

# **7. Human nutrition**

## **7.5 Absorption**

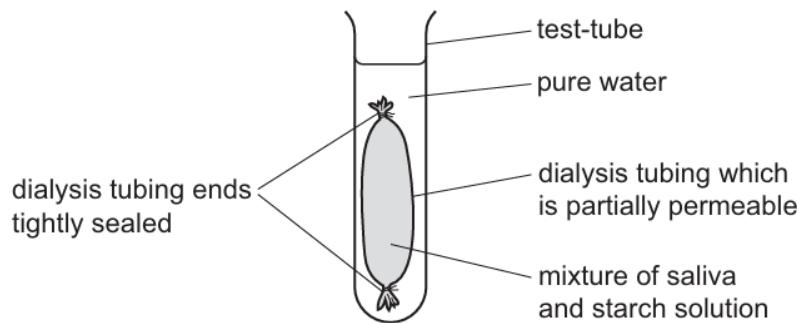
### **Paper 1 and 2**

Question Paper

## Paper 1

Questions are applicable for both core and extended candidates

- 1 The diagram shows the apparatus used in an experiment to demonstrate two processes that take place in the body.



After one hour, the water outside the dialysis tubing contained reducing sugars.

Which two processes are represented by this experiment?

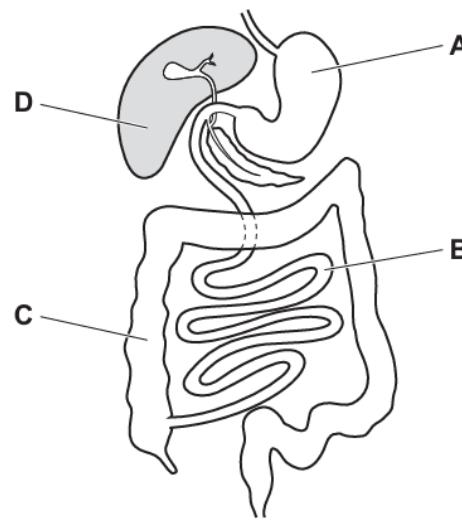
- A** absorption and digestion
- B** absorption and egestion
- C** digestion and egestion
- D** digestion and ingestion

- 2 Where is water absorbed?

- A** colon and small intestine
- B** large intestine only
- C** gall bladder and colon
- D** small intestine only

- 3 The diagram shows the human alimentary canal.

Where is most digested food absorbed into the blood?



- 4 In which part of the alimentary canal are **most** nutrients absorbed into the blood?

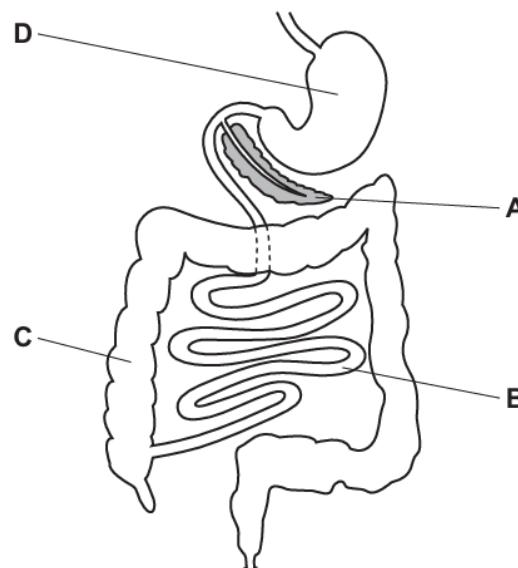
- A colon
- B oesophagus
- C small intestine
- D stomach

- 5 Where is most water absorbed in the alimentary canal?

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

- 6 The diagram shows part of the alimentary canal and associated organs.

Where does most water absorption take place?



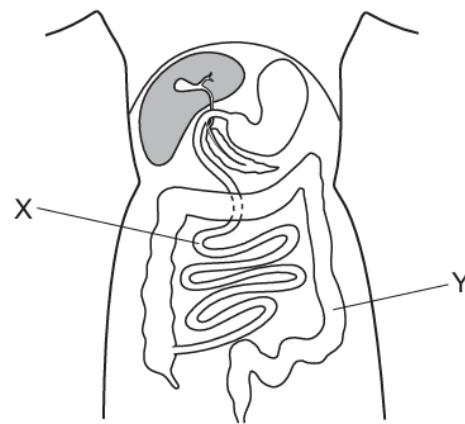
- 7 In humans, where does most of the absorption of digested food take place?

- A colon
- B kidney
- C liver
- D small intestine

- 8 Where does **most** of the absorption of water take place in the alimentary canal?

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

9 The diagram shows part of the human body.

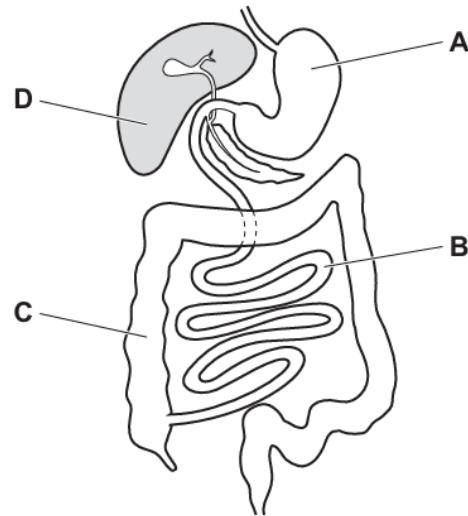


Which statement about organs X and Y is correct?

- A X absorbs more water from food than Y.
- B X does not absorb water from food.
- C Y absorbs more water from food than X.
- D Y does not absorb water from food.

10 The diagram shows the human alimentary canal.

Where is most digested food absorbed into the blood?



- 11 Digested food molecules move into the cells of the body where they are used and become part of the cells.

What is this a definition of?

- A** absorption
- B** assimilation
- C** digestion
- D** ingestion

## Paper 2

**Questions are applicable for both core and extended candidates unless indicated in the question**

12 The list contains statements about villi.

- 1 Villi increase the efficiency of the absorption of nutrients.
- 2 Villi increase the efficiency of the alveoli during gas exchange.
- 3 Villi provide a large surface area.
- 4 Villi filter urea from the blood.

Which two statements explain the role of the villi in humans? **(extended only)**

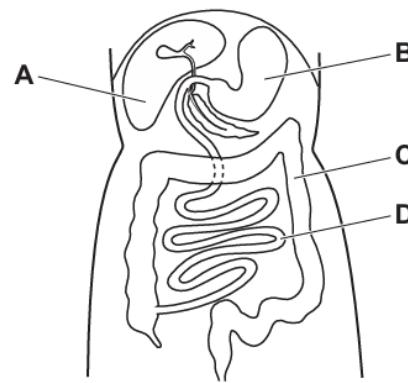
- A** 1 and 2      **B** 1 and 3      **C** 2 and 4      **D** 3 and 4

13 Which substance is absorbed by lacteals in villi? **(extended only)**

- A** amino acids  
**B** fatty acids  
**C** lactic acid  
**D** hydrochloric acid

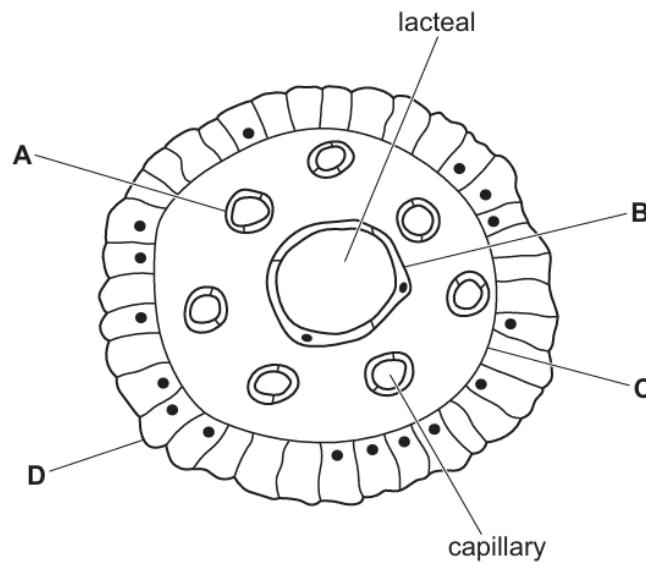
14 The diagram shows part of the alimentary canal.

Where is most water absorbed?

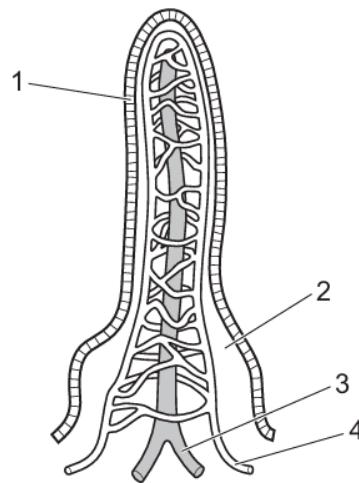


15 The diagram shows a cross-section of a villus.

On which cell surface are microvilli found? **(extended only)**



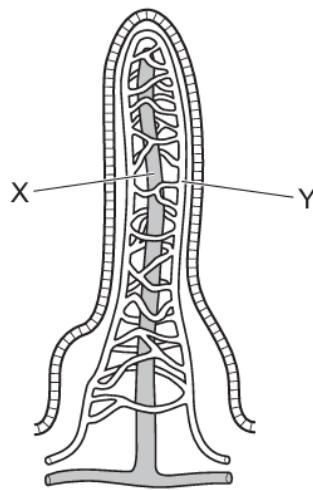
16 The diagram shows a villus.



Which parts transport glucose and fatty acids away from the villus? **(extended only)**

	glucose	fatty acids
<b>A</b>	3	1
<b>B</b>	3	2
<b>C</b>	4	3
<b>D</b>	4	4

17 The diagram shows a villus.

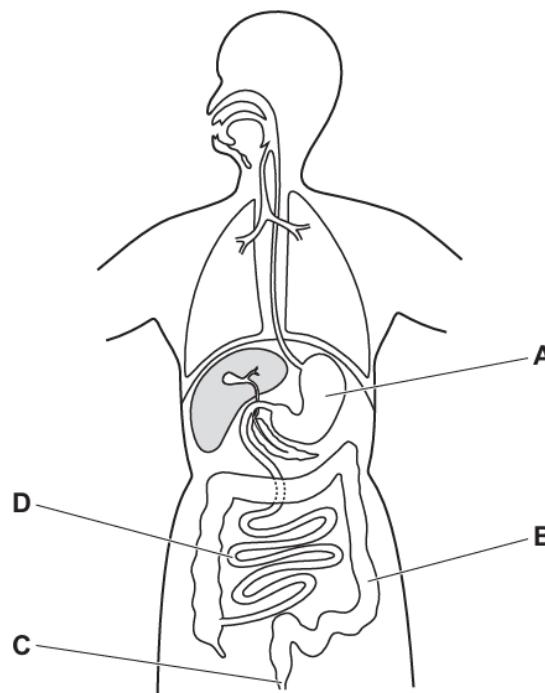


Which statement about absorption is correct? **(extended only)**

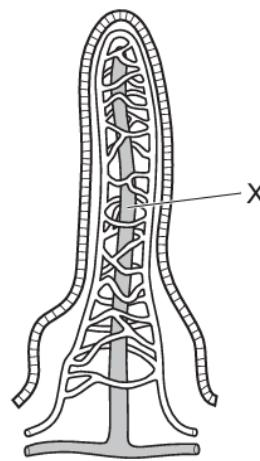
- A** Amino acids move into X.
- B** Fatty acids move into X.
- C** Cellulose moves into Y.
- D** Maltose moves into Y.

18 The diagram shows the digestive system.

Which part absorbs the most water?



19 The diagram shows a villus in the small intestine.

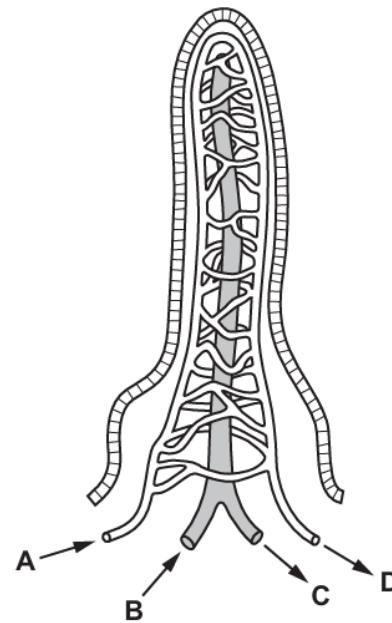


What is absorbed at X? (extended only)

- A fatty acids
- B glucose
- C glycogen
- D starch

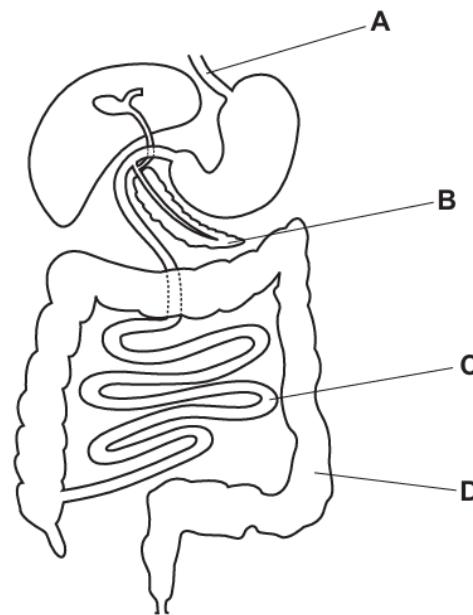
- 20 The diagram shows a villus. The arrows show the direction of flow within vessels associated with the villus.

Which vessel carries blood to the liver? **(extended only)**

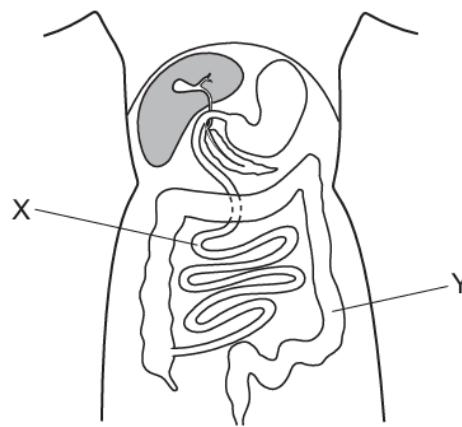


- 21 The diagram shows the human alimentary canal.

In which structure is most glucose absorbed into the blood?



22 The diagram shows part of the human body.



Which statement about organs X and Y is correct?

- A X absorbs more water from food than Y.
- B X does not absorb water from food.
- C Y absorbs more water from food than X.
- D Y does not absorb water from food.

23 The diagram shows the structure of a villus. The arteriole, capillary, lacteal and venule are labelled with letters.

Which letter shows where nutrients are absorbed into the blood? **(extended only)**

