

Past-paper walk-through

Physical digestion ■ 7.3

eXercise

Questions in this set

- 0610/42 N25 Q1 ■ 14 marks
- 0610/22 J25 Q11 ■ 1 mark
- 0610/22 M25 Q13 ■ 1 mark

Reading the mark scheme

- **B1** a mark that stands on its own – the point is either made or not.
- **M1** a *method* mark: the right approach, even if the number is wrong.
- **A1** an *answer* mark, and it usually needs its M mark first.
- **C1** a working mark on the way to the answer.
- **//** separates answers the examiner accepts equally.
- **ecf** = error carried forward: a later part is marked on your own earlier answer.
- **owtte** = “or words to that effect” – the wording need not match.

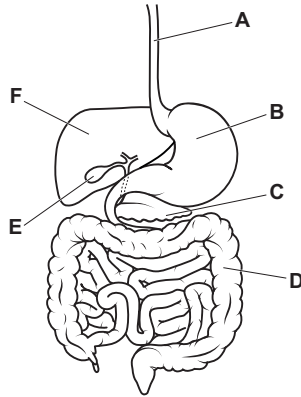
Question 1

0610/42 N25 ■ Q1 ■ 14 marks

-
- 1 (a) Describe what is meant by the term physical digestion.

Question 1

(b) Fig. 1.1 is a diagram of the human digestive system.



Question 1

Fig. 1.1

State the letter from Fig. 1.1 that shows one part where:

Question 1

Question 1

Question 1

[3]

(c) Explain the role of bile in physical digestion.

Question 1

(d) Physical digestion also occurs in the mouth.

State the names **and** functions of **two** types of human teeth.

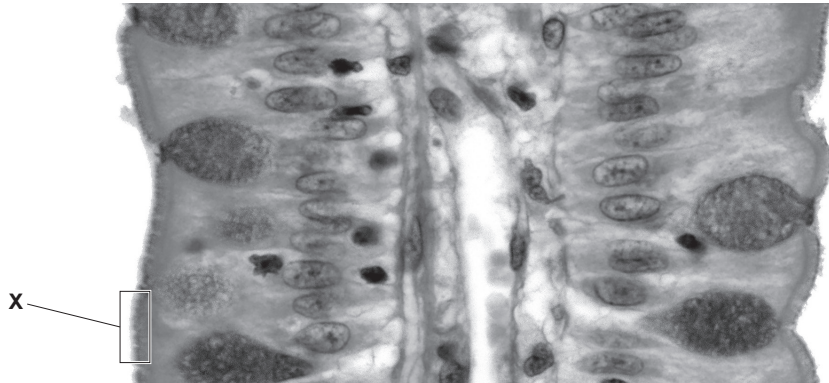
Question 1

Question 1

Question 1

[2]

(e) Fig. 1.2 is a photomicrograph of part of one villus in the small intestine.



Question 1



Question 1

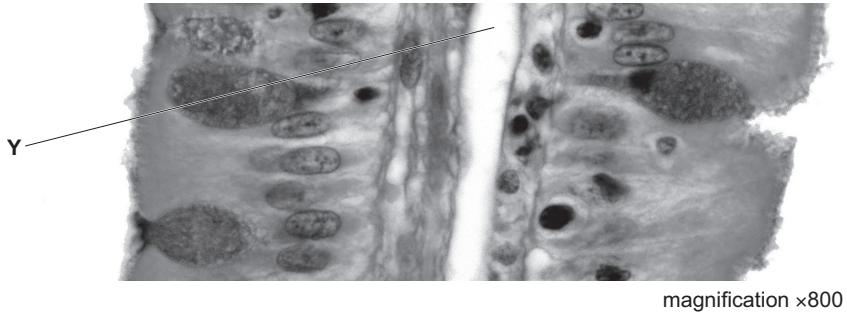


Fig. 1.2

Identify **and** explain the roles of the parts labelled **X** and **Y** in Fig. 1.2.

Question 1

[Total: 14]

Solution 1

(a)

Mark scheme

- the breakdown of food into smaller, pieces / AW ;
- without chemical change (to the food molecules) ;
- 2

Solution 1

(b)

Mark scheme

- B ;
- C ;
- F ;
- 3

Solution 1

(c)

Mark scheme

- ref. to emulsification of fat ;
- ref. to increased surface area (of fat) ;
- (idea of increased surface area / more droplets) for, action of enzymes / action of
- lipase / chemical digestion ;
- 3

Solution 1

(d)

Mark scheme

- any two from:
- incisor for, grabbing / piercing / cutting / tearing / slicing / biting / AW ;
- canine for, grabbing / piercing / cutting / tearing / slicing / biting / AW ;
- premolar for, grinding / chewing / crushing / AW ;
- molar for, grinding / chewing / crushing / AW ;
- 2

Solution 1

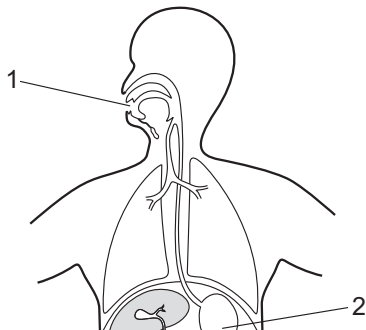
(e) Mark scheme

- X are microvilli ;
- (X) increased / provides large, surface area for absorption (of nutrients)
- OR
- (X) for, attachment of / release of / contains, enzymes / maltase ;
- Y is the lacteal ;
- (Y) absorption of, products of fat digestion / AW ;
- 4
- Guidance

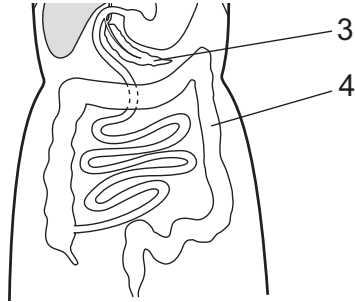
Question 11

0610/22 J25 ■ Q11 ■ 1 mark

11 In which parts of the digestive system does physical digestion occur?



Question 11



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

Solution 11

Answer: **B**

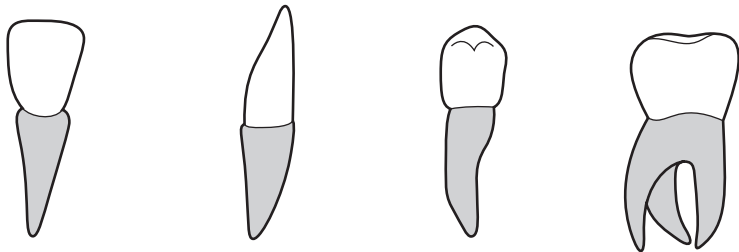
Why

- Physical digestion is the mechanical breaking up of food, without enzymes.
- That happens in the mouth, by the teeth, and in the stomach, by the churning muscles.
- Further down the gut the digestion is chemical, done by enzymes.

Question 13

0610/22 M25 ■ Q13 ■ 1 mark

13 The diagram shows the four types of human tooth.



Question 13

1
incisor

2
canine

3
premolar

4
molar

Which teeth are used for grinding food?

A 1 and 2

B 1 and 4

C 2 and 3

D 3 and 4

Solution 13

Answer: **D**

Why

- Incisors cut, canines tear, and premolars and molars grind.
- The grinding teeth are the broad ones at the back with ridged surfaces.
- So the last two of the four types shown are the grinders.