

L-6: RESPIRATION IN ORGANISMS

I. Choose the correct option

1. The process of breaking down glucose in the absence of oxygen is called:
 - a) Aerobic respiration
 - b) Breathing
 - c) Anaerobic respiration
 - d) Photosynthesis

2. During respiration, which gas is taken in and which is released?
 - a) Oxygen is taken in, carbon dioxide is released
 - b) Carbon dioxide is taken in, oxygen is released
 - c) Nitrogen is taken in, oxygen is released
 - d) Oxygen is taken in, nitrogen is released

3. What is the product of anaerobic respiration in human muscles?
 - a) Alcohol
 - b) Carbon dioxide
 - c) Lactic acid
 - d) Water

4. In which organisms do anaerobic respiration commonly occur?
 - a) Humans
 - b) Yeast
 - c) Plants
 - d) Fungi

5. What is the equation for aerobic respiration?
 - a) $\text{Glucose} + \text{Oxygen} \rightarrow \text{Carbon dioxide} + \text{Water} + \text{Energy}$
 - b) $\text{Glucose} + \text{Water} \rightarrow \text{Oxygen} + \text{Energy}$
 - c) $\text{Glucose} \rightarrow \text{Lactic acid} + \text{Energy}$
 - d) $\text{Carbon dioxide} + \text{Water} \rightarrow \text{Glucose} + \text{Oxygen}$

6. The tiny openings in the leaves of plants that help in gas exchange are called:
 - a) Stomata
 - b) Lenticels
 - c) Spiracles
 - d) Pores

7. What happens to the breathing rate during physical exercise?
 - a) It decreases
 - b) It remains constant
 - c) It increases
 - d) It stops

II. Fill in the blanks.

1. Yeast respire anaerobically and produces _____ and _____.
2. The process of inhaling and exhaling air is known as _____.
3. Frogs can breathe through their _____ and _____.
4. _____ is a muscular sheet that forms the floor of the chest cavity.
5. Respiratory organ of fish _____.
6. The accumulation of _____ causes muscle cramps.

III. Name the following

1. The process in which glucose is broken down to release energy-
2. The type of respiration that takes place in the absence of oxygen-
3. The organ in human beings where the exchange of gases takes place.
4. The end product of anaerobic respiration in yeast.
5. The substance produced in human muscles during vigorous exercise due to anaerobic respiration.
6. The type of respiration that uses oxygen to break down glucose.

IV. Give reason:

- a) Whenever we feel drowsy or sleepy, we start yawning.
- b) Yeast is used to make wine and beer.
- c) An athlete breathes faster and deeper than usual after finishing the race.

V. Assertion and Reason

In each of the following questions, two statements are given: Assertion (A) and Reason (R).
Read the statements and choose the correct option:

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

1. **Assertion (A):** Plants do not respire as they perform photosynthesis.

Reason (R): Photosynthesis provides oxygen for plants, so respiration is unnecessary.

2. **Assertion (A):** The diaphragm plays no role in the process of breathing.

Reason (R): The diaphragm contracts and relaxes to facilitate the movement of air in and out of the lungs.

VI Case study

Read the following passage carefully and answer the questions.

During physical exercise, the body needs more energy to perform various activities. To meet this demand, the breathing rate increases, allowing more oxygen to enter the lungs. The oxygen is transported by blood to the muscles, where glucose is broken down to release energy. In some cases, when the oxygen supply is insufficient, the muscles switch to anaerobic respiration. This leads to the production of lactic acid, which causes muscle cramps. Rest and deep breathing help to restore the oxygen levels and remove the lactic acid from the muscles.

1. Why does the breathing rate increase during exercise?
2. What happens when there is insufficient oxygen in the muscles?
3. What is anaerobic respiration?
4. Write the equation for Anaerobic respiration. (In Muscle cells)

L-7:TRANSPORTATION IN ANIMALS AND PLANTS

I. Fill in the blanks:

- a) _____ binds with oxygen and transports it.
- b) The human heart has _____ chambers.
- c) The rhythmic contraction and expansion of heart is called _____.
- d) Sweat contains water and _____.
- e) The blood from the heart is transported to all parts of the body by the _____.
- f) Water reaches great heights in the trees because of the suction pull caused by the _____.

II. Choose the correct option:

1. The muscular tube through which stored urine is passed out of the body is called:
(a) kidney (b) ureter (c) urethra (d) urinary bladder
2. In plants, water is transported through
(a) Xylem (b) Stomata (c) Phloem (d) root hair
3. The excretory product of fish is
(a) ammonia (b) urea (c) uric acid (d) nitrogen
(a) Xylem tissue (b) Vascular tissue (c) Root hairs (d) Phloem tissue

4. Blood platelets help in

(a) formation of urine (b) excretion of urine (c) sweating (d) blood clotting

III. Assertion and Reason

In each of the following questions, two statements are given: Assertion (A) and Reason (R).

Read the statements and choose the correct option:

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

1. Assertion (A): Arteries have a thick elastic wall.

Reason (R): In arteries blood flow is rapid and at high pressure.

2. Assertion (A): Rhythmic beating of various chambers of the heart maintains circulation of blood. **Reason (R):** Pulse rate per minute indicates the rate of heartbeat.

IV. Answer the following

1. Water kept in an earthen pot is cooler. Give reason.
2. What is the significance of partition between the chambers of heart?
3. What is dialysis? Write its significance.

V. Case Study

Blood is the fluid which flows in blood vessels. It transports substances like digested food from the small intestine to the other parts of the body. It carries oxygen from the lungs to the cells of the body. It also transports Waste for removal from the body. Blood is composed of a fluid, called plasma in which different types of cells are suspended. One type of cells are the red blood cells (RBC) which contain a red pigment called Haemoglobin.

- 1) Which fluid flows in blood vessels?
(a) Plasma (b) RBC (c) Blood (d) All of the above
- 2) What makes blood appear red in colour?
- 3) What role does blood play in the body?
- 4) How is oxygen transported in the body?

L-8: Reproduction in Plants

I. Choose the correct answer.

1. Vegetative reproduction in potato takes place in
a) Roots b) stem c) leaves d) flower
2. The production of new individuals from their parents is known as
a) Reproduction b) Production b) Vegetative propagation d) Sprouting
3. Fragmentation takes place in
a) Algae b) Fern c) Fungi c) Yeast
4. The cell which results after fusion of gametes is
a) Zygote b) Embryo c) Pistil d) none
5. Flowers which contain either the pistil or stamens are called
a) Unisexual flowers b) Bisexual flowers c) asexual d) none
6. Yeast reproduces by
a) Spore formation b) Budding c) Fragmentation d) None
7. Seeds of drumstick and maple are carried to long distances by wind because they possess
a) winged seeds b) large and hairy seeds c) long and ridged fruits d) spiny seeds
8. Pollination refers to the
a) transfer of pollen from anther to ovary b) transfer of pollen from stigma to anther
c) transfer of pollen from anther to stigma d) transfer of pollen from anther to ovule

II. Fill in the blanks.

1. In _____ reproduction, a single parent is involved, and the offspring are identical to the parent.
2. The reproductive parts of a flower are _____ and _____.
3. The process of transfer of pollen grains from the anther to the stigma of a flower is called _____.
4. _____ is the process of fusion of male and female gametes to form a zygote.

5. The seed develops from the _____, and the fruit develops from the _____ of the flower.

6. Plants like potato and ginger reproduce asexually through underground stems called _____.

III. Name the following:

1. Production of new individuals from their parents.
2. The two modes of reproduction.
3. Asexual reproduction bodies with a thick protective wall.
4. Bulb like projections seen in yeast cells.
5. Flowers that possess both the male and female reproductive organs.
6. The male reproductive part of a flower.

IV. Assertion and Reason

In each of the following questions, two statements are given: Assertion (A) and Reason (R). Read the statements and choose the correct option:

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

1. **Assertion (A):** Vegetative propagation is a form of asexual reproduction in plants.

Reason (R): Vegetative propagation occurs through seeds.

2. **Assertion (A):** Pollination is essential for the production of seeds in flowering plants.

Reason (R): Pollination ensures the transfer of pollen grains to the stigma of the flower.

V. Answer the following

- a) Which takes less time to grow and bear flowers and fruits, plants produced by vegetative propagation or by seeds. Give reason
- b) How do ferns and moss reproduce?
- c) How do spores survive a long time?
- d) What will happen if all the seeds of a plant were to fall at a same place and grow?

VI. Case Study

Read the following passage carefully and answer the questions.

A student planted a bean seed in a pot. After a few days, the seed sprouted, and a small plant began to grow. The student watered the plant regularly and ensured it got sufficient sunlight. Over time, flowers appeared on the plant, followed by pods containing seeds.

1. What type of reproduction is shown in the above case?
2. Name the part of the plant that develops into seeds.
3. What happens to the flower after fertilization?
4. What develops into an embryo?

L-9: MOTION AND TIME

I. CHOOSE THE CORRECT OPTION

1. The correct symbol to represent the speed of an object is:

(a) 5 m/s (b) 5 mp (c) 5 m/s-1 (d) 5 s/m

2. A bus travels 54 km in 90 minutes. The speed of the bus is

(a) 0.6 m/s (b) 10 m/s (c) 5.4 m/s (d) 3.6 m/s 3.

II. FILL IN THE BLANKS:

1. The distance covered by an object in a _____ is called its speed.
2. The distance-time graph for the motion of an object moving with a constant speed is a _____.
3. In a simple pendulum, the metallic ball suspended by thread is called its _____.
4. The symbols of all units are written in _____.
5. Motion of a child in merry-go-round is a _____ motion.
6. The flapping of the wings of birds is an example of _____ motion.

L- 10: ELECTRIC CURRENT AND ITS EFFECTS

I. FILL IN THE BLANKS :

- a) The longer line in the symbol for cell denotes _____ terminal.
- b) The combination of two or more cells is called a _____.
- c) The safety device based on the heating effect of the electric current is called _____.
- d) _____ mark is necessary on electric appliances.
- e) The path along which electric current flows is called an _____.
- f) _____ discovered that electric currents create magnetic field.
- g) Current does not flow in an _____ electric circuit .
- h) _____ is an alloy used as the heating element in an electric toaster.
- i) Thin wire in an electric bulb which glows when electric current passes through is known as _____ .
- j) The full form of CFL is _____.

II. CHOOSE THE CORRECT ANSWER :

1. The safety device used for electrical appliances is
(a) fuse (b) resistance (c) connecting wire (d) none of these
2. Which of the following does NOT contain a heating element?
(a) Electric iron (b) Electric heater (c) Electric oven (d) Electric bell
3. Which one of the following is based on the heating effect of current?
(a) Geyser (b) Hair dryer (c) Immersion rod (d) All of these
4. Which of the following statements is correct of a switch?
(a) It allows the flow of electricity (b) It controls the brightness of a bulb.
(c) It controls the power of the batteries (d) It fuses a bulb.
5. The coil of wire contained in an electric heater is known as
(a) component (b) element (c) circuit (d) spring
6. An electric lamp glows due to

INTERNATIONAL INDIAN SCHOOL, DAMMAM

MIDDLE SECTION

ANNUAL EXAMINATION - WORKSHEET 2024-25

CLASS: VII

SUBJECT: GENERAL SCIENCE

- (a) Chemical effect (b) Magnetic effect (c) Heating effect (d) None

III. MATCH THE FOLLOWING:

Column A	Column B
(i) Switch	(a) Coil of wire which heats up when electricity current is supplied
(ii) Battery	(b) Blows off, if the current exceeds safe limit
(iii) Element	(c) Consumes less energy than a bulb
(iv) Filament	(d) Mark that ensures that the electric appliance is safe to handle
(v) Fuse	(e) Supplies current to the circuit
(vi) MCBs	(f) Turns the circuit ON and OFF
(vii) CFL	(g) Turn OFF if current exceeds safe limit
(viii) ISI	(h) Wire in the bulb which glows

IV. ASSERTION & REASONING :

The questions below consist of an Assertion and a Reason. Use the following key to choose the appropriate answer.

- (a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true

1. Assertion (A): A battery is a combination of two cells only.

Reason (R): The positive and negative terminals are generally marked on the cells.

2. Assertion (A): A current-carrying wire deflects the needle of a magnetic compass kept near it.

Reason (R): Even when the electric current is switched off, the coil acts like a magnet.

V. Give reason

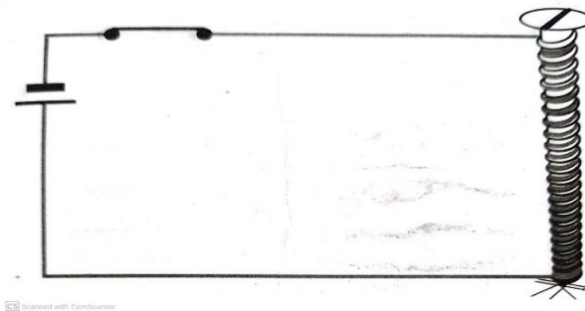
1. We should not touch a lighted bulb. Why?

VI. Answer the following

1. When does a circuit said to be overloaded?
2. Why is an electric fuse required in all electrical appliances?

VII. CASE STUDY:

1. Rohan has wound a long-insulated piece of wire around an iron nail in the form of a coil. The free ends of the wire are connected to a cell through a switch. The current is switched on and some pins are placed near the ends of the nail.



- (i) Why does the nail attract the pins?
- (ii) What will happen if we connect more cells in the circuit?
- (iii) What will happen if we use some other material like a plastic straw in place of the nail?
- (iv) Define an electromagnet.

L-11: LIGHT

I. CHOOSE THE CORRECT OPTION:-

1. The phenomenon of bouncing back of the rays of light into the same medium on striking a polished surface is called

- a) Reflection b. Spectrum c. Dispersion d. None of these

2. The path of light is

- a) Always a straight line b. a curved line c. a zigzag line d. depends on the medium

3. A convex mirror always forms

- a) erect, virtual and smaller image b. inverted, virtual and smaller
c) erect, real and smaller image d. inverted, virtual and smaller image
4. Which one shows lateral inversion?
a) Convex mirror b. Concave mirror c. Plane mirror d. All of these
- 5 . An image which can be obtained on a screen is called
a) Erect b. inverted c. real d. virtual
6. Which mirror forms same sized real image as that of the object?
a) Plane mirror b. concave mirror c. convex mirror d. none of these
7. White light is composed of
a) Seven colours b. three colours c. five colours d. eight colours

II FILL IN THE BLANKS

1. The image formed by a _____ lens is always virtual, erect and smaller in size than the object.
2. A _____ image is always inverted.
3. A _____ lens can produce a virtual image larger than the object.
4. A smooth polished surface which can return the rays of light in to the same medium is called _____.
5. A _____ mirror is used as a side view mirror.
6. A _____ lens is thicker in the middle and thinner at the edges.

III. NAME THE FOLLOWING

1. A transparent medium bounded by two curved surfaces.
2. Demonstration apparatus to show colour mixing by rotating disc of seven colour sectors .
3. A triangular three dimensional device made of glass.
4. An image which can be obtained on a screen.
5. The size of the image being greater than the object.
6. The lens that diverges light falling on it.
7. The spherical mirror used by a dentist.
8. A natural phenomenon showing splitting up of white light into seven colours.

IV. Give reason

- 1) It is dangerous to look through a convex lens at the sun or a bright light.
- 2) Convex mirrors are used as side view mirrors in vehicles.

V.ASSERTION & REASONING :

The questions below consist of an Assertion and a Reason. Use the following key to choose the appropriate answer.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true

- 1) **Assertion(A)**- The mirrors used in search lights are concave spherical.
Reason(R)- In concave spherical mirror the image formed is always virtual.
- 2) **Assertion (A)**: White light is composed of seven colours .
Reason (R): Newton's disc appears white on rotating.

VI CASE STUDY:

One day, Amar's friend was performing their respective experiments given by their teacher. While sitting in the practical lab instead of performing the experiment, Amar was playing with his meter scale. All of a sudden, he held the scale in his hand and started moving in front of the tube light, then he observed the seven colours of white light.

1. The coloured band of light obtained by dispersion of light is called –
a] Image b] Spectrum c] Convergence d] Shadow
2. Name the constituent colours of white light.
3. Name the device which is used to split white light into seven colours.
4. Why does Newton's disc appear white when rotated?