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Class- VI Subject- Biology

Lesson- 5 Respiratory System

Answer the following questions in short:-

1. Define respiration.

Ans. The process of breakdown of food in the cells of the body with the release of oxygen energy.

2. What is anaerobic respiration?

Ans. The breakdown of glucose occurs without the use of oxygen.

3. What is the function of haemoglobin in blood?

Ans. Haemoglobin carries oxygen from lungs to the rest of the body.

4. What is inhalation?

Ans. The taking in of air rich in oxygen into the body during breathing is called inhalation.

5. Why does breathing rate of a person increase?

Ans. The breathing rate of a person increases with increased physical activity so that more oxygen can be supplied to the cells.

6. What is produced by the oxidation of food during respiration?

Ans. Energy is produced by the oxidation of food during respiration.

7. What is the cause of asthma?

Ans. Asthma is a respiratory disease caused due to allergy.

Answer the following questions in detail:-

1. Explain the working of human respiratory system?

Ans. The respiratory system is what allows us to breathe and exchange carbon dioxide for oxygen. The human respiratory system is a series of organs responsible for taking in oxygen and expelling carbon dioxide. The primary organs of the respiratory system are the lungs which carry out this exchange of gases as we breathe.

2. Discuss the mechanism of breathing in detail.

Ans. The mechanism of breathing involves two main processes: inspiration and expiration. Inspiration occurs when the diaphragm and the external intercostal muscle contract. The contraction and relaxation of muscles around the lungs changes the entire volume of air inside the lungs and so does the pressure.

3. Explain the causes, symptoms and prevention of bronchitis.

Ans. Causes- Bronchitis is usually caused by viruses. Viruses can be easily spread if you touch your eyes, nose or mouth after coming in contact with the infected person. Smoking and exposure to air pollutants are also some other causes of Bronchitis.

Symptoms- Cough is the most common symptom. Besides this, a person suffering from bronchitis also complains of headache, chills, mild fever, shortness of breath, wheezing etc.

Prevention- Wash your hands to prevent the spread of germs and avoid smoking.

BOOKWORK

A.Choose the correct option:-

- 1.During heavy exercise, we get cramps in the legs due to the accumulation of
(b) lactic acid
- 2.The normal range of breathing rate per minute of an average adult person at rest is
(b) 15-18
- 3.During inhalation, the diaphragm
(a) moves downwards
- 4.During exhalation, the rib cage
(b) moves downwards and inwards
- 5.One of the following is not produced during the anaerobic respiration in yeast. This one is
(a) Carbon dioxide
- 6.As compared to inhale air, the exhaled air contains more of
(b) A and C
- 7.During respiration in humans, the exchange of gases takes place in
(b) alveoli

B.Fill in the blanks.

- 1The process of respiration takes place partially in the cytoplasm and partially in the mitochondria of the cell.
- 2.In the cells, oxygen (of air) brings about the breakdown of the food.
- 3.The trachea is a tube which is also called the windpipe.
- 4.The nasal passage joins the nostrils to the trachea.
- 5.The exchange of the gases between the air and the blood takes place across the walls of the alveoli.
- 6.The number of times a person breathes in one minute is called breathing rate.
- 7.Breathing involves the movements of the rib cage and the diaphragm.
- 8.Bronchitis is the swelling of lining of bronchial tubes.

C.Write T for true and F for false statement.

- 1.The process of respiration involves taking in oxygen(of air) in the cells. T

2. In anaerobic respiration, the micro organism like yeast breaks down. I
3. The upper end of the trachea has a voice box called larynx. I
4. Our lungs lie in the chest cavity, which is bound by the rib cage and the diaphragm. I
5. Carbon dioxide is not produced by the oxidation of food during respiration. E
6. Pneumonia is the inflammation of the lung tissue. I
7. The bacterial infection cannot pass from one person to another. I

Test your understanding

Fill in the blanks.

1. In the lungs, air passes through a large number of small tubes called bronchioles and then reaches the tiny air sacs called alveoli.
2. Blood carries the carbon dioxide and water to the alveoli in the lungs.
3. The number of times a person breathes in one minute is called breathing rate.
4. We breathe out to remove waste products and carbon dioxide from our body.

State true or false.

1. The respiration which takes place without using oxygen is called anaerobic respiration. I
2. The two holes in our nose are called nasal passage. E
3. The breathing organ in human body is trachea. E
4. Our lungs lie in the chest cavity which is bound by the rib cage and the diaphragm. I