

NCERT Solutions for Class 7

Science

Chapter 2 – Nutrition in Animals.

1. Fill in the blanks:

a. The main steps of digestion in humans are -----, -----, -----, ----- and -----.

Ans: ingestion, digestion, absorption, assimilation and egestion.

b. The largest gland in the human body is -----.

Ans: Liver.

c. The stomach releases hydrochloric acid and ----- juice which acts on food.

Ans: Gastric.

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

Ans: Villi.

e. Amoeba digests its food in the -----.

Ans: Food vacuole.

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

a. Digestion of starch starts in the stomach.

Ans: F

Digestion of starch starts from the mouth.

b. The tongue helps in mixing food with saliva.

Ans: T

c. The gallbladder temporarily stores bile.

Ans: T

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

Ans: T

3. Tick () mark the correct answers in each of the following:

a. Fat is completely digested in the

- i. Stomach**
- ii. mouth**
- iii. Small intestine**
- iv. large intestine.**

Ans: (iii) Small intestine.

Fats are completely digested in the small intestine because it gets bile from the liver through the gallbladder which is responsible for fat digestion.

b. Water from the undigested food is absorbed mainly in the

- i. Stomach**
- ii. mouth**
- iii. Small intestine**
- iv. large intestine.**

Ans: (iv) Large intestine.

As it takes several hours for the food to travel to enter the large intestine through the digestive tract, the water from the undigested food should be cleaned, this process takes place in the large intestine.

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

Column I	Column II
Food Components	Products of digestion
Carbohydrates	Fatty acids and glycerol
Proteins	Sugar
Fats	Amino acids

Ans:

Column I	Column II
Food Components	Products of digestion
Carbohydrates	Sugar
Proteins	Amino acids
Fats	Fatty acids and glycerol.

The food components we take contain carbohydrates, proteins and fats, which are then broken down by the digestive system into digestible ones such as sugar, amino acids and fatty acids, glycerol respectively.

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

Ans:

- a. The finger-like projections present in the inner wall of the small intestine are called villi.
- b. Villi serves the function of increasing the surface area of the small intestine for absorption of digested food.

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

Ans:

- a. Bile is produced by the liver. The gallbladder is where it is stored temporarily.
- b. Fat is the component of food that is digested by bile juices.

7. Name the carbohydrate that can be digested by ruminants but not the human beings. Give the reason also.

Ans: Cellulose can be digested by ruminants but not by human beings. Because ruminants have a large sac-like structure called rumen between the oesophagus and the small intestine. The cellulose of the food is digested here by the action of certain bacteria which are not present in humans.

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

Ans: Cellulose is the carbohydrate which can be digested by the ruminants but not by the humans as humans do not have rumen. The cellulose of the food is digested by the action of bacteria which is present in the rumen by the rumination process.

9. Why do we get instant energy from glucose?

Ans: Glucose is the simplest carbohydrate which undergoes oxidation and can be broken easily to give a high energy molecule that provides energy for cells and the bloodstream by which we get instant energy.

10. Which part of the digestive canal is involved in:

- a. Absorption of food -----.
- b. Chewing of food -----.
- c. Killing of Bacteria -----
- d. Complete digestion of food -----.
- e. Formation of faeces -----.

Ans:

- a. small intestine
- b. buccal cavity
- c. stomach
- d. small intestine

e. large intestine

11. Write one similarity and one difference between the nutrition in amoeba and human beings.

Ans: Similarity: Both humans and amoeba require food for the cellular processes. Difference: Amoeba takes food by pseudopodia and digests it in there while humans eat food which gets digested at different parts of the digestive tract.

12. Match the items of Column I with suitable items in 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 complete
f. Large intestine	(vi) Absorption of water (vii) Release of faeces

Ans:

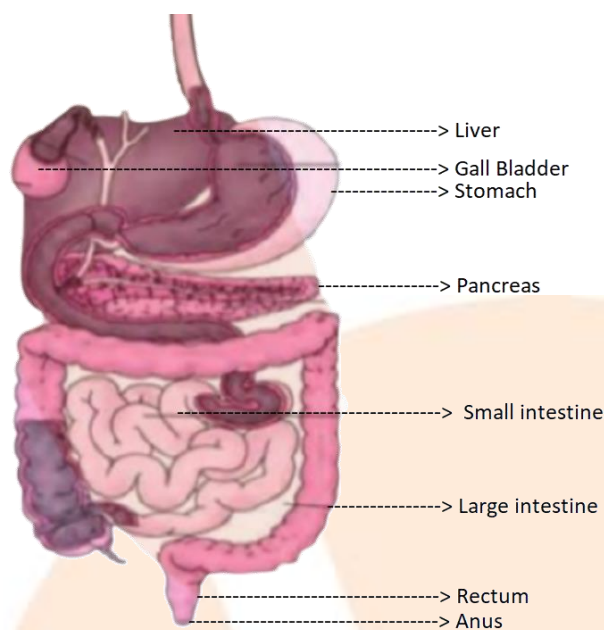
a. Salivary gland	(iii) Saliva secretion
b. Stomach	(iv) Acid release

c. Liver	(i) Bile juice secretion
d. Rectum	(vii) Release of faeces
e. Small intestine	(v) Digestion is complete
f. Large intestine	(vi) Absorption of water and (iv) Acid release

13. Label fig. 2.2 of the digestive system.



Ans:



Human Digestive System

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

Ans:

- No, we cannot survive only on raw, leafy vegetables/grass, because to live a healthy life we should have a balanced diet with all the nutrients.
- Raw vegetables and grasses only provide fibres which is not enough for the body. So, these green leafy vegetables will not serve the purpose.