

Q. 1. Fill in the blanks :

(a) The main steps of nutrition in humans are , , , , and

(b) The largest gland in the human body is

(c) The stomach releases hydrochloric acid and juices which act on food.

(d) The inner wall of the small intestine has many finger-like outgrowths called

(e) Amoeba digests its food in the

Ans. (a) ingestion, digestion, absorption, assimilation, egestion. (b) liver, (c) digestive, (d) villi (e) food vacuole.

Q. 2. Mark 'T' if the statement is true and 'F' if it is false :

(a) Digestion of starch starts in the stomach.

(b) The tongue helps in mixing food with

saliva.

(c) The gall bladder temporarily stores bile.

(d) The ruminants bring back swallowed grass into their mouth and chew it for some time.

Ans. (a) F (b) T (c) T (d) T.

Q. 3. Tick (✓) mark the correct answer in each of the following :

(a) Fat is completely digested in the :

(i) stomach (ii) mouth (iii) small intestine
(iv) large intestine.

(b) Water from the undigested food is absorbed mainly in the :

(i) stomach (ii) food pipe (iii) small intestine
(iv) large intestine.

Ans. (a) (iii) small intestine (b) (iv) large intestine.

Q. 4. Match the items of Column I with those in Column II.

Column I	Column II
Food Components	Product (s) of digestion
Carbohydrates	Fatty acids and glycerol
Proteins	Sugar
Fats	Amino acids

Ans.

Column I	Column II
Food Components	Product (s) of digestion
Carbohydrates	Sugar
Proteins	Amino acids
Fats	Fatty acids and glycerol

Q. 5. What are villi? What is their location and function?

Ans. The finger-like outgrowths on the inner walls of the small intestine are called villi. Their function is to increase the surface area for the absorption of the digested food.

Q. 6. Where is the bile produced? Which component of the food does it help to digest?

Ans. Bile is produced in the gland called liver. Bile juice is stored in a sac like structure called gall bladder and it helps in the digestion of fats.

Q. 7. Name the type of carbohydrate that can be digested by ruminants but not by humans. Give the reason also.

Ans. Cellulose is the carbohydrate present in the grass that can be digested by ruminants. Ruminants have a large sac-like structure called Caecum between the small intestine and the large intestine. There are certain bacteria present in ruminants and they help in digesting the cellulose of the food. In humans, these bacteria are absent. Hence, they are incapable of digesting cellulose.

Q. 8. Why do we get instant energy from glucose?

Ans. Glucose is the simplest form of carbohydrate and absorbed by the cells into the blood and transported to the cells of different organs. Glucose breaks down in the cell with the help of oxygen into carbon dioxide and water and the energy is released. Thus, the glucose gives instant energy.

Q. 9. Which part of the digestive canal is involved in :

- (i) Absorption of food
- (ii) Chewing of food
- (iii) Killing of bacteria
- (iv) Complete digestion of food
- (v) Formation of faeces

Ans. (i) Small intestine, (ii) Mouth, (iii) Stomach, (iv) Small intestine, (v) Large intestine.

Q. 10. Write one similarity and one difference between nutrition in *Amoeba* and human beings.

Ans. Similarity : In *Amoeba*, the digestive juices are secreted into food vacuole and in human beings, the digestive juices are secreted in stomach and small intestine. These secreted juices act on the food and break it down into simpler substances.

Difference : *Amoeba* captures food with the help of false feet or **Pseudopodia** and human beings take in food through mouth.

Q. 11. Match the items given in Column I with those given in Column II.

Column I	Column II
(a) Salivary gland	(i) Bile juice secretion
(b) Stomach	(ii) Storage of undigested food
(c) Liver	(iii) Saliva secretion
(d) Rectum	(iv) Acid release
(e) Small Intestine	(v) Digestion is completed
(f) Large intestine	(vi) Absorption of water
	(vii) Release of faeces

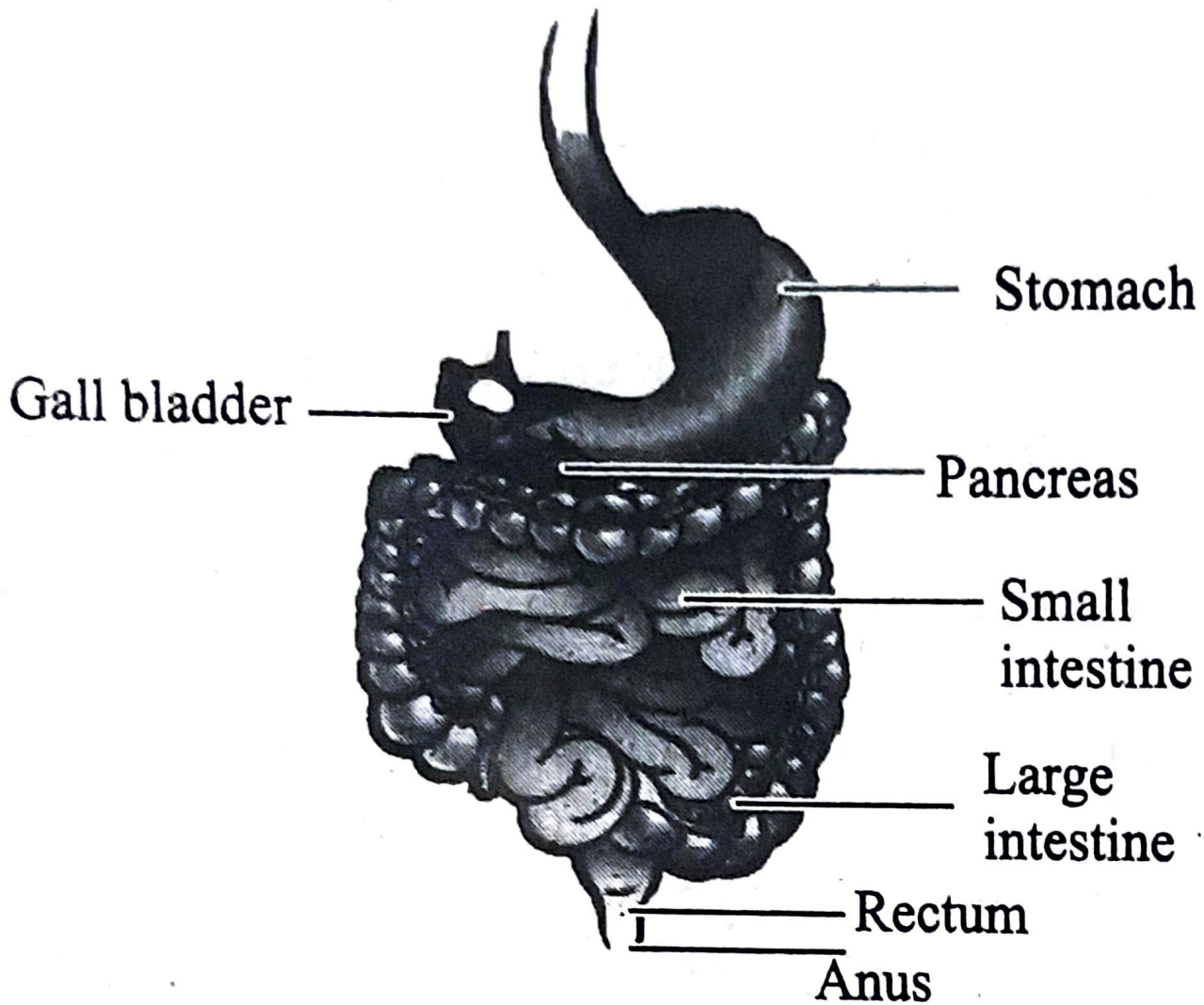
Ans.

Column I	Column II
(a) Salivary gland	(iii) Saliva secretion
(b) Stomach	(iv) Acid release
(c) Liver	(i) Bile juice secretion
(d) Rectum	(ii) Storage of undigested food
(e) Small Intestine	(v) Digestion is completed
(f) Large intestine	(vi) Absorption of water

Q. 12. Label the figure of the digestive system given below.



Ans.



A part of human digestive system

Q. 13. Can we survive only on raw, leafy vegetables / grass ? Discuss.

Ans. Human beings are Heterotrophs i.e., they cannot synthesise their own food. They depend on green plants for their food directly or indirectly. The green plants produce their own food in the form of glucose and they can provide sufficient energy to survive.