

## Chapter 9: The Living Organisms and their Surroundings

NCERT Exemplar · Class 6 · Science

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### Multiple Choice Questions

#### Question 1

Which of the following cannot be called a habitat?

A.

A desert with camels.

B.

A pond with fishes.

C.

A jungle with wild animals.

D.

Cultivated land with grazing cattle.

#### Answer

Correct option: D

#### Solution

**Ans:** The correct option is (d).

Habitat is the natural environment of the organism where it lives. Cultivated land with grazing cattle is not the habitat or is not the place where cattle live. So Cultivated land with grazing cattle is not a habitat.

## Question 2

Following are some features of plants

- (i) They lose a lot of water through transpiration.
- (ii) Their leaves are always broad and flat.
- (iii) They lose very little water through transpiration.
- (iv) Their roots grow very deep into the soil.

Which of the combination of the above features are typical of desert plants?

- (a) (i) and (ii)
- (b) (ii) and (iv)
- (c) (ii) and (iii)
- (d) (iii) and (iv)

## Solution

**Ans:** The correct answer is option - (d) (iii) and (iv)

Desert lacks water. So, plants growing in the desert are adapted to the low water conditions. Their leaves lose very little water through transpiration and most often roots are modified into the spines. The roots of the desert plant run very deep into the soil.

## Question 3

Boojho comes across an animal having a stream-lined and slippery body. What is the habitat of the animal?

A.

Water

B.

Desert

C.

Grassland

D.

Mountain

### Solution

**Ans:** A correct answer is an option (a).

The animals living in water are called aquatic animals. These water habitats have streamlined and slippery bodies to facilitate them to swim easily in the water bodies.

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### Question 4

Which of the following are characteristics of living beings?

- |                  |                   |
|------------------|-------------------|
| (i) Respiration  | (ii) Reproduction |
| (iii) Adaptation | (iv) Excretion    |

Choose the correct answer from the options below:

A.

(i), (ii) and (iv) only

B.

(i) and (ii) only

C.

(ii) and (iv) only

D.

(i), (ii), (iii) and (iv)

### Answer

Correct option: D

### Solution

**Ans:** The correct answer is option (d) (i), (ii), (iii) and (iv).

All these four given characteristics i.e. Respiration, reproduction, adaptation, excretion are the characteristics of living beings.

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### Question 5

Earthworms breathe through their?

A.

Skin

B.

Gills

C.

Lungs

D.

Stomata

### Answer

Correct option: A

### Solution

**Ans:** The correct answer is option (a) Skin.

Earthworms do not have an organ like lungs for breathing. Earthworms breathe through their skin. Gills are the respiratory organ of the fishes and other aquatic animals. And stomata is the respiration point in the case of plants.

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### Question 6

Which of the following is not an example of a response to stimulus?

A.

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Watering in the mouth when we see delicious food items.

**B.**

Closing of leaves of mimosa plant when touched.

**C.**

Shutting our eyes when an object is suddenly thrown in our direction.

**D.**

A chick hatching out of an egg.

### Solution

**Ans:** A correct answer is an option (d)- A chick hatching out of an egg.

Stimulus-response is something that provokes or causes an immediate response to an action. Watering in the mouth when we see delicious food items, closing off leaves of mimosa plant when touched, and Shutting our eyes when an object is suddenly thrown in our direction is a stimulus-response.

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### Question 7

**Which of the following is correct for respiration in plants?**

**A.**

Respiration takes place only during the daytime.

**B.**

Respiration takes place only during the night.

**C.**

Respiration takes place both during day and night.

**D.**

Respiration takes place only when plants are not making food.

## Solution

**Ans:** A correct answer is an option (c)- Respiration takes place both during day and night. Respiration is the necessity of life. So plants respire during the day and night both.

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## Question 8

Which of the following is an incorrect statement about excretion?

**A.**

Excretion takes place in plants.

**B.**

Excretion takes place both in plants and animals.

**C.**

Excretion is the process of getting rid of excess water only.

**D.**

Secretion is one method of excretion.

## Answer

Correct option: C

## Solution

**Ans:** The correct answer is option (c) Excretion is the process of getting rid of excess water only. Excretion is the process of getting rid of all the waste material that is harmful to humans and plants.

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## Question 9

Choose the set that represents only the biotic components of a habitat.

**A.**

Tiger, Deer, Grass, Soil

**B.**

Rocks, Soil, Plants, Air

**C.**

Sand, Turtle, Crab, Rocks

**D.**

Aquatic plant, Fish, Frog, Insect

### Answer

Correct option: D

### Solution

**Ans:** The correct answer is option (d) Aquatic plant, Fish, Frog, and Insect.

Biotic components are those components that have life and respiration. So, the Aquatic plant, Fish, Frog, and Insect all are living components.

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### Question 10

Which one of the following is not associated with reproduction?

**A.**

A new leaf coming out of a tree branch.

**B.**

A dog giving birth to a puppy.

**C.**

A seed growing into a plant.

**D.**

Chick hatching from an egg.

### Solution

**Ans:** The correct answer is an option (a) A new leaf coming out of a tree branch.

Reproduction is the process by which new offspring or individuals are produced. And a new leaf coming out of a tree branch is not a reproduction process.

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### Question 11

Choose the odd one out from below with respect to reproduction.

**A.**

Eggs of hen

**B.**

Seeds of plants

**C.**

Buds of potato

**D.**

Roots of a mango tree

### Answer

Correct option: D

### Solution

**Ans:** The correct answer is option (d) Roots of the mango tree.

Eggs of hen hatches and produces new hen, seeds of the plant give rise to new plant and buds of potato produce new potato plant but the roots of mango tree do not reproduce a new mango tree on its own.

**Question 12**

Although organisms die, their kind continues to live on earth. Which characteristic of living organisms makes this possible?

**A.**

Respiration

**B.**

Reproduction

**C.**

Excretion

**D.**

Movement

**Answer**

Correct option: B

**Solution**

**Ans:** The correct answer is option (b) Reproduction.

Reproduction is the process by which new offspring or individuals are produced.

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**Question 13**

If you happen to go to a desert, what changes do you expect to observe in the urine you excrete? You would

(i) Excrete a small amount of urine.

(ii) Excrete a large amount of urine.

(iii) Excrete concentrated urine.

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(iv) Excrete very dilute urine.

Which of the above would hold true?

(a) (i) and (iii)

(b) (ii) and (iv)

(c) (i) and (iv)

(d) (i) and (ii)

### Solution

**Ans:** The correct answer is an option (a) (i) and (iii) i.e. Excrete a small amount of urine and excrete concentrated urine.

Deserts have less water. So to minimize loss of water human body will excrete less amount of urine and in a concentrated form

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## Very Short Answer Questions

### Question 14

Unscramble the given words below to get the correct word using the clues given against them.

(a) SATPADAPOINT: specific features or certain habits which enable a living being to live in its surroundings

### Solution

**Ans:** Adaptations

(b) RETECOXNI: Waste products are removed by this process

**Ans:** Excretion

(c) LUMISIT: All living things respond to these

**Ans:** Stimuli

(d) ROUCDPRENTOI: Because of this we find organisms of the same kind

**Ans:** Reproduction

**Question 15**

Using the following words, write the habitat of each animal given in Fig. 9.1 (a to d).

Grassland, Mountain, desert, Pond, River.

**a****b****c****d****Solution**

**Ans:** Habitats of the given animals are:

(a) Deer – Forests and Grassland

(b) Frog (red-eyed frog) – Tropical RainForest

(c) Yak – Mountains and plateaus

(d) Camel – Desert

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### Question 16

Classify the following habitats into terrestrial and aquatic types.

Grassland, Pond, Ocean, Rice Field.

### Solution

**Ans:** When land is the habitat, it is known as terrestrial habitat. And when water is the habitat, it is known as aquatic habitat.

Aquatic habitats are – Pond and Ocean

Terrestrial habitat is – Grassland and Rice Field

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### Question 17

Why is reproduction important for organisms?

### Solution

**Ans:** Reproduction is the process of producing similar new individuals of their own kind. Reproduction ensures the continuity of a species on earth.

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### Question 18

Fill in the blanks:

(a) Saline water, hot air, and sand are \_\_\_\_\_ components of a habitat.

### Solution

**Ans:** Abiotic (non-living)

(b) The habitat of plants and animals that live in \_\_\_\_\_ is called the aquatic habitat.

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**Ans:** Water

(c) \_\_\_\_\_ enable a plant or an animal to live in its surroundings.

**Ans:** Adaptations

(d) Plants and animals that live on land are said to live in \_\_\_\_\_ habitats.

**Ans:** Terrestrial

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## Short Answer Questions

### Question 19

**Paheli has a rose plant in her garden. How can she increase the number of rose plants in the garden?**

#### Solution

**Ans:** The most common method of rose plant propagation is 'Stem Cutting'. So, Paheli should cut about 20-30cms long stems of a year-old plant and from its one side plant this stem into the soil. This stem cutting technique will give rise to a new rose plant.

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### Question 20

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

#### Solution

**Ans:** Desert snakes burrow deep into the sand during the day because Deserts are too hot during the daytime. And the soil deep inside is cooler than the soil on the top. Therefore, snakes burrow deep to rest in cooler soil and escape the scorching heat of the desert.

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### Question 21

**Write the adaptation in aquatic plants due to which**

**(a) Submerged leaves can bend in the flowing water.**

## Solution

**Ans:** Submerged leaves can bend in the flowing water due to their special shape i.e. long narrow and ribbon-shaped. These changes in shape help to tolerate water currents without getting harmed. E.g. – tape grass.

(b) Leaves can float on the surface of the water.

**Ans:** Leaves that can float on the surface of the water are simple, lightweight, hollow, and long.

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## Question 22

**Mention one adaptation present in the following animals:**

(a) In camels to keep their bodies away from the heat of the sand.

## Solution

**Ans:** Camels have very long legs, so the body of the camel is far away from the surface of the sand and thus, this adaptation helps camels to keep their bodies away from the heat of the sand.

(b) In frogs to enable them to swim.

**Ans:** Frogs generally have webbed feet that help them to swim in the water.

(c) In dolphins and whales to breathe in the air when they swim near the surface of the water.

**Ans:** Dolphins and whales both have a special opening known as "Blow Holes". These specialized openings help the whales and dolphins to breathe in the air when they swim near the surface of the water.

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## Question 23

**Some desert plants have very small leaves whereas some others have only spines. How does this benefit the plants?**

## Solution

**Ans:** Deserts are well known for adverse conditions like scarcity of water. plants growing in the desert adapt themselves to such adverse conditions. So they have very small leaves and in some others,

leaves are modified into spines to prevent loss of water through transpiration.

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### Question 24

**What are the specific features present in a deer that helps it to detect the presence of predators like a lion?**

### Solution

**Ans:** These are the following features that are helpful for the deer to detect the presence of predators:

- (i) Deers have long and thin legs that help them to run away very fast from predators.
- (ii) Deers have long and sharp ears that help them to listen to sound from the distance.
- (iii) The eyes of the deer are present on the sides of its head. This enables it to keep watch in all directions.

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### Question 25

**Read the features of plants given below:**

- (a) Thick waxy stem
- (b) Short roots
- (c) Cone-shaped plants
- (d) Sloping branches
- (e) Small or spine-like leaves
- (f) Hollow stem

**Choose the type of plant for every feature given in a, b, c, d, e, and f from the list given below: Aquatic plant, Desert plant, Mountainous plant**

### Solution

**Ans:**

- (a) Thick waxy stem – It is a feature of a Desert plant. It helps in the conservation of water.

(b) Short roots – It is a feature of an Aquatic plant. Water is present near the surface, so they don't need long roots.

(c) Cone-shaped plants – It is a feature of Mountainous plants. The cone shape of the plants helps the snow to slide off from the plant easily.

(d) Sloping branches- It is also a feature of Mountainous plants. The slope prevents the deposition of snow and ice on the plant.

(e) Small or spine-like leaves- it is a feature of the Desert plant. This helps in the prevention of water loss through transpiration.

(f) Hollow stem – It is a feature of an Aquatic plant. Hollow nature helps the plants to float on water easily.

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## Long Answer Questions

### Question 26

Like many animals although a car also moves it is not considered a living organism. Give 2-3 reasons.

### Solution

**Ans:** the car is not considered a living organism because it does not have the following properties:

(i) Not made up of cells- All living beings are composed of cells but the car is not made up of cells and thus is a non-living thing.

(ii) No Reproduction- All living beings undergo the process of reproduction but the car does not reproduce.

(iii) Lack of respiration- respiration is an essential process for the survival of the living being but the car does not undergo the process of respiration.

Thus, these points above cleared the fact that a car is a non-living thing.

## Question 27

**What are the adaptive features of a lion that helps it in hunting?**

### Solution

**Ans:** The following are the adaptive features of a lion that helps it in hunting:

- (i) Lions have very sharp claws and teeth that help them capture the prey strongly.
- (ii) They have a brown body that helps them to hide very well in the dry grass.
- (iii) Lions have two sharp eyes in the front of the head, that keep their focus clearly on the prey.

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