passed through the wall of the small intestine.

7.4. CHEMICAL DIGESTION

11. 0610_m19_qp_22 Q: 15

The graph shows the concentration of maltose in different parts of the alimentary canal.



What causes the change in concentration at X?

- A absorption of maltose
- B action of amylase
- C action of maltase
- D assimilation of maltose

12. 0610_s19_qp_21 Q: 15

A student investigates the breakdown of fats in milk by lipase. Four test-tubes labelled A to D are set up.

The table shows the contents of each test-tube.

In which test-tube will the contents become acidic most quickly?

	milk	bile	boiled lipase	lipase
A	✓	✓	x	✓
B	✓	✓	✓	x
C	✓	x	✓	x
D	✓	x	x	✓

key
 ✓ = present
 x = absent

13. 0610_s19_qp_22 Q: 15

A person eats some cheese which contains a lot of fats and protein.

Which row shows the combination of substances that will digest the cheese most effectively?

	substances present			
	amylase	bile	lipase	protease
A	✓	✗	✓	✗
B	✗	✓	✗	✓
C	✓	✗	✓	✓
D	✗	✓	✓	✓

key

✓ = present

✗ = absent

14. 0610_s19_qp_23 Q: 15

Starch in food is digested in two stages.

In which parts of the alimentary canal do the two stages occur?

	starch into maltose	maltose into glucose
A	duodenum	stomach
B	lining of small intestine	mouth
C	mouth	lining of small intestine
D	stomach	duodenum

15. 0610_w19_qp_22 Q: 38

Which chemical reaction is catalysed by maltase?

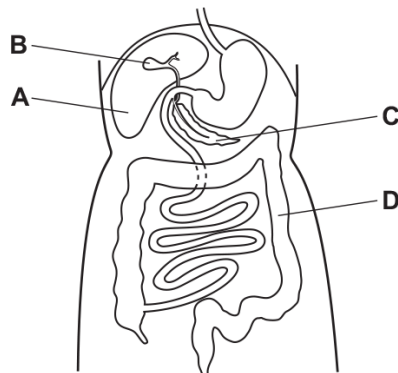
- A** glycogen → glucose + maltose
- B** maltose → glucose + glucose
- C** maltose → starch
- D** starch → glucose + maltose

7.4. CHEMICAL DIGESTION

16. 0610_w18_qp_21 Q: 14

The diagram shows part of the alimentary canal.

Which structure produces lipase?



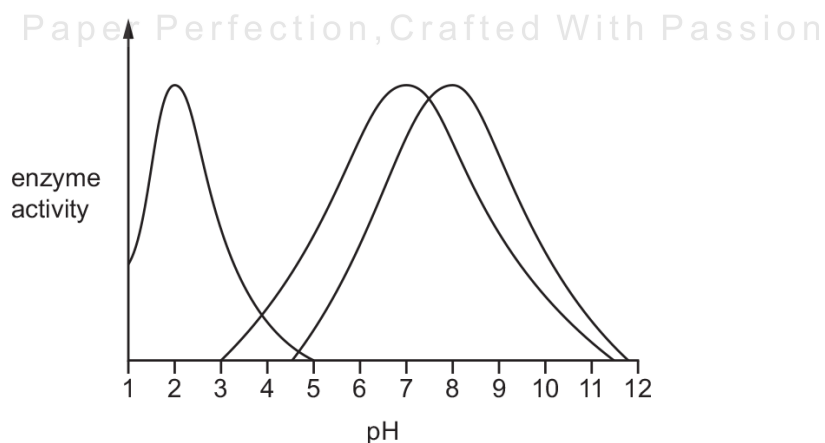
17. 0610_w18_qp_22 Q: 14

Which row shows an enzyme with the correct site of production and products?

	enzyme	enzyme produced by	product(s) of digestion
A	amylase	salivary glands	amino acids
B	amylase	stomach	sugar
C	protease	salivary glands	sugar
D	protease	stomach	amino acids

18. 0610_w18_qp_23 Q: 14

The diagram shows the activity of salivary amylase, pancreatic lipase and stomach protease at different pH levels.

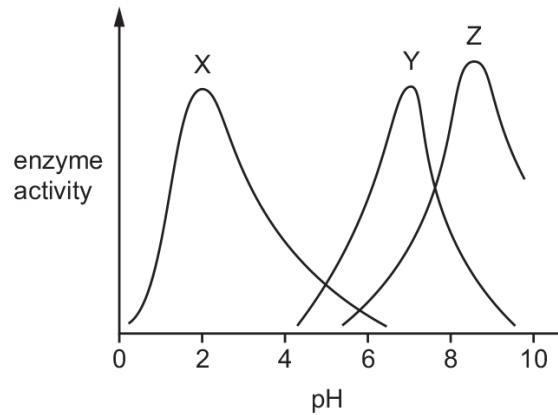


From the graph, what is the optimum pH for the protease enzyme?

- A** 2.0 **B** 3.5 **C** 7.0 **D** 8.0

19. 0610_s17_qp_21 Q: 14

The graph shows the effect of pH on the activity of three different enzymes.



The table shows the pH of different parts of the alimentary canal.

part of the alimentary canal	pH
mouth	7.0
stomach	2.0
small intestine	8.5

Which enzymes in the graph are likely to be protease enzymes?

- A** X, Y and Z **B** X and Z only **C** Y and Z only **D** Z only

20. 0610_w17_qp_22 Q: 10

Four test-tubes were set up as shown in the table.

In which test-tube would starch be broken down the fastest?

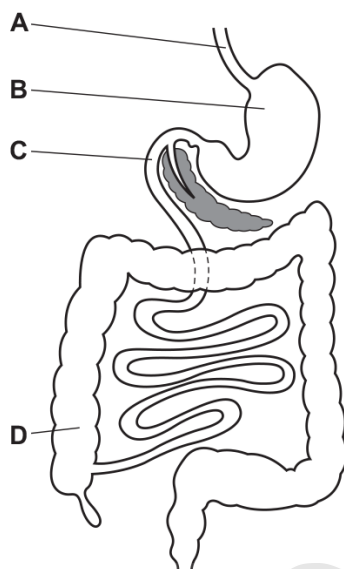
	2 cm ³ starch suspension added	1 cm ³ of amylase added	1 cm ³ of boiled amylase added	temperature /°C
A	✓	✓	x	5
B	✓	✓	x	35
C	✓	x	✓	5
D	✓	x	✓	35

key
 ✓ = present
 x = absent

7.4. CHEMICAL DIGESTION

21. 0610_w17_qp_23 Q: 9

Into which part of the alimentary canal is the enzyme that digests starch secreted?



22. 0610_w17_qp_23 Q: 13

Which substrate, enzyme and product are correctly named?

	substrate	enzyme	product
A	amino acids	trypsin	protein
B	amylase	maltose	glucose
C	lipase	lipid	fatty acids and glycerol
D	maltose	maltase	glucose

23. 0610_m16_qp_22 Q: 11

The table shows the conditions in four test-tubes containing equal amounts of starch and salivary amylase.

In which test-tube is the starch broken down fastest?

	pH	temperature /°C
A	2	27
B	2	37
C	7	27
D	7	37

24. 0610_s16_qp_21 Q: 15

What is the function of bile?

- A to acidify food entering the duodenum
 - B to emulsify starch
 - C to increase the surface area of fats for digestion
 - D to provide enzymes for fat digestion
-

25. 0610_s16_qp_23 Q: 12

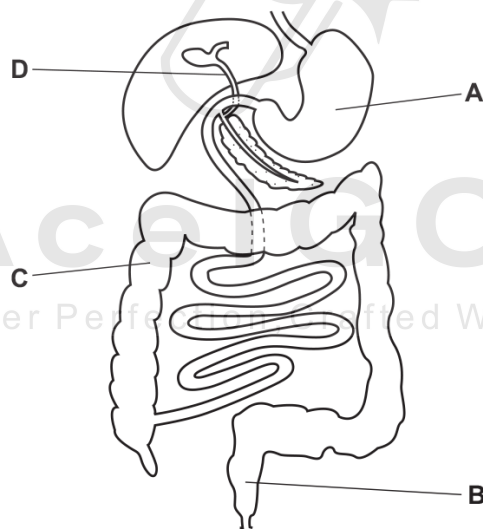
In which region of the alimentary canal is maltose digested?

- A colon
 - B rectum
 - C small intestine
 - D stomach
-

26. 0610_w16_qp_21 Q: 13

The diagram shows the human alimentary canal.

Which labelled part absorbs the most water?



7.4. CHEMICAL DIGESTION

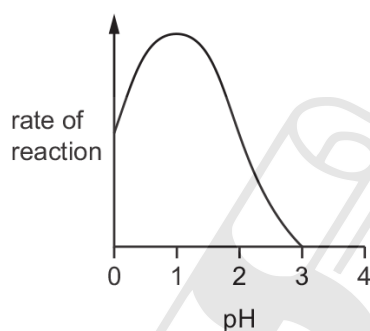
27. 0610_w16_qp_22 Q: 13

What functions are carried out by the small intestine?

	absorption of digested food	absorption of water	ingestion
A	✓	✓	✓
B	✓	✓	✗
C	✓	✗	✗
D	✗	✗	✓

28. 0610_w16_qp_22 Q: 14

The graph shows the effect of pH on the activity of a human digestive enzyme.



What is the enzyme?

- A** amylase
- B** maltase
- C** pepsin
- D** trypsin

Ace | GCSE
Paper Perfection, Crafted With Passion

29. 0610_w16_qp_23 Q: 13

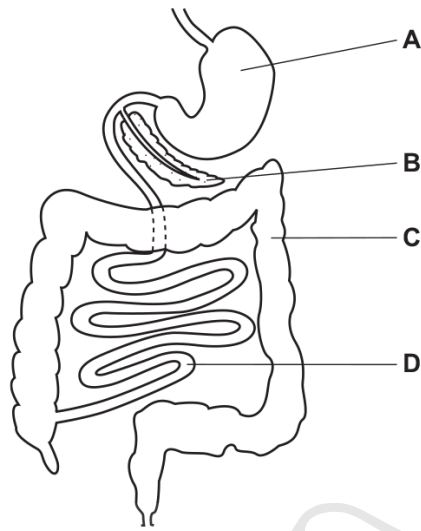
What is the correct order of the processes that take place in the alimentary canal?

- A** absorption, digestion, ingestion, egestion
- B** digestion, ingestion, egestion, absorption
- C** egestion, digestion, absorption, ingestion
- D** ingestion, digestion, absorption, egestion

30. 0610_w16_qp_23 Q: 14

The diagram shows part of the human alimentary canal.

Which organ produces hydrochloric acid?



AcelGCSE

Paper Perfection, Crafted With Passion

SN	Paper	Q. No.	Answer
01	0610_s17_qp_23	13	C
02	0610_m22_qp_22	14	A
03	0610_m21_qp_22	16	C
04	0610_s21_qp_21	16	A
05	0610_w21_qp_21	15	C
06	0610_m20_qp_22	10	C
07	0610_m20_qp_22	16	A
08	0610_s20_qp_21	13	C
09	0610_s20_qp_22	13	D
10	0610_w20_qp_21	14	A
11	0610_m19_qp_22	15	C
12	0610_s19_qp_21	15	A
13	0610_s19_qp_22	15	D
14	0610_s19_qp_23	15	C
15	0610_w19_qp_22	38	B
16	0610_w18_qp_21	14	C
17	0610_w18_qp_22	14	D
18	0610_w18_qp_23	14	A
19	0610_s17_qp_21	14	B
20	0610_w17_qp_22	10	B
21	0610_w17_qp_23	9	C
22	0610_w17_qp_23	13	D
23	0610_m16_qp_22	11	D
24	0610_s16_qp_21	15	C
25	0610_s16_qp_23	12	C
26	0610_w16_qp_21	13	C
27	0610_w16_qp_22	13	B
28	0610_w16_qp_22	14	C
29	0610_w16_qp_23	13	D
30	0610_w16_qp_23	14	A

Paper Perfection, Crafted With Passion