

# 7. Human nutrition

## 7.5 Absorption

### Paper 4

#### Question Paper

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Questions are applicable for extended candidates only

1 (b) Fig. 6.1 is a diagram of a villus.

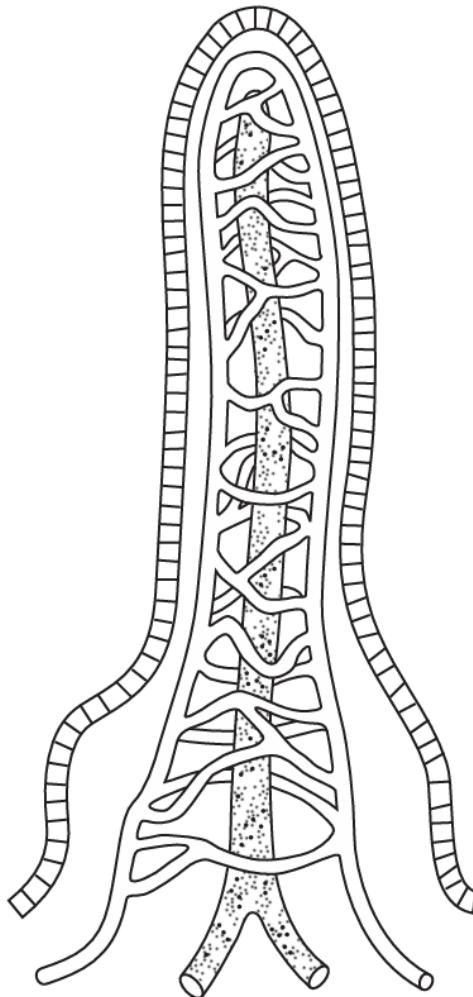


Fig. 6.1

(i) Draw labels and label lines on Fig. 6.1 to identify a capillary **and** a lacteal. [1]

(ii) State the part of the digestive system where villi are located.

..... [1]

(iii) State the function of the lacteal.

.....

.....

..... [1]

(c) Describe the pathway taken by the products of protein digestion from the villi to the liver.

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..... [2]

2 (a) The small intestine is lined with many villi and is adapted to absorb glucose.

Fig. 2.1 shows two villi from the lining of the small intestine.

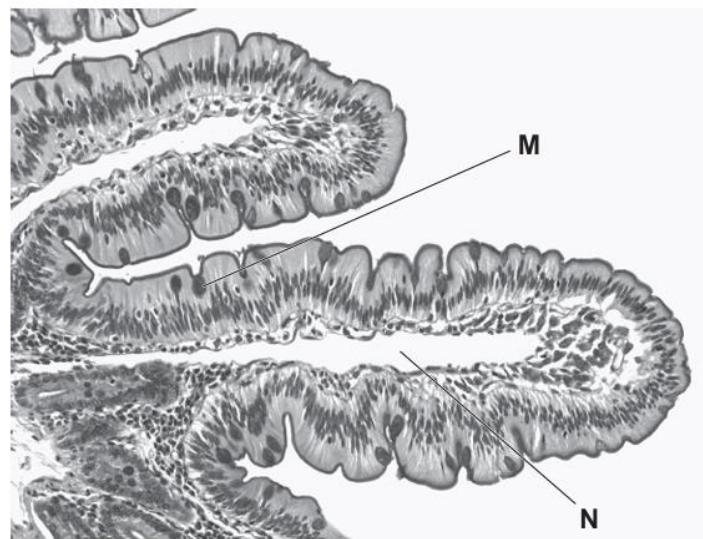


Fig. 2.1

(i) State the name of structure **N** in Fig. 2.1.

..... [1]

(ii) Cell **M** in Fig. 2.1 secretes mucus.

State the name of cell **M**.

..... [1]

(iii) State **one** other place in the body where mucus secreting cells are found.

..... [1]

(iv) Describe and explain how the structure of a villus is adapted for its function.

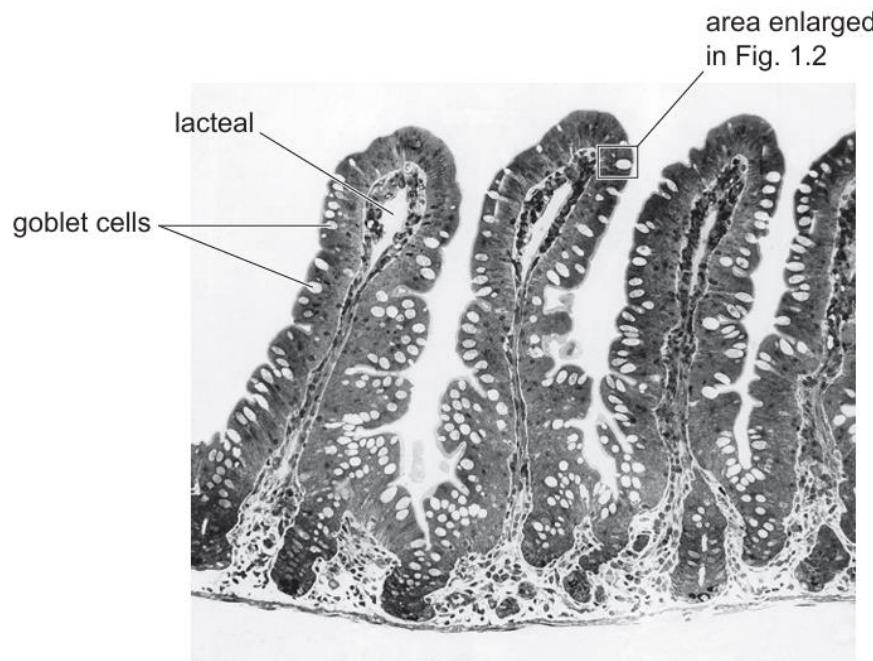
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[4]

(b) State the name of the main blood vessel that takes blood from the small intestine to the liver.

..... [1]

3



**Fig. 1.1**

(d) Fig. 1.1 shows a lacteal in the centre of each villus.

Describe the roles of lacteals.

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.....  
.....  
.....  
..... [2]

4 (d) The epithelial cells of the small intestine have many microvilli.

State the role of the microvilli.

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.....  
..... [2]