



<b>CLASS: VII</b>	<b>DEPARTMENT: SCIENCE 2026-2027</b>	<b>DATE: 06/05/2026</b>
<b>WORKSHEET NO: 2</b>	<b>CHAPTER: LIFE PROCESSES IN ANIMALS</b>	<b>NOTE: A4 FILE FORMAT</b>
<b>CLASS &amp; SEC:</b>	<b>NAME OF THE STUDENT:</b>	<b>ROLL NO.</b>

**I. OBJECTIVE-TYPE QUESTIONS:**

1. Riya eats food very quickly without chewing properly. After some time, she feels discomfort in her stomach. What is the most likely reason?
  - (a) Food is not absorbed properly.
  - (b) Oxygen supply is reduced.
  - (c) Saliva did not mix well with food.
  - (d) Blood circulation is affected.
  
2. A student observes that limewater turns milky faster when exhaled air is passed through it than when inhaled air is passed through it. This indicates that:
  - (a) Inhaled air contains more oxygen.
  - (b) Exhaled air contains more carbon dioxide.
  - (c) Inhaled air contains nitrogen.
  - (d) Exhaled air contains less water vapour.
  
3. During a medical test, a doctor finds that a person's alveoli are damaged. What problem will occur?
  - (a) Food digestion will stop.
  - (b) Blood will not clot.
  - (c) Waste removal will increase.
  - (d) Oxygen will not enter the blood efficiently.
  
4. Why do athletes have a higher breathing rate during running?
  - (a) To remove more oxygen.
  - (b) To slow down the heart.
  - (c) To supply more oxygen and remove carbon dioxide quickly.
  - (d) To digest food.
  
5. A bird swallows small stones along with food. What would happen if these stones were absent?
  - (a) Food digestion would stop completely.
  - (b) Food would not be ground properly in the gizzard.

- (c) Food would not enter the stomach.
- (d) Respiration would be affected.

6. Breathing involves:

- (a) Only inhalation.
- (b) Only exhalation.
- (c) Both inhalation and exhalation.
- (d) None of these.

7. A patient's liver is not producing bile properly. What problem might occur?

- (a) Fat digestion is affected.
- (b) Protein digestion is affected.
- (c) Carbohydrate digestion stops.
- (d) Water absorption stops.

*For the following questions, two statements are given- one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (A), (B), (C), and (D) as given below*

- (A) Both A and R are true, and R is the correct explanation of the assertion.*
- (B) Both A and R are true, but R is not the correct explanation of the assertion.*
- (C) A is true, but R is false.*
- (D) A is false, but R is true*

8. **Assertion (A):** Animals need oxygen continuously to stay alive.

**Reason (R):** Oxygen is required for the breakdown of glucose/food to release energy.

9. **Assertion (A):** Inhaled air contains more carbon dioxide than exhaled air.

**Reason (R):** Carbon dioxide is produced during respiration in cells.

10. **Assertion (A):** The diaphragm plays an important role in breathing.

**Reason (R):** It helps in increasing and decreasing the volume of the chest cavity.

## **II. VERY SHORT ANSWER TYPE QUESTIONS: (2M)**

1. What is the function of bile? (WBQ)

[Hint: Bile is a digestive juice produced by the liver and stored in the gallbladder. Its main function is to help in the digestion of fats.]

2. Define digestion.

[Hint: Digestion is the process of breaking down complex food into simpler substances that can be absorbed by the body.]

3. What is egestion? (WBQ)

[Hint: Egestion is the process of removing undigested and unabsorbed food from the body.]

4. Define rumination.

[Hint: The process of bringing the partially digested food back to the mouth for gradual chewing is called rumination]

5. Explain the reason for rapid and deep breathing after intense physical exercise. (WBQ)

[Hint: The reason for rapid and deep breathing after intense physical exercise is that our muscles need more energy, and thus, more oxygen is needed by the body to release the energy.]

### **III. SHORT ANSWER TYPE QUESTIONS: (3M)**

1. Explain the role of saliva in digestion.

[Hint: Saliva moistens food and makes it easy to swallow.

It helps in the process of digestion in the mouth as it contains digestive juice that breaks down starch into sugar.]

2. Differentiate between breathing and respiration. (WBQ)

[Hint:

<b>Breathing</b>	<b>Respiration</b>
Physical process	Chemical process
Takes place in the lungs	Takes place in cells
Involves inhaling and exhaling	Involves releasing energy

]

3. How does the small intestine help in digestion and absorption?

[Hint:

- Receives bile and pancreatic juice along with the secretion of intestinal juice from its walls.
- Completes digestion of carbohydrates, proteins, and fats.
- Helps in absorption of digested food through finger-like projections called villi into the blood.]

4. How do different animals breathe? Explain with examples.

[Hint:

- Humans, birds, and mammals breathe through lungs.
- Fish use gills to absorb oxygen dissolved in water.
- Frogs breathe through gills as tadpoles, lungs on land, and skin in water.
- Earthworms breathe through moist skin.]

5. Explain respiration with the help of a word equation.

[Hint: Respiration is the process by which glucose is broken down in the presence of oxygen to release energy. It is the process by which nutrients are converted into usable energy, called respiration.

**Word equation:**

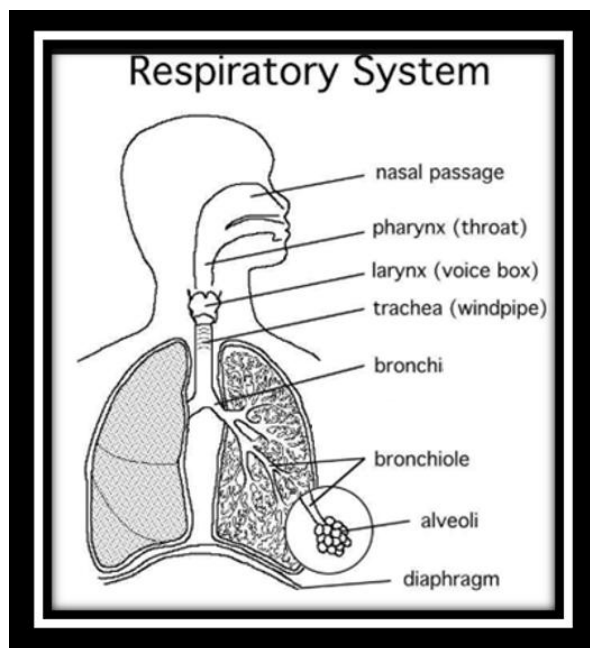
Glucose + Oxygen → Carbon dioxide + Water + Energy  
This energy is used for movement, growth, and repair.]

#### **IV. LONG ANSWER TYPE QUESTIONS: (5M)**

1. Explain the structure and working of the human respiratory system. (WBQ)

[Hint: The human Respiratory system consists of the following parts:

Nostrils, Nasal passage, Windpipe, Bronchi, Alveoli and the lungs.



The respiratory system starts with the nostrils, through which air is inhaled and exhaled. The air passes into the nasal passages and then travels through the windpipe to the lungs. The windpipe divides into two branches, each entering a lung. Inside the lungs, these branches further divide into smaller tubes that end in small balloon-like sacs called alveoli. The lungs are protected by the rib cage.]

2. Write about the test to confirm the action of saliva on starch. (WBQ)

[Hint: Saliva plays an important role in the digestion of food, especially carbohydrates like starch. To confirm the action of saliva on starch, a simple experiment can be performed in the laboratory using iodine solution.

Procedure: Take two clean test tubes, **A** and **B**. Pour equal amounts of starch solution into both test tubes. Add a small amount of fresh saliva into test tube **A** only, while test tube **B** is kept without saliva. Now add a few drops of iodine solution into each test tube using a dropper.

Observation:

In test tube **B** (without saliva), the solution turns **blue-black**, indicating the presence of starch. However, in test tube **A** (with saliva), no blue-black colour appears, and the solution remains brownish.

Conclusion: Iodine solution turns blue-black in the presence of starch.]

## **V. SOURCE-BASED/ CASE STUDY-BASED QUESTIONS**

*Read the following passage and answer the questions.*

Riya was observing a rabbit in her garden. She noticed that the rabbit's chest moved up and down continuously, even when it was resting. She learned that animals need energy to perform all activities, such as movement, growth, and repair. This energy is obtained from food through a process that involves oxygen. The oxygen taken in reacts with food in the cells, releasing energy and producing carbon dioxide and water as waste products.

Breathing and respiration are often confused, but they are different processes. Breathing is the physical process of inhaling oxygen-rich air and exhaling carbon dioxide-rich air, while respiration is a chemical process that occurs inside cells. During respiration, oxygen reacts with food to release energy. Even when animals are not actively breathing, cellular respiration continues to occur.

i) What is produced when oxygen reacts with food in the cells?

[Hint: When oxygen reacts with food in the cells, energy is released along with carbon dioxide and water as waste products.]

ii) Why does respiration continue even when breathing slows down during sleep?

[Hint: Respiration continues even when breathing slows down during sleep because body requires a supply of energy at all times.]

iii) What is breathing?

[Hint: Breathing is the physical process of inhaling oxygen-rich air and exhaling carbon dioxide-rich air.]

## **ANSWERS FOR OBJECTIVE TYPE QUESTIONS [1 to 10]:**

1. (c) Saliva did not mix well with food
2. (b) Exhaled air contains more carbon dioxide.
3. (d) Oxygen will not enter blood efficiently.
4. (c) To supply more oxygen and remove carbon dioxide quickly.
5. (b) Food would not be ground properly in the gizzard.
6. (c) Both inhalation and exhalation.
7. (a) Fat digestion is affected.
8. (A) Both A and R are true, and R is the correct explanation of the assertion.
9. (D) A is false, but R is true.
10. (A) Both A and R are true, and R is the correct explanation of the assertion.

<i>Prepared by:</i> <i>Ms Alysia Fernandes</i>	<i>Checked by:</i> <i>HOD Science</i>
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