

Respiration in Humans

A. Choose the Correct Answer

1. What is the primary function of respiration in the human body?
 - A) To produce energy
 - B) To release oxygen
 - C) To store carbon dioxide
 - D) To break down food into nutrients
2. Which organ is primarily responsible for the exchange of gases in humans?
 - A) Heart
 - B) Liver
 - C) Lungs
 - D) Kidneys
3. What is the name of the tiny air sacs in the lungs where gas exchange occurs?
 - A) Bronchi
 - B) Alveoli
 - C) Trachea
 - D) Diaphragm

B. Fill in the Blanks

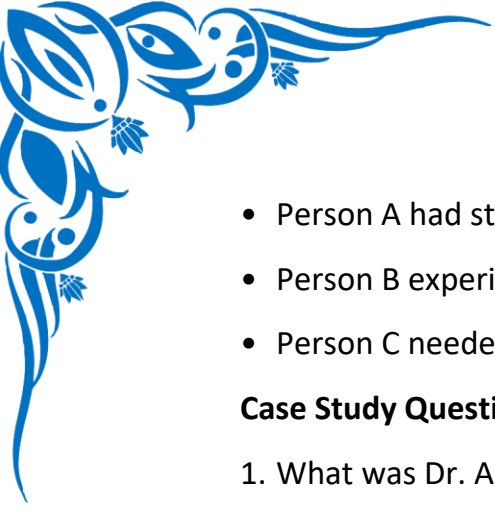
1. The process by which cells obtain energy by breaking down glucose in the presence of oxygen is called _____ respiration.
2. The muscle that helps in breathing by contracting and relaxing is known as the _____.
3. During inhalation, the lungs expand as they fill with _____.

C. Case Study

Dr. Ananya, a pulmonologist, conducted a study on how different lifestyles affect lung health. She observed three individuals:

- Person A regularly exercised and avoided smoking.
- Person B lived in a polluted area and smoked frequently.
- Person C had asthma and often found it difficult to breathe during physical activities.

After six months, Dr. Ananya recorded the following findings:



- Person A had strong lung capacity and showed no respiratory issues.
- Person B experienced frequent coughing and reduced lung efficiency.
- Person C needed medical support due to increased breathing difficulties.

Case Study Questions:

1. What was Dr. Ananya trying to analyze through her study?
2. Why did Person B experience respiratory problems?
3. What challenges did Person C face due to asthma?
4. Based on this study, how do lifestyle and environment affect lung health?

D. Short Answer Questions:

1. Why is oxygen essential for the human body?
2. How does the diaphragm help in breathing?
3. What are the differences between inhalation and exhalation?

E. Long Answer Questions:

1. Explain the process of respiration in humans, including the role of the lungs and diaphragm.
2. Describe how smoking and air pollution affect the respiratory system.
3. Discuss the differences between aerobic and anaerobic respiration and their significance in the human body.