

12. The Muscular System and Digestive System in Human Beings

Question 1:

1. Fill in the blanks with the right word from the brackets.

- a) The process of digestion starts from the mouth.
- (b) Eyelids have voluntary muscles.
- (c) Production of blood cells is not a function of the muscular system.
- (d) Muscles of the heart are cardiac muscles.
- (e) Pushing forward the food that has been chewed is the function of the oesophagus.

Question 2:

2. Find a match for me.

- (1) Cardiac muscles - we never feel tired.
- (2) Are brought about by muscles - chewing movements of jaws.
- (3) Pepsin - enzyme of the gastric juice.
- (4) Cramps - uncontrolled and painful contraction of muscles.
- (5) Skeletal muscles - always function in pairs.

Question 3:

Organ Statement

- 1. Tongue - My taste-buds can tell only a sweet taste.
- 2. Liver - I am the largest gland in the body.
- 3. Large intestine - I am 7.5 meter long.
- 4. Appendix - Digestion is impossible without me.
- 5. Lung - I play an important role in excretion.

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ANSWER:

The tongue, large intestine, appendix and lungs are lying.

1. Tongue can taste salt, sweet and bitter tastes.
2. Large intestine is 1.5 meter long.
3. Appendix is not required for digestion.
4. Kidneys play an important role in excretion.

Question 4:

Give reasons.

(1) Food becomes acidic in the stomach.

Ans. Food becomes acidic in the stomach because of the presence of hydrochloric acid in the stomach. As the food reaches the stomach, it gets mixed with the hydrochloric acid present there.

(2) Cardiac muscles are said to be involuntary muscles.

Ans. Cardiac muscles are said to be involuntary because they are not controlled by our will. These muscles are found in heart and are the only muscles which work throughout the life without getting tired.

(3) Intoxicating substances should not be consumed.

Ans. Intoxicating substances should not be consumed because they harm the body directly or indirectly. Substances such as alcohol cause damage to the nervous system and the digestive system as well. Liver is the main organ which is affected by alcohol. Tobacco is one of the leading causes of oral cancer. Smoking has a direct effect on the respiratory system of an individual and can lead to lung cancer as well.

(4) Your muscles should be strong and efficient.

Ans. Our muscles should be strong and efficient because they carry out various vital functions in our body. From helping us to breath, digest food to helping us in walking and lifting weights, muscles play an important role. If our muscles are not strong enough, we would get tired easily. It is required to keep them in a healthy state by regular exercising and taking proper diet.

Question 5:

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Answer the following.

(a) How many types of muscles are there? Which are those types?

Ans. There are 3 types of muscles:

- Skeletal muscle
- Smooth muscle
- Cardiac muscle

(b) What causes the problem of acidity? What is its effect on the body?

Ans. Acid is produced by stomach to digest the food that we eat. If excess of acid is produced it causes headache, heart burns, vomiting or skin rashes.

(c) Name the different types of teeth. What is the function of each type?

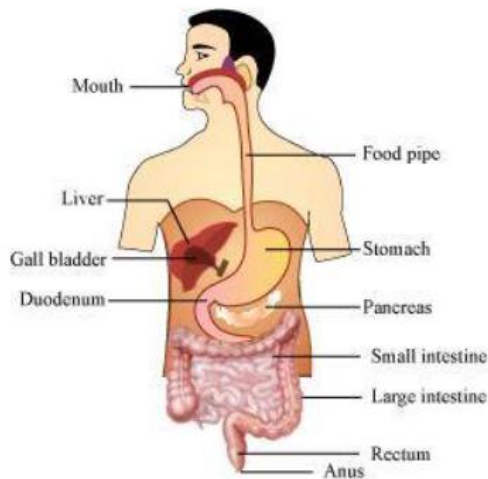
Ans. There are 4 types of teeth which are found in humans:

1. Incisors are the teeth present at the front portion of the mouth. There are four incisors in each jaw. They are used for biting and cutting food.
2. Canines are located next to the incisors. There are two canines in each jaw. They are used for tearing and piercing food.
3. Premolars lie next to the canines. There are four premolars in each jaw. They are used for chewing and grinding food.
4. Molars lie next to the premolars at the end of the jaw. There are six molars in each jaw. They are also used for chewing and grinding food.

Question 6:

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Sketch and label a diagram of the digestive system and describe it in your own words.



Mouth: Digestion of food begins in the mouth. Food is chewed with the help of teeth into very small pieces.

Pharynx/Throat: The oesophagus and trachea open into the pharynx.

Oesophagus: The food passes from the mouth, down the oesophagus, into the stomach, as a result of the movement of the walls of the oesophagus.

Stomach: It mixes the food received from the oesophagus with digestive juices.

Small intestine: The food from the stomach moves into the small intestine, which receives intestinal juices from two glands – liver and pancreas. These juices help in the further digestion of food.

Large intestine: Water is absorbed in the large intestine.

Rectum and anus: Undigested food particles are thrown out with the help of the rectum and anus.

Associated digestive glands-

Salivary glands: Saliva is produced in the salivary glands in the mouth cavity, located in front of the ears, near the pharynx and below the tongue. It is carried to the mouth via ducts. It is mixed with food during the process of chewing.

Liver: The liver is the largest gland in the body. Its main function is storage of glucose. The gall bladder is situated below the liver. It stores the bile, the digestive juice secreted by the liver. When bile is carried into the small intestine,

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it mixes with the food there and helps in the digestion of fats. Bile contains bile salts.