Unit 17 · Digestive System

WORKSHEET

Full marks 32

Name _____ Class _____ Roll no. _____ Date _____ Marks _____ / 32

1 Key words [4]

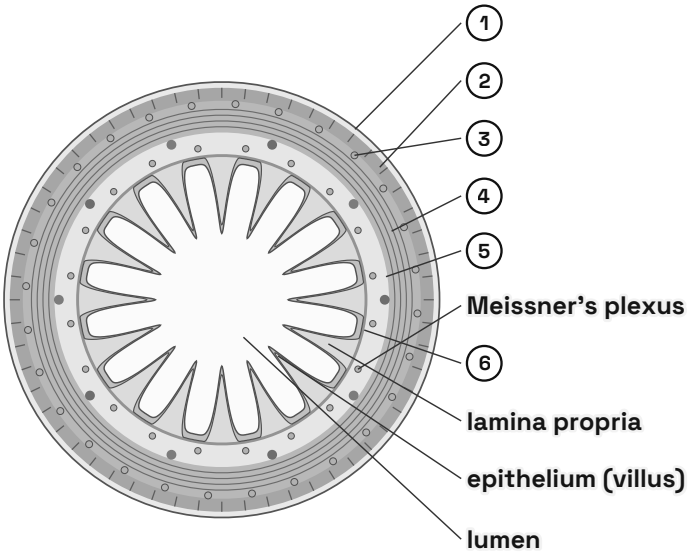
Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

chylomicrons	enterokinase	epiglottis	Kupffer cells	lacteal	micelles	ptyalin
Stensen's duct	thecodont	Wharton's duct				

Human teeth sit in sockets in the jaw bone, so they are _____. The flap of elastic cartilage that covers the glottis during swallowing is the _____. The phagocytes in the sinusoids of the liver are _____. The parotid gland pours its saliva into the vestibule through _____. The enzyme on the brush border of the duodenum that turns trypsinogen into trypsin is _____. Fatty acids and monoglycerides are carried to the cells of the villi in tiny balls with bile salts, the _____. Inside the cells, fats are packed into droplets called _____, which pass into the _____ of the villus.

2 Label the diagram [3]

The diagram shows the wall of the human small intestine cut across. Write the names of the parts 1 to 6. Each carries 0.5 mark.



1. _____ 2. _____

3. _____ 4. _____

5. _____ 6. _____

3 Multiple choice [5]

Choose the correct option for each of the following questions.

i. Which of the following ducts is also called the duct of Santorini? [1]

a. main pancreatic duct
b. accessory pancreatic duct
c. pancreatic ductule
d. hepatopancreatic duct

ii. Which papillae of the human tongue carry no taste buds? [1]

a. circumvallate
b. fungiform
c. filiform
d. all of them carry taste buds

iii. In a liver lobule, which way do blood and bile flow? [1]

a. both flow towards the central vein
b. blood flows in to the central vein; bile flows out to the bile ducts at the corners
c. blood flows out to the corners; bile flows in to the central vein
d. both flow out to the corners

iv. A meal rich in fat reaches the duodenum. Which hormone makes the gall bladder squeeze out bile? [1]

a. gastrin
b. secretin
c. cholecystokinin
d. GIP

v. A person with chronic diarrhea is losing a large amount of water and salts in watery feces. Which part of the digestive system normally takes back the last of the water, turning the liquid that reaches it into solid feces? [1]

a. small intestine
b. stomach
c. large intestine
d. esophagus

4 Short answers [9]

Write short answers to the following questions.

a. Write the dental formula of an adult human and of a child. Why does a child have no premolars? [2]

b. Why are the protein-digesting enzymes of the pancreas made as inactive proenzymes? [2]

c. A person's gall bladder is removed, and he is told to eat less fatty food. Which food would he digest less well, and why? **[2]**

d. Describe the structure of a hepatic lobule. **[3]**

5 Long answers **[8]**

Write long answers to the following questions.

a. Describe the digestion of proteins throughout the alimentary canal. **[4]**

b. How are the end products of carbohydrate, protein and fat digestion absorbed? **[4]**

6 Think [3]

Oral rehydration solution is water with glucose and salt in fixed amounts. Explain why it works even in cholera, when the gut is pouring out water, and why adding too much sugar or salt makes things worse.

7 Activity: Bread that turns sweet (not marked)

Chew a small piece of plain bread or a spoonful of plain cooked rice slowly, without swallowing, for two or three minutes. Rinse your mouth with water afterwards.

Time chewing	How it tastes
at first	
after one minute	
after two or three minutes	

Which enzyme causes the change, and what does it make?