



UNIQUE STUDY POINT

Class 7 Science Chapter 2 Nutrition in Animals

EXERCISES

Question 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 _____.

Answer: (a) The main steps of nutrition in humans are **ingestion, digestion, absorption, assimilation** and **egestion**.

- (b) The largest gland in the human body is **Liver**.
- (c) The stomach releases hydrochloric acid and **digestive** juices which act on food.
- (d) The inner wall of the small intestine has many finger-like outgrowths called **villi**.
- (e) Amoeba digests its food in the **food vacuole**.

Question 2: Mark (T) if the statement is true and (F) if it is false:

- (a) Digestion of starch starts in the stomach. (T/F)
- (b) The tongue helps in mixing food with saliva. (T/F)
- (c) The gall bladder temporarily stores bile. (T/F)
- (d) The ruminants bring back swallowed grass into their mouth and chew it for some time. (T/F)

Answer: (a) False

- (b) True
- (c) True
- (d) True

Question 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**

Answer: (iii) small intestine

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

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

Answer: (iv) large intestine

Question 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

Answer:

Column- I	Column- II
Food components	Product(s) of digestion
Carbohydrates	Sugar

Proteins	Amino acids
Fats	Fatty acids and glycerol

Question 5: What are villi? What is their location and function?

Answer: The inner walls of the small intestine have thousands of finger-like outgrowths. These are called villi (singular villus). The villi increase the surface area for absorption of the digested food. Each villus has a network of thin and small blood vessels close to its surface. The surface of the villi absorbs the digested food materials.

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

Answer: Bile juice is produced in the liver, and it helps in the digestion of fats by breaking large fat globule into smaller ones.

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

Answer: Cellulose is the carbohydrate that can be digested by ruminants but not by humans because humans lack cellulase enzyme required to digest the cellulose.

Or

Cellulose is a type of carbohydrate that can be digested by ruminants and not by humans. Ruminants have a large sac-like structure between 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.

Question 8: Why do we get instant energy from glucose?

Answer: Glucose is a simple sugar which is easily absorbed by the blood whereas other carbohydrates are first broken down into glucose and then absorbed; hence, glucose gives instant energy.

Question 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 _____.

Answer:

- (i) Small intestine
- (ii) Mouth
- (iii) Stomach
- (iv) Small intestine
- (v) Large intestine

Question 10: Write one similarity and one difference between the nutrition in amoeba and human beings.

Answer: Similarity: Both amoeba and human beings follow the holozoic type of nutrition.

Difference: Humans intake food through buccal cavity. In amoeba food is ingested through pseudopodia.

Or

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 <i>Amoeba</i>
Humans have a mouth and a complex digestive system.	Mouth and digestive system are absent in <i>Amoeba</i> .
Digestive juices are secreted in the buccal cavity, stomach, and small intestine.	Digestive juices are secreted in the food vacuole.
Digestion of carbohydrates, proteins, and fats starts in separate regions.	All the food components are digested in the food vacuole.

Question 11: Match the items of Column I with suitable items in Column II

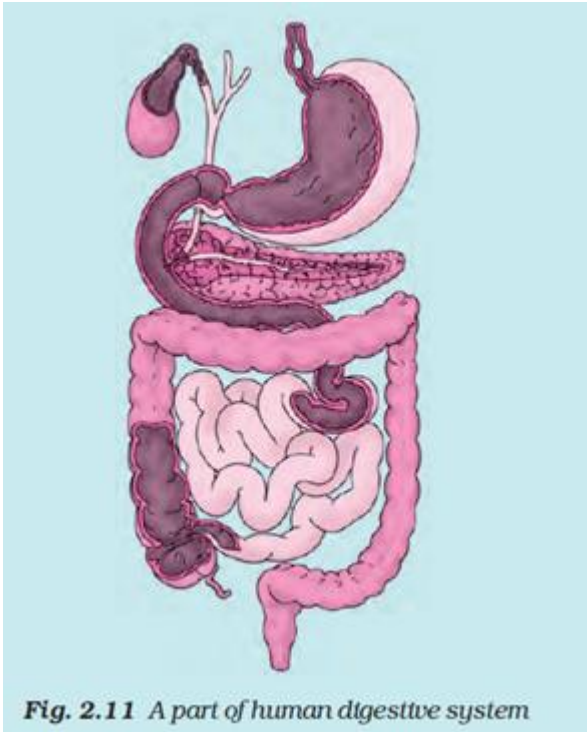
Column-I	Column-II
a) Salivary gland	(i) Bile juice secretion
b) Stomach	(ii) Storage of undigested food
c) Liver	(iii) Saliva secretion
d) Rectum	(iv) Acid release
e) Small intestine	(v) Digestion is completed
f) Large intestine	(vi) Absorption of water
	(vii) Release of faeces

Answer:

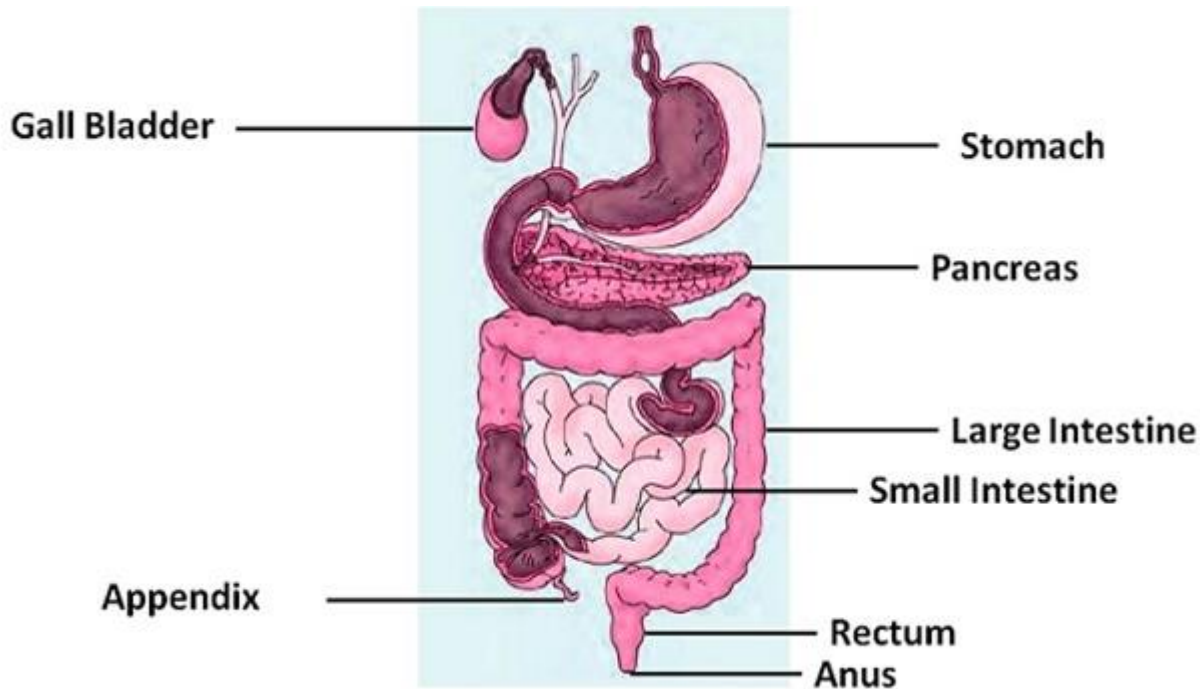
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c) Liver	(i) Bile juice secretion
d) Rectum	(ii) Storage of undigested food

e) Small intestine	(v) Digestion is completed
f) Large intestine	(vi) Absorption of water

Question 12: Label Fig. 2.11 of the digestive system.



Answer:



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

Answer: No, we cannot survive only on raw, leafy vegetables because they mainly consist of Cellulose which cannot be digested by us due to lack of cellulose digesting enzyme in our body.

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