

Human nutrition – 2020 O Level 5090

1. **Nov/2020/Paper_11/No.4**

Starch digestion occurs in the mouth cavity and in the duodenum but it stops in the stomach.

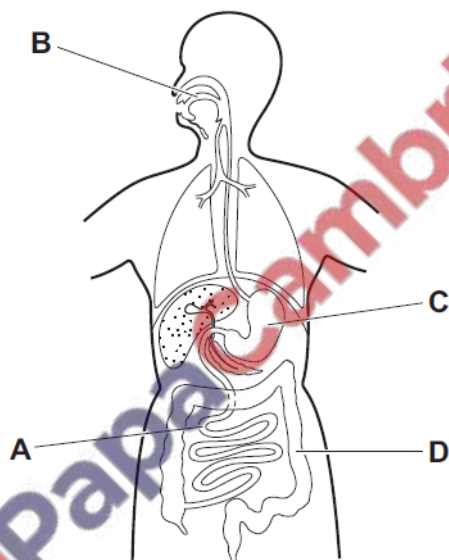
Why is this?

- A All the starch has been digested before it reaches the stomach.
- B Cells in the stomach do not produce amylase.
- C The pH in the stomach changes the shape of the amylase.
- D The temperature in the stomach is too high for amylase to work.

2. **Nov/2020/Paper_11/No.8**

The diagram shows the human alimentary canal.

In which part does protein digestion begin?



3. **Nov/2020/Paper_11/No.9**

Blood flows away from the small intestine in the hepatic portal vein.

Where does the blood go next, and what may happen there?

- A the kidneys, delivering glucose for respiration
- B the kidneys, for removal of urea
- C the liver, where alcohol is broken down
- D the liver, where bile is added to the blood

4. Nov/2020/Paper_11/No.10

The symptoms of a disease include weakness, fatigue, aching and swollen joints, and swollen and soft gums.

Which food is used to treat this disease?

- A liver as a source of iron
- B milk as a source of calcium
- C oily fish as a source of vitamin D
- D oranges as a source of vitamin C

5. Nov/2020/Paper_11/No.13

In the process of blood clotting, the1..... help to convert2..... to3..... which forms a clot.

Which words complete the description of blood clotting?

	1	2	3
A	platelets	fibrin	fibrinogen
B	platelets	fibrinogen	fibrin
C	red blood cells	fibrin	fibrinogen
D	red blood cells	fibrinogen	fibrin

6. Nov/2020/Paper_12/No.4

Starch digestion occurs in the mouth cavity and in the duodenum but it stops in the stomach.

Why is this?

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- D The temperature in the stomach is too high for amylase to work.

7. Nov/2020/Paper_12/No.9

What is the main function of the villi in the ileum?

- A to increase the surface area for absorption
- B to move digested food along the intestine by peristalsis
- C to produce mucus so that materials can move smoothly
- D to secrete amylase to digest starch in the food

8. Nov/2020/Paper_12/No.10

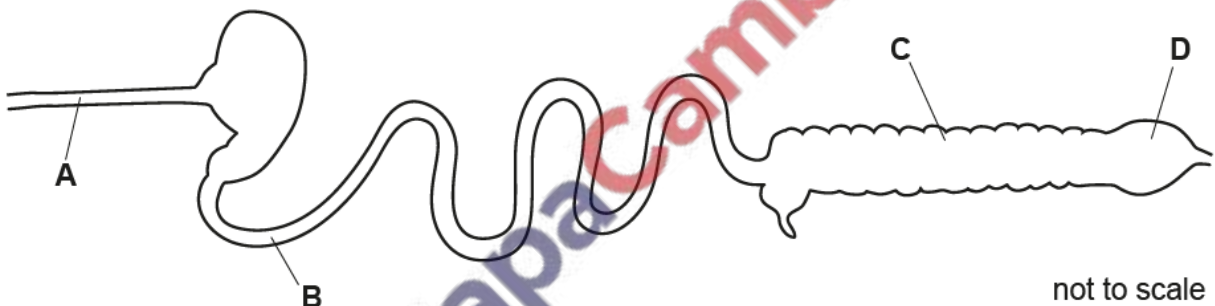
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9. Nov/2020/Paper_21/No.1

The diagram represents what the human alimentary canal would look like if it was removed from a person and straightened out.



(a) (i) Identify the parts A, B, C and D labelled on the diagram.

- A
- B
- C
- D

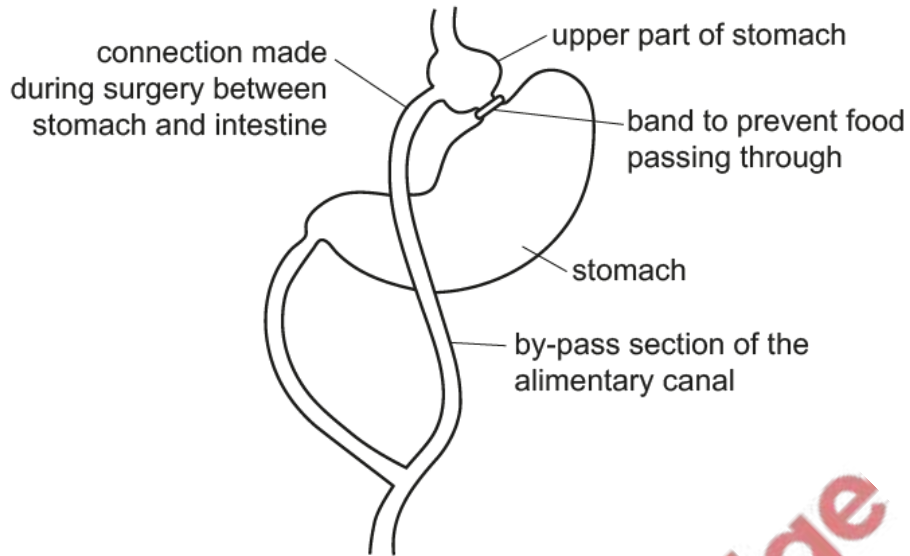
[4]

(ii) State which part has the absorption of water as its main function.

.....

[1]

(b) Gastric (stomach) by-pass surgery is sometimes used to help a person to lose weight. The diagram shows the result of this type of surgery.



(i) The digestion of **one** food substance is most likely to be affected by this surgery. State which food substance and explain your answer.

food substance

explanation

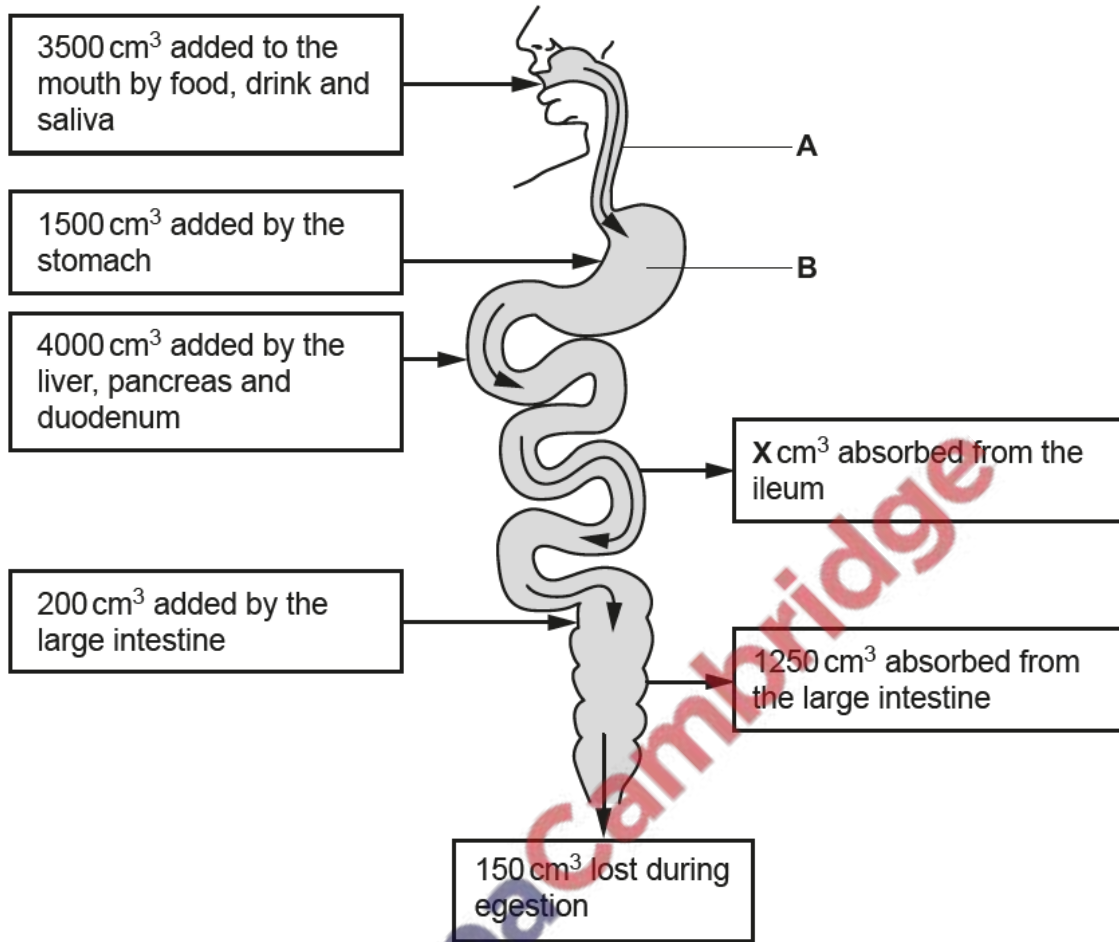
..... [2]

(ii) Suggest how this surgery may help a person to lose weight.

.....
.....
..... [3]

[Total: 10]

The diagram shows the total volume of water entering and leaving organs of the human alimentary canal during one day.



(a) (i) Name the organs labelled A and B.

A

B

[2]

(ii) Calculate the volume of water, X, absorbed from the ileum.

..... cm³ [1]

(iii) Describe the absorption of water from the ileum.

.....

.....

.....

.....

.....

.....

..... [3]

(b) State how a **named** organ causes some of the water absorbed from the ileum to later become water in the urine.

.....

.....

.....

..... [2]

[Total: 8]

11. Jun/2020/Paper_11/No.8

Which organ produces an acid which kills the bacteria in ingested food?

- A liver
- B pancreas
- C salivary gland
- D stomach

12. Jun/2020/Paper_11/No.9

A patient has her gall bladder surgically removed.

How will this affect the functioning of her body?

- A reducing the absorption of carbohydrates
- B reducing the digestion of fats
- C reducing the liver's ability to convert glucose to glycogen
- D reducing the volume of stored urine

13. Jun/2020/Paper_11/No.10

Four of the organs of the alimentary canal are listed.

- J colon
- K duodenum
- L oesophagus
- M stomach

Which sequence shows the order in which food passes through these organs?

- A K → J → L → M
- B L → K → M → J
- C L → M → K → J
- D M → L → J → K

14. Jun/2020/Paper_11/No.13

Which blood vessels carry blood to the liver?

	hepatic artery	hepatic portal vein	hepatic vein	vena cava
A	yes	yes	no	no
B	yes	no	yes	no
C	no	yes	no	yes
D	no	no	yes	yes

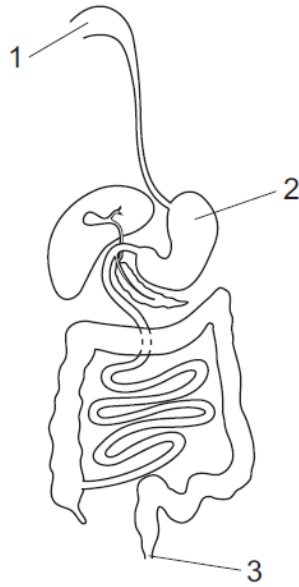
15. Jun/2020/Paper_12/No.8

Which process happens in the duodenum?

- A bile is formed
- B faeces are formed
- C fats are digested by lipase
- D pancreatic juice lowers the pH

16. Jun/2020/Paper_12/No.9

The diagram shows the human alimentary canal.



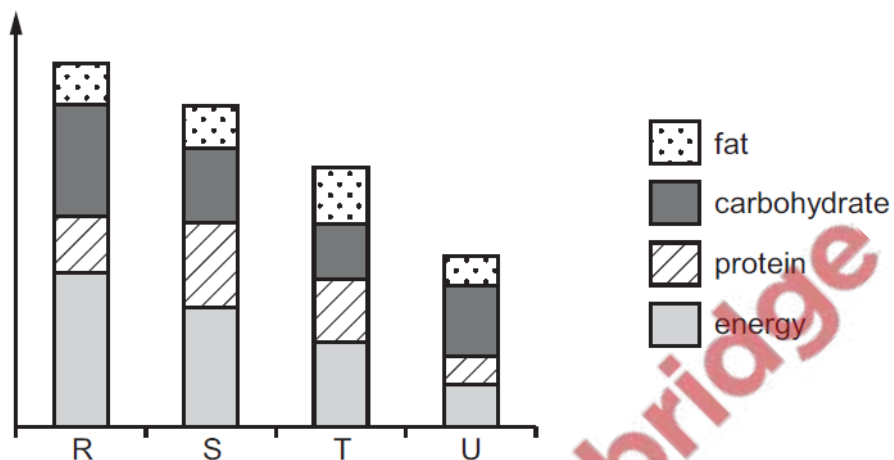
Where do egestion and ingestion occur?

	egestion	ingestion
A	1	3
B	2	3
C	3	1
D	3	2

PapaCambridge

The bar chart shows the recommended daily food intake of four people:

- an 80 year-old retired man
- a male manual worker
- a 6 year-old child
- a breast-feeding mother.



Which row correctly identifies two of these four people?

- A child is U; retired man is R
- B manual worker is T; child is S
- C mother is S; manual worker is R
- D retired man is R; mother is U



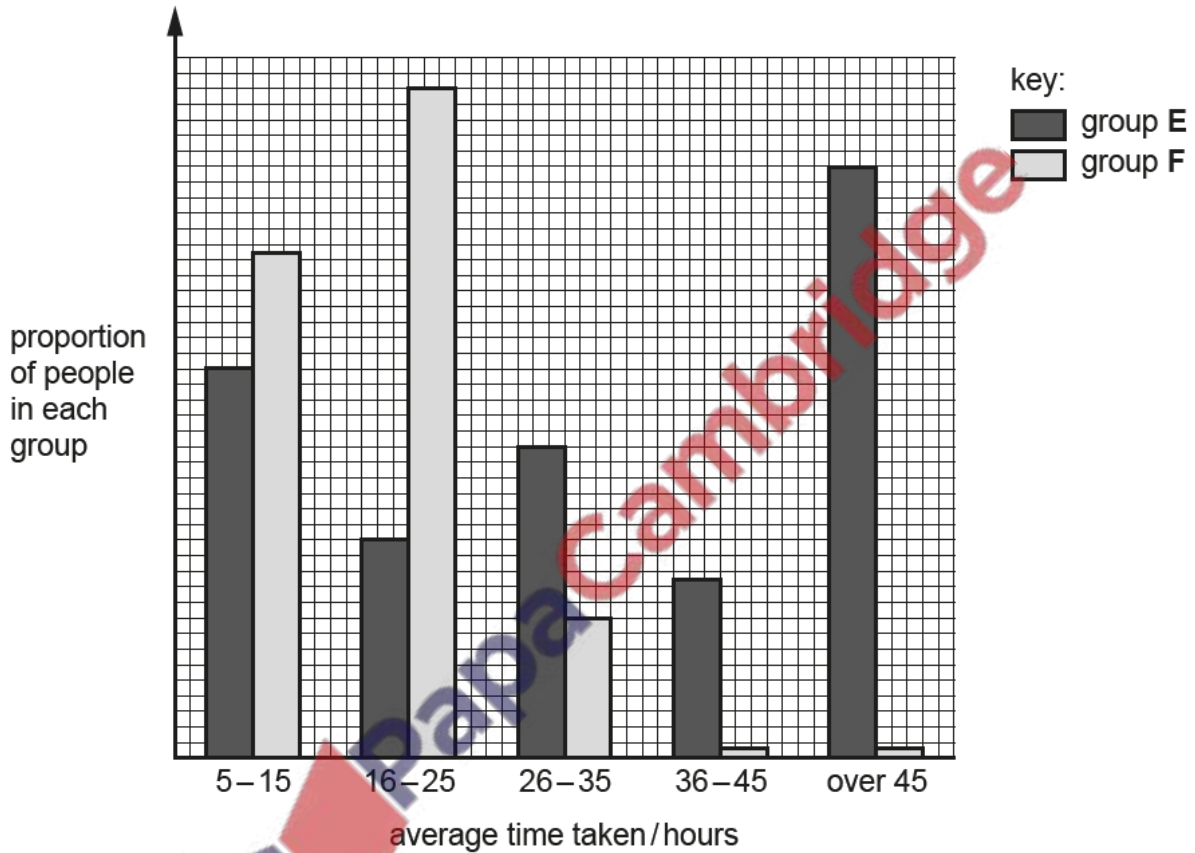
(a) (i) Name a substance in a healthy diet, a lack of which leads to soft bones in a child.

..... [1]

(ii) Name a food that contains this substance.

..... [1]

(b) Two groups of people (E and F) eat different types of diet. The graph shows the average time taken for food to pass through the alimentary canal for these two groups.



(i) Name the process that causes food to pass through the alimentary canal.

..... [1]

(ii) Suggest how the diets of the two groups of people may be different and give reasons for your answer.

.....

 [3]

(c) Suggest reasons why it may be a **disadvantage** for food to pass through the alimentary canal too quickly.

.....

.....

..... [2]

[Total: 8]

19. Jun/2020/Paper_22/No.1

In the diagram below the boxes on the left contain the names of organs of the human body.

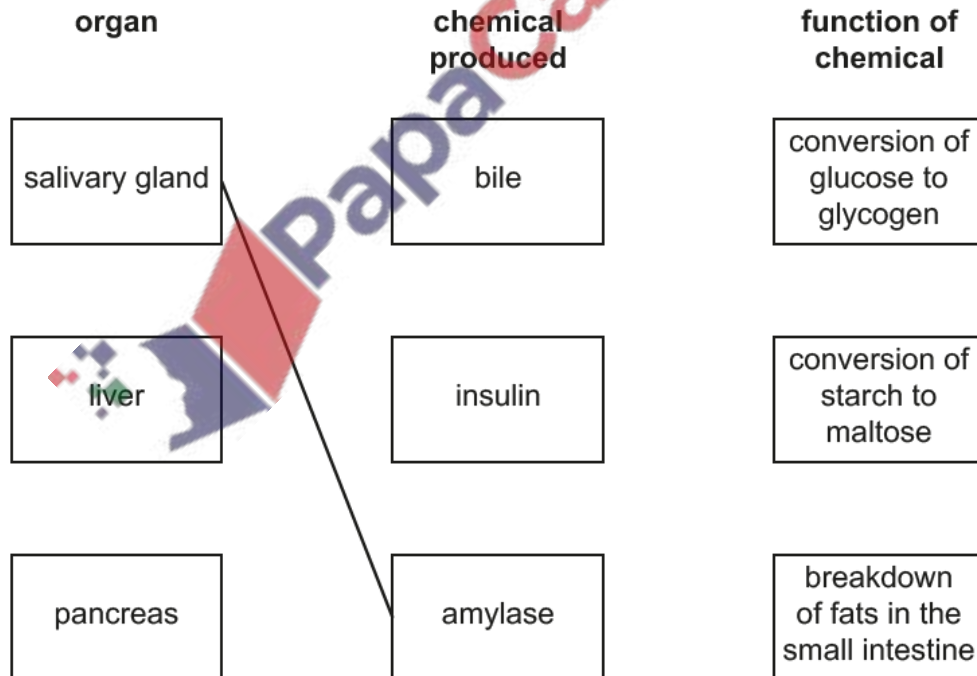
The boxes in the middle contain the names of chemicals produced by these organs.

The boxes on the right contain descriptions of one function of each of these chemicals.

Draw lines to link each organ with the chemical it produces **and** to link each chemical with the description of its function.

One line has been drawn for you.

Draw **five more** lines.



[5]