

(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

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

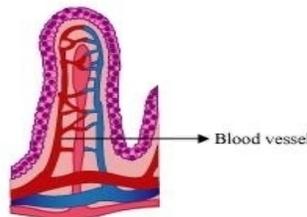
| Column I | Column II |
|-----------------|--------------------------|
| Food components | Product(s) of digestion |
| Carbohydrates | Fatty acids and glycerol |
| Proteins | Sugar |
| Fats | Amino acids |

Ans.

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|-----------------|--------------------------|
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5. What are villi? What are their location and function?

Ans. Villi are tiny finger-like projections originating from the walls of the small intestine. They increase the surface area for absorption of the digested food. The blood vessels present inside the villi can absorb the nutrients from the digested food.



Structure of a villus

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

Ans. The liver secretes the bile juice which is stored in the gall bladder. Bile plays an important role in the digestion of fats.

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

Ans. Cellulose is a type of carbohydrate that can be digested by ruminants and not by humans. Ruminants have a large sac-like structure between the small and large intestine where the food containing cellulose is digested by the action of certain bacteria. On the other hand, humans cannot digest cellulose, as the cellulose digesting enzymes are absent in them.

8. Why do we get instant energy from glucose?

Ans. Glucose is a simple sugar. Carbohydrates, when consumed, have to be digested into glucose. As glucose can be easily absorbed in the blood, it provides energy to the body. Hence, when glucose is directly taken, it does not have to be digested and thus acts as an instant source of energy.

9. Which part of the digestive canal is involved.

- (i) Absorption of Food ____.
- (ii) Chewing of Food ____.
- (iii) Killing of Bacteria ____.
- (iv) Complete Digestion of Food ____.
- (v) Formation of Faeces ____.

Ans. (i) Absorption of food small intestine
(ii) Chewing of food buccal cavity
(iii) killing of bacteria stomach
(iv) Complete digestion of food small intestine
(v) formation of faeces large intestine

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

Ans. The similarity between nutrition in Amoeba and human beings.

Both Amoeba and humans require energy for the growth and maintenance of their bodies. This energy is derived from the food that they eat. The food that they consume is always in a complex form and is therefore broken down into simpler forms by the process of digestion. Hence, both these organisms are heterotrophs.

Differences between nutrition in Amoeba and human beings.

| | Digestion in Humans | | Digestion in Amoeba |
|--|---------------------|--|---------------------|
|--|---------------------|--|---------------------|

| | | | |
|-------|---|-------|---|
| (i) | Humans have a mouth and a complex digestive system. | (i) | Mouth and digestive system are absent in Amoeba. |
| (ii) | Digestive juices are secreted in the buccal cavity, stomach, and small intestine. | (ii) | Digestive juices are secreted in the food vacuole. |
| (iii) | Digestion of carbohydrates, proteins and fats start in separate regions. | (iii) | All the food components are digested in the food vacuole. |

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

Ans. No. Humans cannot survive only on raw, leafy vegetables, or grass. It is because the grass is rich in cellulose, which is a type of carbohydrate that humans are not able to digest due to the absence of cellulose-digesting enzymes.

12. Match the items of Column I with suitable items in Column II.

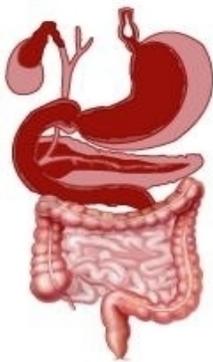
| | Column I | | Column II |
|-----|-----------------|-------|----------------------------|
| (a) | Salivary gland | (i) | Bile juice secretion |
| (b) | Stomach | (ii) | Storage of undigested food |
| (c) | Liver | (iii) | Saliva secretion |
| (d) | Rectum | (iv) | Acid release |
| (e) | Small intestine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

Ans.

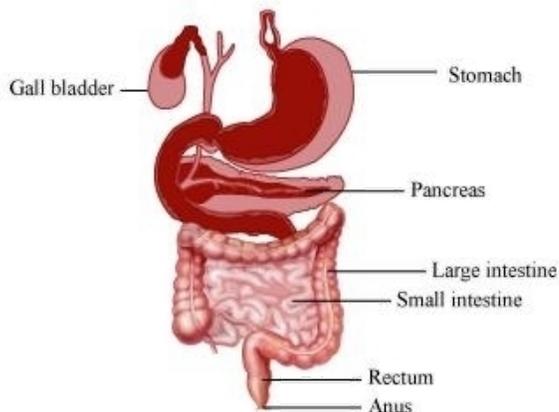
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| | | | |
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| (c) | Liver | (i) | Bile juice secretion |
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| (f) | Large intestine | (vi) | Absorption of water |

13. Label the following figure of the digestive system.



Ans. A part of the human digestive system



14. Name the following:

- (a) It digests carbohydrates, proteins and fats in the small intestine.
- (b) It transports the nutrients from the undigested food to every cell of the body.

- (c) It breaks down starch into sugar in the mouth.
- (d) It produces bile juice.
- (e) It secretes pepsin.
- (f) They are building blocks of proteins.
- (g) It protects the lining of the stomach.
- (h) It secretes pancreatic juice.

Ans. (a) Pancreatic juice

- (b) Blood
- (c) Amylase
- (d) Liver
- (e) Gastric juice
- (f) Amino acids
- (g) Mucosa
- (h) Pancreas