

**Class: 7**

**Subject: Biology**

**Topic: Nutrition in Animals**

**No. of Questions: 20**

Q1. What do you understand by animal nutrition?

Sol. Animal nutrition includes requirement of nutrients, mode of intake of food, and its utilization in the body.

Q2. What are the main steps of digestion in humans?

Sol. The main steps of digestion in humans are ---

(1) Ingestion (2) Digestion (3) Absorption (4) Assimilation (5) Egestion

Q3. What is digestion?

Sol. The breakdown of complex components of food such as carbohydrates into simpler substances is called digestion

Q4. Name the process of taking in food?

Sol. Ingestion.

Q5. What are the different modes of taking food into the body in different organisms?

Sol. Scraping, chewing, brewing, capturing and swallowing, sucking etc. are the different mode of feeding in animals

Q6. Name the type of food and mode of feeding of the following animals-

(a) Ant (b) Mosquito

Sol. (a) Ant: Type of food-Sugar, food particles

Mode of feeding -Scraping

(b) Mosquito: Type of food- Blood Mode of feeding -Sucking

Q7. What are the main organs of digestive system?

Sol. The main organs of digestive system are liver , gall bladder, Stomach, Pancreas, Small intestine, Large intestine , Rectum ,Anus. The digestive tract and the associated glands together constitute the digestive system.

Q8. What are Milk teeth and permanent teeth?

Sol. The first set of teeth grows during infancy and they fall off at the age between six to eight years. These are termed milk teeth.

The second set that replaces them are the permanent teeth. The permanent teeth may last throughout life or fall off during old age.

Q9. What is mastication?

Sol. Mixing of saliva with chewed food is called mastication. It moistens the food and helps in swallowing food.

Q10. Write the functions of the tongue.

Sol. The functions of the tongue are as follows:

(1) It is used for talking.

(2) It mixes saliva with the food during chewing and helps in swallowing food.

(3) It is used to identify the taste of food like sweet or salty etc. due to presence of taste buds on it.

Q11. What is peristalsis?

Sol. The powerful muscles in esophagus gently push food down to the stomach in a wave - like action, called peristalsis.

Q12. What happens to the food in different parts of the digestive tract?

Sol. The mouth: Our mouth has the salivary glands which secrete saliva. The saliva breaks down the starch into sugars.

- a. Esophagus - It is a long, narrow, muscular tube which directly leads to the stomach. It is about 25 cm long and passes downwards through the neck, the thorax and the abdominal cavity. Esophagus gently pushes masticated food down to the stomach in a wave - like action, called peristalsis.
- b. The stomach: The inner lining of the stomach secretes mucous, hydrochloric acid and digestive juices. The mucous protects the lining of the stomach by neutralizing acid produced by gastric juice. The hydrochloric acid kills many bacteria that enter along with the food and makes the medium in the stomach acidic. The digestive juices break down the proteins into simpler substances
- c. The small intestine: The small intestine is highly coiled and is about 7.5 metres long.
- d. Liver (reddish brown ) is the largest gland in the body. It secretes bile juice that is stored in a sac called the gall bladder. It digests fats. The pancreas is cream colored gland secretes pancreatic juice that acts on carbohydrates and proteins and changes them into simpler forms. The carbohydrates get broken into simple sugars such as glucose, fats into fatty acids and glycerol, and proteins into amino acids. The digested food can now pass into the blood vessels in the wall of the intestine having thousands of finger-like villi. The surface of the villi absorbs the digested food materials. The absorbed substances are transported via the blood vessels to different organs of the body
- e. Large intestine: The food that remains undigested and unabsorbed then enters into the large intestine. It is about 1.5 meter in length. Its function is to absorb water and some salts from the undigested food material.

Q13. What are secreted inside the stomach?

Sol. Gastric juice is secreted by the walls of stomach which contains HCl and Pepsin.

HCl helps to kill the germs present in the food.

After mixing with the food it makes an acidic medium which is essential for the activation of pepsin enzyme. Pepsin digests protein into peptides.

Q14. What are digestive enzymes?

Sol. There are different types of enzymes which are used for the digestion of different food materials like carbohydrates, fats, protein etc. The process of digestion involves the association of several catalytic organic compounds. These are amylase, pepsin, lipase, trypsin etc. These organic compounds are known as digestive enzymes.

Q15. Why do we get instant energy from glucose?

Sol. Glucose is the simplest form of carbohydrate that can be easily broken down to give energy. Hence, we get instant energy from glucose. Moreover, glucose mixes directly into the blood stream making it readily available to the body.

Q16. What is absorption?

Sol. The digested food passes into the blood vessels through the wall of the intestine. This process is called absorption.

Q17. What is the role of villi performing in the small intestine?

Sol. The villi increase the surface area for absorption of the digested food. The surface of the villi absorbs the digested food materials and pass into blood. The absorbed substances are transported via the blood vessels to different organs of the body

Q18. What is assimilation?

Sol. Absorbed digested food materials transported via the blood vessels to different organs of the body where they are used to build complex substances such as the proteins required by the body. This is called assimilation

Q19. What is egestion?

Sol. The process of the removal of waste fecal matter through the anus from time-to-time is called egestion.

Q20. What is Rumination?

Sol. A process in which partially digested food returns to the mouth in small lumps and the animal chews it. This type of process is called Rumination and such types of animals are called Ruminants.

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