

# Science Class 7 Important Question Chapter 2 Nutrition in Animals

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## 1. Fill in the blanks:

a) \_\_\_\_\_ is the elimination of unused parts of the food.

Ans: Egestion .

b) The digestive system in humans consists of \_\_\_\_\_ and \_\_\_\_\_.

Ans: alimentary canal and digestive glands.

c) The first set of teeth that grow during infancy and fall off between 6-8 years of age is \_\_\_\_\_.

Ans: milk teeth.

d) The working of the stomach was discovered by \_\_\_\_\_.

Ans: William Beaumont.

## 2. Define Nutrition in animals.

Ans: Nutrition in animals is very important. Some of them are plant-eating while others are carnivores. It includes the process of food ingestion, digestion, absorption and assimilation by the cells of their body. It also includes the removal of unused portions of food.

## 3. Differentiate between absorption and assimilation.

Ans: The difference between absorption and assimilation is as follows:

### Absorption

Absorption is the process of ingestion of the digested food from the alimentary canal into the bloodstream through the intestinal villi.

### Assimilation

Assimilation is the process of ingestion of digested food and nutrients and the synthesis of new compounds from the molecules that are absorbed to perform respiration and metabolism.

#### 4. What is the function of the large intestine in digestion?

**Ans:** The large intestine reabsorbs all the excess water from unabsorbed and undigested food. Thus, it helps in making the unabsorbed portion of the food as faeces and its elimination by excretion. Thus, returning most of the water to the blood can prevent excess water loss as well as eliminate unabsorbed food from the body.

#### 5. List the different types of teeth present in humans and their functions.

**Ans:** The different types of teeth present in humans and their functions are:

**Incisors:** Incisors or the front teeth are the eight visible teeth that are used to bite the food.

**Canines:** Next to incisors are the canines that are used to tear flesh or other food items. These are very sharp and come in around nine to twelve years of age.

**Premolars:** Next to canines are the premolars which are typically used for grinding and chewing food.

**Molars:** Molars are replaced by the eight premolars. They serve the primary function of chewing and grinding food into small particles.

#### 6. What is diarrhoea?

**Ans:** When excess water from digested food is not reabsorbed, it is passed out through the stool which is loose and watery. Passage of this watery stool frequently is called diarrhoea which is caused by a microbial infection of the alimentary canal. This can lead to severe dehydration that can be controlled by using Oral Rehydration Solutions (ORS).

#### Long Answer Questions (5 Marks)

##### 1. Explain nutrition in starfish.

**Ans:** Starfish is an aquatic invertebrate. It has a unique way of obtaining nutrition from other animals.

**Ingestion:** The mouth of the starfish is on the underside of their body. They wrap themselves around the prey and open the shell of the prey. Then through their mouth they push their stomach out and ingest the soft animal.

**Digestion:** They digest the animal in the stomach and draw its stomach back into its body.

**Absorption and assimilation:** This allows them to feed on organisms larger than the ones which can fit into their small mouth.

## 2. Explain the process of nutrition in amoeba.

**Ans:** The process of nutrition in amoeba is done through holozoic nutrition and the process is called phagocytosis.

**Ingestion:** Amoeba moves closer to its food with the help of pseudopodia and encircles it forming a food vacuole to engulf the food.

**Digestion:** The food is then digested using digestive enzymes present in the lysosomes.

**Absorption and assimilation:** The digested food is absorbed by the cytoplasm and the energy thus produced from the food is used to perform different life processes.

**Egestion:** To excrete the undigested food, an amoeba ruptures its cell wall and releases it out of the cell.

## 3. Explain the process of digestion and absorption in the small intestine.

**Ans:** The process of digestion as well as absorption in small intestine is as follows:

**Digestion:** Digestion in the small intestine is accomplished by the action

of digestive juices from the liver, pancreas and small intestine. The bile juice secreted by the liver helps in the digestion of fats, breaking down the big fat droplets into smaller droplets. It does not contain any enzymes. Pancreatic juice secreted by the pancreas contains enzymes for the digestion of carbohydrates, proteins and lipids. Pancreatic amylase helps in the digestion of carbohydrates while trypsin helps in the digestion of proteins. The enzymes of the intestinal juice eventually break down carbohydrates, proteins and lipids into their simplest components such as glucose, amino acids, fatty acids and glycerol etc.

**Absorption:** Absorption takes place through the walls of the intestine

that are lined with finger-like projections known as villi. These villi improve the surface area available for nutritional absorption. The villi contain blood vessels and hence the digested food is absorbed directly into the bloodstream.

## 4. Explain the importance of rumen in ruminants.

**Ans:** Rumen is a part of the stomach in grass-eating animals. It stores the food that the ruminant reproduces, chews again and swallows a second time. Specific bacteria found in the rumen aid in the digestion of cellulose. Ruminants can chew their ruminants for hours every day. The rumen contains many small organisms that aid in the digestion of food such as grass whose cell walls cannot be easily digested by other animals. Cud, or partially

digested food, is then reintroduced into the mouth for easier chewing. This process of cud-chewing even when the animal is not eating is called rumination. The rumen ferments this food through the formation of gas, which must be expelled by belching to prevent bloating.