



## Class VII Science

### Nutrition In Animals

**1) What is Buccal cavity?**

**Ans :** Buccal cavity is a scientific and anatomical term for the inside of the mouth. Buccal means relating to the mouth and a cavity is a hollow spot inside the body.

**2) Name the different types of teeth present in the buccal cavity?**

**Ans:** The different teeth present in the Buccal Cavity are incisors, canines, premolars and molars.

**3) Describe the role of salivary glands in digestion**

**Ans: Salivary glands** are present inside the Buccal Cavity. They secrete saliva. This saliva plays an important role in breaking down complex components like starch, which is further simplified into sugars

**4) What do you understand by nutrition?**

**Ans:** The process of utilising **nutrients** like carbohydrates, proteins, fats, etc., to generate energy is called **nutrition**

**5) Define digestion**

**Ans:** The components of food such as carbohydrates are complex substances. These complex substances cannot be utilised as such. So they are broken down into simpler substances. The breakdown of complex components of food into simpler substances is known as digestion

**6) What is the process of taking in food known as**

**Ans :** Ingestion

**7) How can we test the presence of starch in food?**

**Ans:** If we take a food item in a test tube and add 2-3 drops of iodine solution to it, we observe that iodine turns blue black. This confirms the presence of starch

**8) What are the essential nutrients in human diet?**



**Ans:** Protein, Carbohydrate, Fats, Vitamins, Minerals, water and roughage

**9) What do you understand by - "Milk Teeth"**

**Ans:** 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.

**10) Describe the role of tongue**

**Ans:** The tongue is a fleshy muscular organ attached at the back to the floor of the buccal cavity. It is free at the front and can be moved in all directions.

- a) We use our tongue for talking.
- b) It mixes saliva with the food during chewing and helps in swallowing food.
- c) We also taste food with our tongue.

**11) How does tooth decay occur?**

**Ans:** If we do not clean our teeth and mouth after eating, many harmful bacteria also begin to live and grow in it. These bacteria break down the sugars present from the leftover food and release acids. The acids gradually damage the teeth. This is called **tooth decay**.

**12) How does swallowed food move in the food pipe?**

**Ans:** Food is pushed down by movement of the wall of the foodpipe. This movement takes place throughout the alimentary canal and pushes the food downwards

**13) Describe the process of digestion in Stomach**

**Ans:** The stomach is a thick-walled bag. Its shape is like a flattened U and it is the widest part of the alimentary canal. It receives food from the food pipe at one end and opens into the small intestine at the other.

The inner lining of the stomach secretes mucous, hydrochloric acid and digestive juices.

- a) The mucous protects the lining of the stomach.





- b) The acid kills many bacteria that enter along with the food. It also makes the medium in the stomach acidic and helps the digestive juices to act.
- a) The digestive juices break down the **proteins** into simpler substances.

#### 14) What is the role of liver in digestion?

**Ans:** Liver secretes bile juice. The bile plays an important role in the digestion of fats.

Bile breaks the larger fat molecules into tiny droplets, thereby increasing their surface area, which helps enzymes to act on it and digest fats easily

Bile is stored in a sac called the gall bladder

#### Important

The liver is a reddish brown gland situated in the upper part of the abdomen on the right side. It is the largest gland in the body.

#### 15) Describe the process of digestion in small intestine

**Ans:** In the small intestine, food enters from the stomach.

It is acted upon by secretions from the liver and the pancreas.

Bile juice secreted by liver breaks fat molecules and the pancreatic juice acts on carbohydrates, fats and proteins and changes them into simpler forms

The partly digested food now reaches the lower part of the small intestine where the intestinal juice completes the digestion of all components of the food. The carbohydrates get broken into simple sugars such as glucose, fats into fatty acids and glycerol, and proteins into amino acids

#### 16) What do you understand by ABSORPTION?

**Ans :** The passage of digested food can now pass into the blood vessels in the wall of the intestine is called **absorption**.



**17) How are the walls of small intestine designed to facilitate the process of absorption?**

**Ans:** 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. The absorbed substances are transported via the blood vessels to different organs of the body.

**18) Define and describe assimilation**

**Ans:** The process by which digested food that are absorbed by walls of intestine are carried out to different organs of the body through blood vessels to build complex substances such as proteins that is required by our body is known as assimilation.

The digested food absorbed by the walls of small intestine are transported via the blood vessels to different organs of the body.

**19) How is energy released in the cells of our body**

**Ans:** In the cells, glucose is broken down with the help of oxygen into carbon dioxide and water, and energy is released.

**20) Define Egestion**

**Ans: Egestion** is the act of excreting unusable or undigested material from a cell, as in the case of single-celled organisms, or from the digestive tract of multicellular animals.

From the small intestine the food that remains undigested and unabsorbed enters into the large intestine.

The function of LARGE INTESTINE is to absorb water and some salts from the undigested food material. The remaining waste passes into the rectum and remains there as semi-solid faeces. The faecal matter is removed through the anus from time-to-time.

**21) What are ruminants?**





**Ans:** Grass eating animals like cows, buffaloes are called ruminants because they have a separate part of stomach called **rumen**. They quickly swallow the grass and is stored in **rumen** where it is partially digested forming cud.

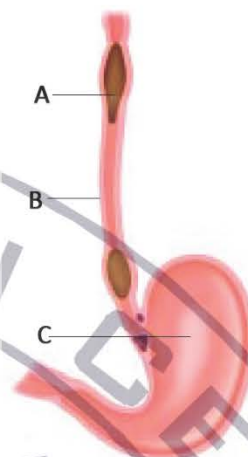
**22) Label A, B and C in the figure**

**Ans:**

A – Food

B – Oesophagus

C – Stomach



**23) Describe Rumination.**

**Ans:** Grass eating animals like cows quickly swallow the grass and store it in a part of the stomach called **rumen**. Here the food gets partially digested and is called **cud**.

But later the cud returns to the mouth in small lumps and the animal chews it. This process is called **rumination** and these animals are called **ruminants**.

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.

**24) Describe the process of digestion in amoeba**

**Ans:** Amoeba has tiny finger like projections called **pseudopodia** or false feet for movement and capture of food. It engulfs tiny organisms by spreading out its pseudopodia around its food particle.

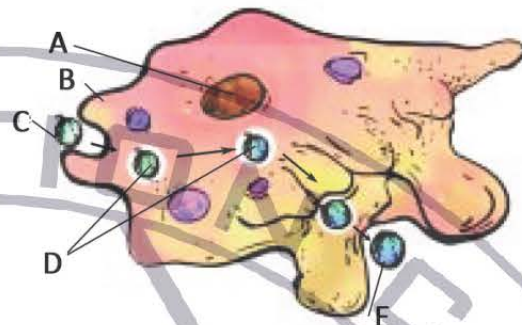
The food gets trapped inside **food vacuole**, into which digestive juices are secreted and convert them into simpler substances.

The digested food is then absorbed which is required for growth, maintenance and multiplication.

The undigested food is expelled out by vacuole.

**25) Label A, B C, D and E in the following figure**

**Ans:** A – Nucleus  
B – Pseudopodium  
C – Ingestion  
D – Food Vacuole  
E – Egested Waste



**26) What does animal nutrition include**

**Ans:** Animal nutrition includes nutrient requirement, mode of intake of food and its utilisation in the body.

**27) Name the main parts of human digestive system**

**Ans:** The human digestive system consists of the alimentary canal and secretory glands.

It consists of the

- |                      |   |
|----------------------|---|
| i) Buccal cavity,    | v) Large intestine ending in rectum and |
| ii) Oesophagus,      | vi) Anus                                |
| iii) Stomach,        |   |
| iv) Small intestine, |   |

The main digestive glands which secrete digestive juices are

- The salivary glands,
- The liver and
- The pancreas.

The stomach wall and the wall of the small intestine also secrete digestive juices.

**28) What are the main steps of nutrition?**

**Ans:** Nutrition is a complex process involving: (i) ingestion, (ii) digestion, (iii) absorption, (iv) assimilation and (v) egestion.