WORKSHEET 2

CHAPTER 11 – DIGESTIVE SYSTEM

A. Give reasons.

1. Nutrition is essential for an organism.
2. Hydrochloric acid is present in gastric juice.
3. Herbivores have longer small intestine.
4. Villi are present in the small intestine and not in the stomach.
5. There is no enzyme to digest vitamins.

B. Name the following.

1. Ring of muscles that control the release of food from stomach to small intestine.
2. A ball-like mixture of food and saliva formed in the mouth during the process of chewing.
3. Enzyme that converts milk protein casein into insoluble paracasgein.
4. The reserved food in animals.
5. The pigments present in bile.

C. Fill in the blanks.

1. Bile helps in _____ of fat.
2. _____ helps in curdling of milk.
3. _____, _____ and _____ are the three pairs of salivary glands in human.
4. _____ breaks starch into maltose in the mouth cavity.
5. Enzyme, _____ present in succus entericus breaks peptides into amino acid.

D. Choose the correct option.

1. Removal of undigested food is known as
   a. excretion. b. assimilation. c. absorption. d. egestion.
2. Which of the following is a part of small intestine?
   a. Caecum b. Jejunum c. Rectum d. Colon
3. The main digestive function of enterokinase is
   a. conversion of casein into paracasein.
   b. conversion of pepsinogen into pepsin.
   c. conversion of trypsinogen into trypsin.
   d. stimulation of gastric gland to secrete gastric juice.

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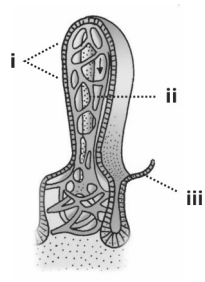
4. Succus entericus is the name given to
   a. a junction between ileum and large instestine.
   b. intestinal juice.
   c. swelling in the gut.
   d. appendix.
5. Gastric juice contains
   a. trypsin, HCl and rennin.
   b. pepsin, HCl and rennin.
   c. trypsin, HCl and pepsin.
   d. trypsin, pepsin and rennin.

E. Study the figure given alongside and answer the following questions.



1. Identify the structure.
2. Where is this found?
3. State the role of this structure in human digestive system.
4. Label parts **i–iii** and state their role.
5. What will happen if part **ii** is removed from this structure?

ANSWERS

WORKSHEET 2

A. Give reasons.

1. Nutrition is essential to get energy for doing work, growth and development of body and repair of worn out tissues.
2. HCl present in gastric juice
   a. makes the medium acidic, which is essential for the activation of pepsinogen to active pepsin enzyme.
   b. kills the bacteria which might have come along the food.
   c. also activates prorennin to rennin.
3. The diet of herbivores is rich in cellulose which is hard to digest. As a result, herbivores have a longer digestive tract to digest their food completely. The long intestine host many bacteria that breakdown cellulose into glucose and release energy.

4 Villi are small finger-like projections richly supplied with blood capillaries which increase the surface area for absorption of completely digested food in the small intestine. In the stomach, the food is not completely digested and is not needed to be absorbed. Hence, stomach lack villi.

5. Vitamins are directly absorbed from the digestive tract and transported by the blood to the cells. They are used in their original form by the cells. Therefore, they do not require enzymes for digestion.

B. Name the following.

1. Pyloric sphincter
2. Bolus
3. Rennin
4. Glycogen
5. Bilirubin and Biliverdin

C. Fill in the blanks.

1. emulsification
2. Rennin
3. Parotid, submandibular, sublingual
4. Ptyalin
5. erepsin/peptidases

D. Choose the correct option.

1. d
2. b
3. c
4. b
5. b

E. Study the figure given alongside and answer the following questions.

1. Intestinal villi
2. In the small intestine
3. Intestinal villi are finger-like projections on the inner wall of small intestine. They greatly increase the surface area for absorption of digested food.
4. **i**. Blood capillaries **ii**. Lacteal **iii**. Hepatic portal vein

   Their respective roles:
   The blood capillaries absorb monosaccharides, peptides and amino acids.
   Lacteal absorbs fatty acid and glycerol.
   The blood capillaries converge to form hepatic portal vein, which delivers the absorbed food to the liver.
5. If lacteals are removed from villi, fatty acid and glycerol will not be absorbed from the small intestine.