



## INDIAN SCHOOL AL WADI AL KABIR

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| <b>Class: VII</b>                              | <b>Department: SCIENCE</b><br><b>2020 - 2021</b> | <b>Date of completion :</b><br><b>30.06.2020</b> |
| <b>Worksheet No.: 4</b><br><b>With answers</b> | <b>Topic: Nutrition in Animals</b>               | <b>NOTE:</b><br><b>A4 FILE FORMAT</b>            |
| <b>NAME OF THE STUDENT:</b>                    | <b>CLASS &amp; SEC:</b>                          | <b>ROLL NO.</b>                                  |

### I. OBJECTIVE TYPE QUESTIONS:

- Which of the following pair of teeth differ in structure but are similar in function?  
i) canines and incisors. **ii) molars and premolars.**  
iii) incisors and molars. **iv) premolars and canines.**
- The swallowed food moves downwards in the alimentary canal because of:  
i) force provided by the muscular tongue.  
ii) the flow of water taken with the food.  
iii) gravitational pull.  
**iv) the contraction of muscles in the wall of food pipe.**
- The finger-like outgrowths of *Amoeba* helps to ingest food. However, the finger-like outgrowths of human intestine help to:  
i) digest the fatty food substances. **ii) make the food soluble.**  
**iii) absorb the digested food.** **iv) absorb the undigested food.**
- The enzymes present in the saliva convert-  
i) fats into fatty acids and glycerol. **ii) starch into simple sugars.**  
iii) proteins into amino acids. **iv) complex sugars into simple sugars.**
- Cud is the name given to the food of ruminants which is-  
i) swallowed and undigested. **ii) swallowed and partially digested.**  
iii) properly chewed and partially digested. **iv) properly chewed and completely digested.**
- In which of the following organs of alimentary canal digestion of food does not take place:  
i) Stomach      ii) Small intestine      **iii) Large intestine**      iv) Mouth
- In digesting which of the components of food will a person, having a liver that does not function properly feel difficulty:  
i) Carbohydrates      ii) Proteins      **iii) Fats**      iv) Sugar

For question numbers 8 to 10, two statements are given- one labelled Assertion (A) and the other labelled Reason (R).

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

- i) Both A and R are true and R is correct explanation of the assertion.
- ii) Both A and R are true but R is not the correct explanation of the assertion.
- iii) A is true but R is false.
- iv) A is false but R is true

8. **Assertion-** Villi are present in the inner lining of stomach.

**Reason-** The villi increase the surface area for absorption of the digested food.

**Ans:** A is false but R is true

9. **Assertion-** The process of digestion begins in the mouth.

**Reason-** The tongue mixes the food with saliva during chewing and help in swallowing food.

**Ans:** ii) Both A and R are true but R is not the correct explanation of the assertion.

10. **Assertion-** Ruminants can digest cellulose.

**Reason-**Ruminants have cellulose digesting bacteria in their stomach.

**Ans:** i) Both A and R are true and R is correct explanation of the assertion.

## **II. BASIC CONCEPTS LEVEL:**

1. What is meant by digestion?

[Digestion is the process of breakdown of complex components of food into simpler substances that is absorbed and assimilated in the body. E.g. Starch is broken down to sugars]

2. What is the role of pseudopodia in nutrition of amoeba?

[Pseudopodia is used by amoeba to capture its prey and also for the movement.]

3. State two functions of tongue.

[Tongue is used for talking. Besides, it mixes saliva with the food during chewing and helps in swallowing food. It has taste buds that detect different tastes of food.]

4. Name different modes of feeding in animals.

[The mode of taking food into the body varies in different organisms. Bees and humming-birds **suck** the nectar of plants, Snakes like the python **swallow** the animals they prey upon.]

5. What is meant absorption of food? [Absorption is the process by which the products of digestion are absorbed by the blood to be supplied to the rest of the body.]

6. What do you understand by the term animal nutrition? [Animal nutrition includes requirement of nutrients, mode of intake of food, and its utilisation in the body]

7. What happens if we do not clean our teeth after eating the food?

[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. If it is not treated in time, it causes severe toothache and in extreme cases results in tooth loss.]

8. What are the major causes of tooth decay? [Chocolates, sweets, cold drinks and other sugar products are the major culprits of tooth decay.]

### III. INTERMEDIATE LEVEL:

1. Distinguish between:

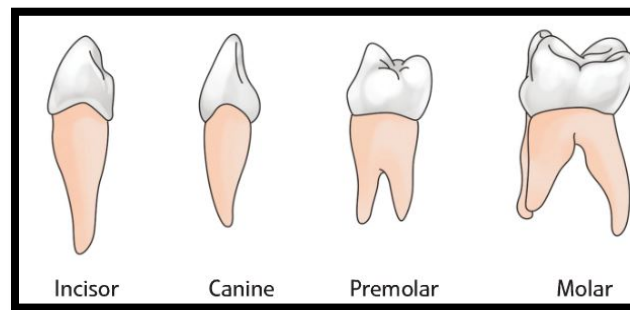
i) Milk teeth and permanent teeth.

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

ii) Ingestion and egestion. [**Ingestion**- Ingestion refers to the process of intake of food.

**Egestion** is the process by which organism get rid of the undigested food as waste.]

2. Draw the different types of teeth and also state their functions.



- Incisors:** There are eight incisors. Four in the upper jaw and four in the lower jaw. The incisor teeth are well adapted for cutting and biting of food items.
- Canines:** These are sharp and pointed teeth. Canines are well adapted to hold and tear the food. There are four canine teeth found in human.
- Premolars:** There are two premolars on each side of each jaw. Premolars help in crushing and grinding the food. There are 8 premolar teeth in an adult human.
- Molars:** There are two molars on both sides in both the jaws. These teeth are meant for fine grinding of food.

3. No digestion takes place in large intestine yet its role is important. Justify.

[Its function is to absorb water and some salts from the undigested food material]

4. Write the measures to be taken to prevent tooth decay.

[One should clean the teeth with a brush or datun (neem twigs) and dental floss (a special strong thread which is moved between two teeth to take out trapped food particles) at least twice a day and rinse the mouth after every meal. Also, one should not put dirty fingers or any unwashed object in the mouth.]

5. What is the effect of saliva on starch?

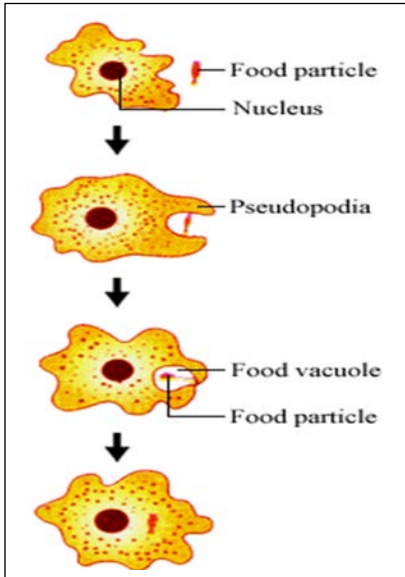
6. [The saliva has enzymes which can break down starch into simple sugars]

### IV. ADVANCED LEVEL:

1. What is diarrhoea? Why do we give ORS to patients suffering from diarrhoea? [Diarrhoea is a condition in which person passes watery stool frequently. It may be caused by an infection, food poisoning or indigestion. Under severe conditions it can be fatal. This is because of the excessive loss of water and salts from the body. Diarrhoea should not be neglected. Even

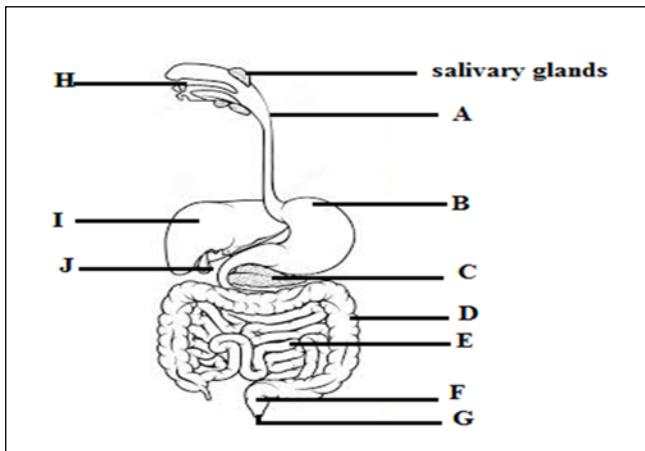
before a doctor is consulted the patient should be given plenty of boiled and cooled water with a pinch of salt and sugar dissolved in it. This is called Oral Rehydration Solution (ORS).]

2. What do you mean by rumination? [The grass eating animals like quickly swallow the grass and store it in a part of stomach called rumen. Here food is partially digested and is called **cud**. But later the cud returns to mouth in small lumps and the animal chews it. This process is called **rumination** and the animals are called **ruminants**].
3. Explain with a neat labelled diagram the process of nutrition in amoeba.



[Amoeba feeds on some microscopic organisms. When it senses food, it pushes out pseudopodia around the food particle and engulfs it. The food becomes trapped in a food vacuole. Digestive juices are secreted into the food vacuole. They act on the food and break it down into simpler substances. Gradually digested food is absorbed and used for growth, maintenance and multiplication.]

4. Label the parts in the given figure.



[A- Oesophagus, B- Stomach, C- Pancreas, D- Large intestine, E- small intestine, F- Rectum-Anus, H- Buccal cavity, I- Liver and J-Gall bladder]

5. Tabulate the importance of various glands associated with digestion.

| S.NO: | GLAND           | IMPORTANCE   |
|-------|-----------------|--|
| 1     | Salivary glands | Salivary glands secrete saliva. Saliva helps in moistening the food for easy swallowing. It has enzymes which breaks down starch to simple sugar(Maltose). |

|   |          |   |
|---|----------|---|
| 2 | Liver    | 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. It secretes bile juice that is stored in a sac called the gall bladder. The bile plays an important role in the digestion of fats. |
| 3 | Pancreas | The pancreas is a large cream coloured gland located just below the stomach. The pancreas secretes pancreatic juice. The pancreatic juice acts on carbohydrates and proteins and changes them into simpler forms.   |

6. Explain the role of stomach in the process of digestion.

[The stomach stores food and serves as the mixer and grinder of food. The inner lining of stomach secretes digestive juice which consist of mucous, hydrochloric acid and enzymes. The **mucous** protects the lining of stomach. The **hydrochloric acid** kills the bacteria that enter along with the food and make the medium inside the stomach acidic. The enzymes break down proteins into simpler substances.]

#### **IV.EXEMPLAR QUESTIONS:**

1. Boojho and Paheli were eating their food hurriedly so that they could go out and play during the recess. Suddenly, Boojho started coughing violently. Think of the reasons why he was coughing?

[Sometimes when we eat hurriedly, talk or laugh while eating, we get hiccups or choking sensation. While swallowing the flap- like valve closes the passage of windpipe and guides food into the food pipe. If the food enters the wind pipe, coughing helps to clear it]

2. Boojho took some grains of boiled rice in test tube 'A' and Paheli took boiled and chewed rice in test tube 'B'. Both of them poured 1 – 2 drops of iodine solution into the test tube and observed the colour change. What colour change would they have observed? Give reasons for your answer.

[In test tube 'A' – blue black colour because of presence of starch. In test tube 'B' – colour of iodine will not change because of digestion of starch into sugars.]

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