



Class: VI	DEPARTMENT OF SCIENCE - 2022-2023	DATE: 24/01/2023
WORKSHEET NO: 15 WITH ANSWERS	TOPIC: THE LIVING ORGANISMS AND THEIR SURROUNDINGS	NOTE: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO.

I. VERY SHORT ANSWER TYPE QUESTIONS (1M):

1. Mention the adaptations in fish for easy movement in water.
[Hint: The streamlined body, slippery scales, tail and fins help the fish for movement.]
2. What is a habitat?
[Hint: The natural living place of an organism is termed as its habitat.]
3. How do plants respire?
[Hint: Respiration takes place mainly through leaves with the help of tiny pores called stomata.]
4. Define lifespan of an organism.
[Hint: The time period for which living things remain alive is called its life span.]
5. Give an example of a response of plants towards changes in their surroundings.
[Hint: In Touch-me-not plant, leaves close or fold when someone touches them.]
6. Snow leopards have thick fur on feet and toes. Give reason.
[Hint: This protects its body and feet from cold when it walks on snow.]
7. Mountain trees are cone-shaped and have sloping branches. Why?
[Hint: It helps the rainwater and snow to slide off easily.]
8. Define stimulus.
[Hint: Changes in our surroundings that make us respond to them are called stimuli.]
9. Why are leaves in desert plants reduced to spines?
[Hint: The leaves are reduced to spines to minimise loss of water through transpiration.]
10. What are blowholes?
[Hint: Blowholes are nostrils on the upper part of head through which whales and dolphins breathe in air.]

For the questions that follows, two statements are given: - one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below:

- i) Both A and R are true and R is the correct explanation of the assertion.*
- ii) Both A and R are true but R is not the correct explanation of the assertion.*
- iii) A is true but R is false.*
- iv) A is false but R is true.*

11. Assertion (A): The habitat provides food, water, air, shelter and other needs to organisms.

Reason (R): Several kinds of plants and animals live in the same habitat.

ii) Both A and R are true but R is not the correct explanation of the assertion.

12. Assertion (A): Living things produce more of their own kind through reproduction.

Reason (R): It takes place in same way in all the living organisms.

iii) A is true but R is false.

13. Assertion (A): The process of getting rid of waste materials by living organisms is known as excretion.

Reason (R): Some plants remove waste products as secretions.

ii) Both A and R are true but R is not the correct explanation of the assertion.

II. PASSAGE BASED QUESTIONS:

Read the given passage and answer the following questions.

Respiration is necessary for all living organisms. In respiration, some of the oxygen of the air we breathe in is used by the living body. We breathe out the carbon dioxide produced in this process. Animals have different mechanisms for the exchange of gases, which is a part of the respiration process. Do plants also respire? Exchange of gases in plants mainly takes place through their leaves. The leaves take in air through tiny pores in them and use the oxygen. They give out carbon dioxide to the air. Plants produce their food only during the daytime whereas respiration in them takes place day and night.

1. Which among the following set shows the correct pair of organism and its respiratory part?

- a) earthworm - skin**
- b) fish - fins
- c) dolphin - gills
- d) camel - hump

2. Respiration helps the body to:

- a) respond to the stimulus
- b) obtain energy from the food it takes**
- c) adjust to changes in the surroundings
- d) get rid of waste from the body

3. The tiny pores on the leaves that help in exchange of gases are:

- a) **stomata**
- b) blowholes
- c) buds
- d) nostrils

4. Which among the following is produced during respiration?

- a) resins
- b) gums
- c) **carbon dioxide**
- d) oxygen

III. CASE STUDY BASED QUESTIONS

1. Gita lives in a city. Her family planned to visit a hilly area during her school vacation. She was so excited. When she reached there, she experienced breathing problem while walking or running. It was so cold and windy too. She got worried about her health. But she was fine after few days of staying there.

a. The breathing difficulty occurred due to:

- i) low oxygen level
- ii) change in habitat
- iii) High altitude
- iv) **All of these**

b. The process by which Gita got adjusted to her surroundings is called:

- i) adaptation
- ii) transpiration
- iii) **acclimatisation**
- iv) excretion

c. Gita made a note in her diary: We need to breathe ----- on high mountains.

- i) slower
- ii) less
- iii) **faster**
- iv) very less

2. Keerthi while learning about the characteristics of living organisms studied that living organisms excrete their waste out of the body. She remembered that plants are also living organisms. But she wondered how plants excrete their waste.

a. How do plants excrete their waste materials?

[Hint: In plants different modes of excretion are present.

- **They lose their gaseous waste through stomata.**

- **Excess water is lost through transpiration.**
- **Some plants remove waste products as secretions.]**

b. What are the characteristics of living organisms?

[Hint:

Living things need food.

Living things respire.

Living things respond to stimuli.

Living things reproduce.

Living things show movement.

Living things excrete.

Living things grow.

Living things have definite lifespan.]

IV. a) SHORT ANSWER TYPE QUESTIONS: (2M)

1. Why is reproduction important for organisms?

[Hint: Reproduction is very important for living organisms as it helps them to produce young ones of their own kind and maintains the continuity of life.]

2. Like many living organisms, a car also moves. Yet it cannot be considered to be a living organism. Give two reasons.

[Hint: Living Organisms have the ability to move on their own, whereas a car moves by burning fuels like petrol and diesel. Cars do not show other characteristics of living organisms such as respiration, growth, excretion, reproduction, etc.]

3. Mention the differences in the surroundings of sea and desert habitat.

[Hint: In the sea, plants and animals are surrounded by saline water. Most of them use the air dissolved in water. In the desert, there is very little water available. The plants and animals live on the desert soil and breathe air from the surroundings.]

4. Differentiate between Biotic and Abiotic components of a habitat?

[Hint: Abiotic: It refers to the non-living components of a habitat. e.g., air, soil, water, sunlight. Biotic: It refers to living components of a habitat. e.g., Humans, plants and animals]

5. Why do desert snakes burrow deep into the sand during the day?

[Hint: As the deeper layers of sand are cooler, the desert snakes burrow deep into the sand to stay away from the heat of the desert during day time.]

6. Why do living organisms need food?

[Hint: Food gives organisms energy needed to grow and help perform other life processes like digestion, respiration, etc.]

7. Features of lion in a grassland help it to survive. How?

[Hint: The light brown colour helps it to hide in dry grasslands when it hunts. The eyes in the front of the face allow it to have the correct location of the prey.]

8. Define predator and prey.

[Hint: Predators- The animals which hunt other animals for their food are called predators. Prey -The animals which are hunted by predators for their food are called prey.]

9. What is photosynthesis?

[Hint: The process by which plants make their own food with the help of water and carbon dioxide in presence of sunlight and chlorophyll.]

IV. b) SHORT ANSWER TYPE QUESTIONS: (3M)

1. What are the adaptations found in a camel?

[Hint: i) Excrete small quantity of urine.

ii) They do not sweat and their dung is dry.

iii) Can live without water for many days as their bodies lose little water.

iv) It has long legs which provide protection from heat of sand.]

2. What is acclimatisation? How is it different from adaptation?

[Hint: Acclimatisation is the occurrence of small changes in the body of an organism over short periods, to adjust to changes in the surroundings, whereas adaptation is the presence of specific features and habits that takes place over thousands of years which enable the organisms to live in a particular habitat.]

3. How do aquatic animals use the oxygen dissolved in water?

[Hint: Most aquatic animals have gills that help them use oxygen dissolved in water. Whales and dolphins have blowholes located on the upper part of their head which allows them to breathe when they come near the water surface. They can stay in water without breathing for a long time.]

4. Differentiate terrestrial and aquatic habitat?

[Hint: Terrestrial habitat- Plants and Animals that grow on land are said to live in terrestrial habitat. Forests, grasslands, deserts and mountain regions are some examples of terrestrial habitat.

Aquatic Habitat - Plants and Animals that grow in water are said to live in aquatic habitat. Oceans, ponds and lakes are examples of aquatic habitat.]

5. List some adaptations found in deer to survive in grass land/forests.

[Hint: It has strong teeth for chewing hard plant stems.

It has long ears to hear movements of predators.

The eyes on the side of its head allow it to look in all directions.

Its speed help it to run away from the predators.]

6. How are desert plants adapted to their surroundings?

[Hint: i) Leaves are absent/reduced or modified into spines to reduce water loss by transpiration.

ii) Stem is green and performs photosynthesis.

iii) Stem stores water, so it is thick and fleshy.

iv) Deep root system to collect maximum water from deep soil.

v) Thick waxy layer on stem prevents water loss.]

7. What kind of movement do we see in plants?

[Hint: Plants are generally anchored in soil, so they do not move from one place to another. But as living things, plants too exhibit some kind of movement.

i) Opening and closing of flowers.

ii) Growth of stem and leaves.

iii) Movement of water, minerals and food from one part of the plant to other.]

V. LONG ANSWER TYPE QUESTIONS. (5M)

1. Identify the habitat mention one adaptation each in the following animals.

i) Frog ii)Yak iii)Squid iv) Desert snake v) Mountain goat

[Hint: i) Frogs live in Pond habitat – They have webbed feet to help them swim in water.

ii) Yaks are found in Mountain habitat – They have long hair to keep them warm.

iii) Squids live in Ocean habitat – They have gills to help them use oxygen dissolved in water.

iv) Desert snakes are found in Desert habitat - They stay in burrows deep in the sand to escape from the intense heat during the day.

v) Mountain goats are found on Mountains – They have strong hooves to climb the rocky slopes of the mountains.

2. Mention the major adaptations in different kinds of aquatic plants?



[Hint: A. FLOATING PLANTS

- i) Stems have air spaces to enable the plant to float.**
- ii) They have waxy upper surfaces that makes them waterproof.**
- iii) They have stomata on the upper surfaces which are exposed to air.**
E.g., water lettuce and water hyacinth.

B. PARTLY SUBMERGED PLANTS

- i) The roots are fixed in the soil below water, at the bottom of the pond**
- ii) Stems are long, hollow and light.**
- iii) The stems grow up to surface of water, while the leaves and flowers float on surface of water. E.g., water lily and lotus.**

C. TOTALLY SUBMERGED PLANTS

- i) The roots of these plants are fixed in the soil below water.**
- ii) These plants have narrow and ribbon like leaves.**
- iii) In some plants, leaves are highly divided through which water can easily flow without damaging them. E.g., Hydrilla and Vallisneria.]**

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