St. Andrews Scots School

Adjacent Navniti Apartments,
I.P. Extension, Patparganj, Delhi – 110092
Session: 2025 – 2026
(Answer Key)

Class: VII | **Subject: Science** | **Chapter: Nutrition in animals**

Checkpoint 1.

1. Eating 2. Earthworm 3. Parasitic 4. Ingestion 5. Assimilation

Checkpoint 2.

1. Incisors 2. Taste buds 3. Milk and permanent 4. Enamel

Checkpoint 3.

1. Starch 2. Villi 3. Bile 4. Hydrochloric acid 5. Ruminants

Practice time

A. Tick the correct answers.

1. (d) 2. (a) 3. (b) 4. (a) 5. (c) 6. (d)

B. Assertion and Reason.

1. (d) 2. (a) 3. (b) 4. (c)

C. Match the columns.

1. (c) 2. (e) 3. (f) 4. (a) 5. (d) 6. (b)

D. Very short answer type questions.

1. Salivary amylase. It digests starch into simple sugars (maltose and glucose).
2. Premolars and Molars. They are used for grinding and chewing the food.
3. Pancreatic juices.
4. Small intestine and large intestine.
5. Rumen.
6. The partially digested food which is taken back into the mouth from stomach for

rechewing by the ruminants is called cud.

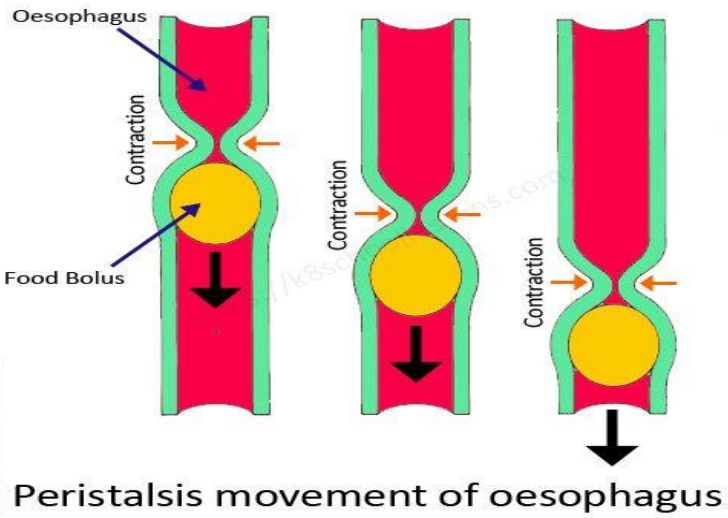
7. No, cellulose is not digested in man because the caecum, where cellulose is digested, is reduced and cellulose-digesting bacteria are absent.

E. Short answer type questions.

1. Amoeba captures food by pushing finger-like projections called pseudopodia around the food and engulfing it inside the cell.

2. Hydrochloric acid kills bacteria that enter stomach along with food and water. It also makes food acidic for the action of digestive enzymes secreted by gastric glands.

3. (a) Peristaltic movements.
   (b) They are produced by a series of contraction and relaxation of muscles of alimentary canal.
   (c) These movements help the food move along the length of alimentary canal and churn the food into a fine paste to mix well with digestive juices.



Peristalsis movement of oesophagus

4. Bile juice makes the food alkaline and helps in the digestion of fat.

5. (a) Cows and buffaloes are called ruminants because a part of their stomach called rumen is specialised to store half-chewed food.
   (b) In caecum.

6. Rumen, Reticulum, Omasum, and Abomasum are the parts of a ruminant stomach. Abomasum is the true stomach.

7. Animals that eat dead and decaying matter of plants and animals present in the soil are called saprophagous animals, e.g, earthworms.

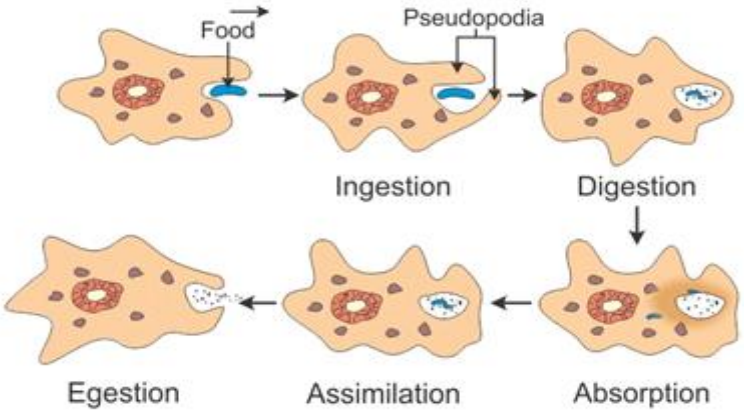
8. Assimilation is utilisation of absorbed nutrients by the body cells for energy and synthesis of new substances.

   Different nutrients are assimilated in following ways:
   1. Glucose is used to release energy in the cells.
   2. Amino acids are used to build new substances for the cells.
   3. Fats are stored in the fatty tissues in various parts of the body.

9. In ruminants, cellulose is digested with the help of cellulose-digesting bacteria which are found in the caecum part of their alimentary canal.

F. Long answer type questions.

1. Steps involved in the process of nutrition are ingestion, digestion, absorption, assimilation and egestion.
   Process of nutrition in Amoeba:
   1. Ingestion : Amoeba pushes finger-like pseudopodia around its food and engulfs it.
   2. Digestion : The engulfed food is digested inside the food vacuole.
   3. Absorption : The digested food diffuses into the surrounding cytoplasm.
   4. Assimilation : The absorbed food is used for energy, growth and repair.
   5. Egestion : The undigested food is expelled from the body surface at any point.



Nutrition in Amoeba

2. Digestion is the process of breaking down food into simple soluble molecules by the action of digestive enzymes.

   Role of saliva in digestion: Saliva moistens the food and makes the chewed food slimy for easy swallowing. It contains enzyme salivary amylase which digest starch into glucose and maltose.

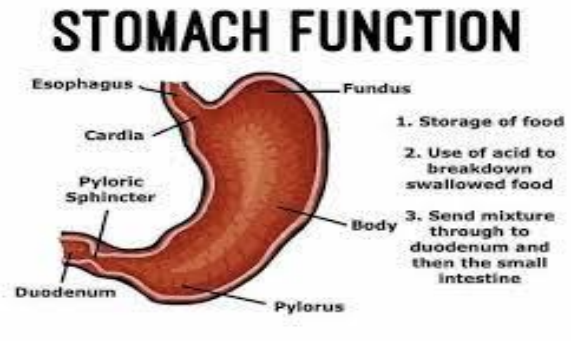
   Role of bile juice in digestion: Bile juice makes the food alkaline and helps in the digestion of fat.

Role of pancreatic juice in digestion: It helps in the digestion of proteins and carbohydrates.

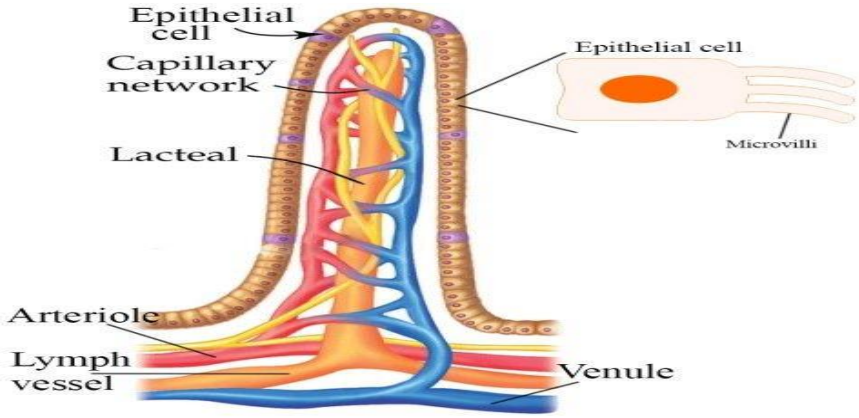
3. (a) (i) Starch converts into maltose in turn changes into glucose.
(ii) Protein breaks into amino acids.
(iii) Fats break into fatty acids and glycerol.

(b) The nutrients in their simplest form are absorbed by small intestine and are passed to all cells of body through blood. Inside the cells, they are assimilated for following purposes :
(i) Glucose is used as fuel for getting energy.
(ii) Amino acids are used for building new living material for growth or repair of cells.
(iii) Fatty acids and glycerol are stored as fat in the fatty tissue of various parts of the body.

4. Stomach has following functions :
(i) It churns food into fine paste called chyme and mixes the digestive juices with it.
(ii) It secretes hydrochloric acid which kills bacteria that come along with food and makes food acidic for the action of enzymes.
(iii) The chemical digestion of proteins starts in stomach.



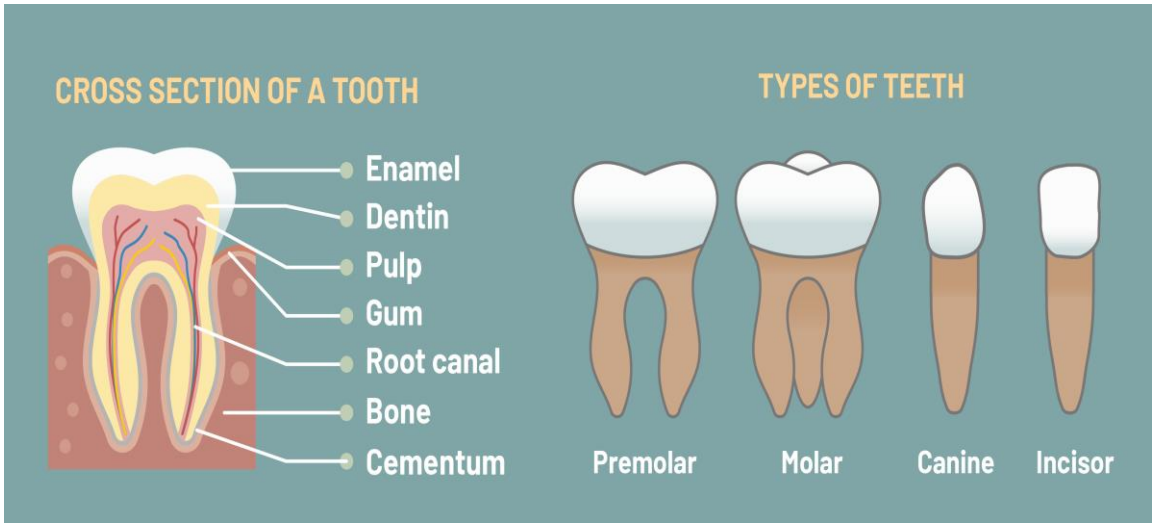
5. The lining of small intestine is very thin which allows rapid entry of substances. Its inner wall contains numerous finger-like projections called villi which increase the surface area of intestine to about five times for the absorption of digested food. The villi are richly supplied with blood vessels to carry away absorbed nutrients.



Structure of villi

6. Four types of teeth are found in man. These are :
   (a) Incisors for biting the food.
   (b) Canines for tearing the food.
   (c) Premolars for grinding and chewing the food.
   (d) Molars are also for grinding and chewing the food.

   Care of teeth can be taken by :
   (a) Avoiding sticky and starchy foods, sweets, ice cream etc.
   (b) Brushing teeth twice a day.
   (c) Rinsing mouth after eating.
   (d) Massaging teeth
   (e) Eating raw foods such as carrot, radish, fruits for self-cleaning of teeth.



G. HOTS Questions;

1. In herbivores, caecum contains cellulose-digesting bacteria. These bacteria are not found in the caecum of man. Hence, it is nonfunctional and is not well developed.

2. It is because the enzyme, salivary amylase in saliva changes starch of chapatti into maltose which is sweet in taste.

3. (a) - (i)
   (b) - (iii)
   (c) - (iv)
   (d) - (ii)

Passage/Case-based questions:

1. 1. Salivary gland 2. Mouth 3. Liver 4. Stomach 5. Pancreas
6. Caecum 7. Small intestine 8. Large intestine 9. Rectum 10. Anus

2. **Functions of mouth:** In mouth, the food is chewed and masticated by teeth into a fine paste. It is moistened and starch is converted into maltose with the help of saliva.
Functions of stomach: It churns food into a fine paste called chyme. It mixes hydrochloric acid and digestive juice to the food. Food is partially digested in the stomach.
Functions of pancreas: It releases the pancreatic juice which helps in the digestion of carbohydrates and proteins.
Functions of large intestine: It absorbs water and salts from undigested food.

J. Value based question:

(a) The yellow and sticky film is plaque. The sugary and starchy food stuck to plaque are acted upon by the bacteria that form acid. This acid dissolves enamel of tooth and leads to tooth decay.

(b) Enamel is the hardest substance in our body.

(c) Gautam is a caring person.