St. Andrews Scots School

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Session: 2026-2027
Answer Key

Class-VII	Subject-Science	Chapter- Life processes in Animals

Self-Assessment: **Page no. 117**

A. Multiple Choice Questions:

1. (b) 2. (c)

Self-Assessment: **Page No.118**

A. Multiple Choice Questions:

1. (b) 2. (c)

B. Assertion-Reason based Questions:

1. (a) 2. (a)

Self-Assessment: **Page No. 122**

A. Assertion-Reason Based Questions:

1. (a) 2. (a)

Self-Assessment: **Page No. 125**

A. Multiple Choice Questions:

1. (c) 2. (c)

B. Assertion-Reason Based Questions:

1. (c) 2. (a)

Exercise
Section-A

A. Oral Questions:

1. Digestion is important because it breaks down food into simpler forms like glucose, amino acids and fats that the body can absorb and use for energy, growth and repair.
2. The diaphragm helps in breathing by moving downward during inhalation to increase space in the chest cavity and moving upward during exhalation to push air out of the lungs.
3. Earthworms breathe through their moist skin, as they do not have lungs or gills. Oxygen enters and carbon dioxide leaves directly through the skin.

B. Multiple Choice Questions:

1. (c) 2. (d) 3. (b) 4. (c) 5. (c) 6. (a)

C. Assertion-Reason Based Questions:

1. (both statements are wrong) 2. (a)

D. Case-Based Questions:

1. The lime water turned milky when Ravi blew into it because exhaled air contains carbon dioxide, which reacts with lime water to form a white precipitate.
2. This experiment shows that exhaled air contains carbon dioxide gas, while the air from the syringe (ordinary air) has very little CO_2.
3. The gas responsible for this change in lime water is carbon dioxide (CO_2).

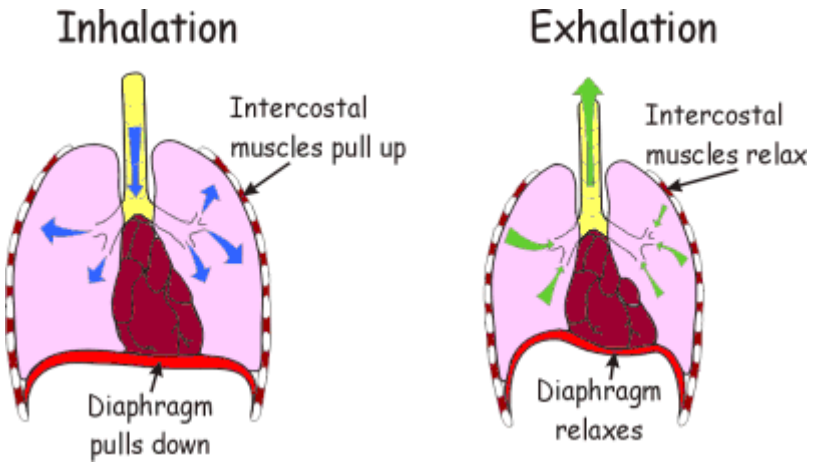
Section-B

A. Very Short Answer Questions:

1. Small intestine
2. Peristalsis is the wave-like movement of muscles in the food pipe and intestines that pushes food forward through the digestive tract.
3. Egestion is the removal of undigested food from the body through the anus.

B. Short Answer Questions:

1. The diaphragm moves downward during inhalation, increasing the space in the chest cavity and allowing air to enter the lungs. It moves upward during exhalation, pushing air out of the lungs.



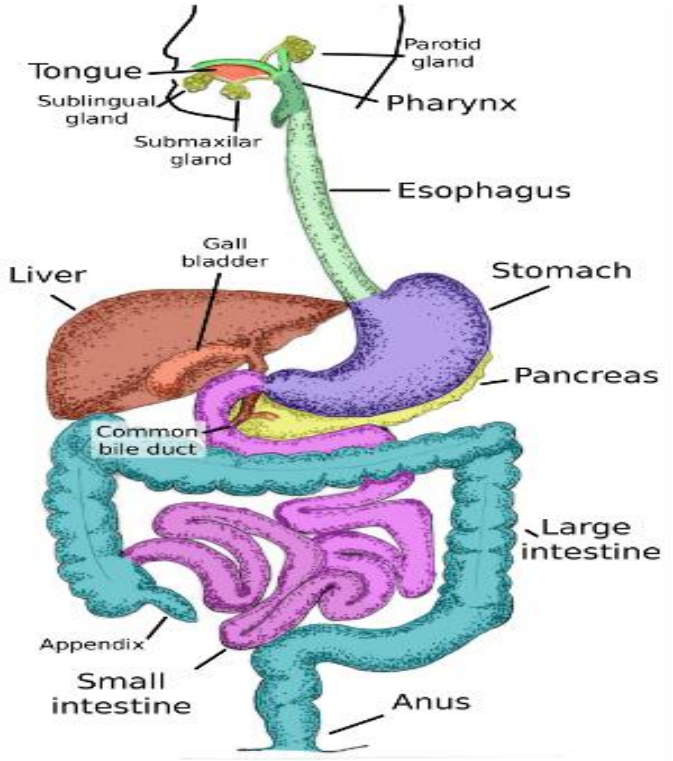
2. Digestion begins in the mouth where teeth chew food into smaller pieces and saliva (containing an enzyme called amylase) starts breaking down starch into sugar.

3. Mucus in the stomach protects its inner lining from the strong acid and digestive juices, preventing damage and ulcers.

C. Long Answer Questions:

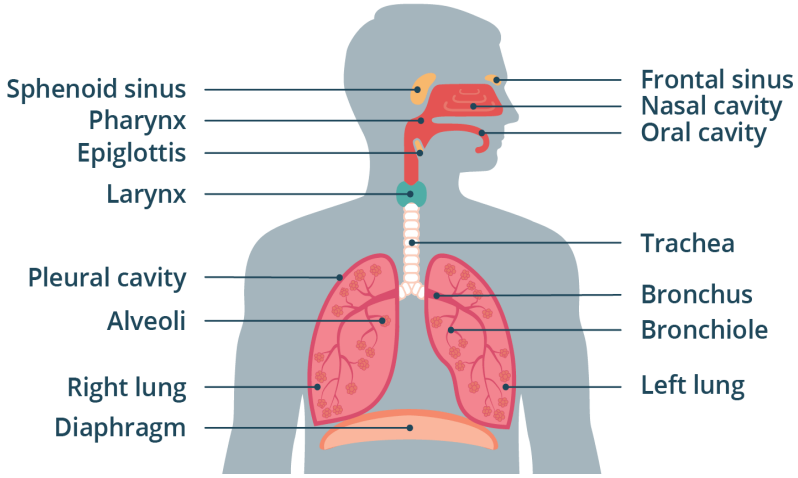
1. **Journey of Food through the Human Digestive System:**
   (a) **Mouth:** Chewing and saliva begin digestion.
   (b) **Food pipe (oesophagus):** Peristalsis pushes food to the stomach.

(c) **Stomach:** Acid and enzymes digest proteins.
(d) **Small intestine:** Bile and pancreatic juices help digest fats, carbohydrates and proteins; nutrients are absorbed through villi.
(e) **Large intestine:** Absorbs water and salts; undigested waste forms.
(f) **Anus:** Removes undigested waste by egestion.



Human Digestive System

2. **Human Respiratory System and Gas Exchange:**
(a) Air enters through the nose, passes through the trachea and lungs.
(b) In the lungs, air reaches tiny air sacs called alveoli, where oxygen passes into the blood and carbon dioxide moves out of the blood to be exhaled.
(c) This continuous exchange keeps the body supplied with oxygen and removes waste gases.



Human Respiratory System

3. **Comparison of Breathing Organs:**

Animal	Breathing Organ	Explanation
Frog	skin and lungs	Breathes through skin in water and lungs on land.
Fish	gills	Extracts oxygen from water.
Earthworm	moist skin	Gases pass directly through its skin.

D. Application-Based Questions:

1. If a person's small intestine is damaged, they will face problems in digestion and absorption of nutrients, leading to weakness and malnutrition.
2. Athletes do breathing exercises before a race to increase oxygen intake, helping their muscles get more energy and improving performance during physical activity.

E. Picture-Based Questions:

1. (a) Inhaled air has about 21% oxygen and 0.04% carbon dioxide, while exhaled air has about 16–17% oxygen and 4–5% carbon dioxide.
   (b) This change occurs because the body uses oxygen for respiration and releases carbon dioxide as a waste gas during the process.
2. (a) The structure shown is the gills of a fish.
   (b) Gills help the fish breathe underwater by absorbing oxygen dissolved in water and releasing carbon dioxide from the blood.