

# The Living Organisms and their Surrounding

## TALENT & OLYMPIAD



### The living organism & Their Surroundings

The environment consists of both living things and non living things. Living things are known as biotic components of the environment whereas non living things are known as abiotic components.

All the living things have been classified into three groups producers, consumers and decomposers.



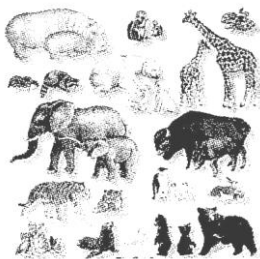
#### Producers

Producers are the living organisms which can make their own food with the help of photosynthesis. All the green plants like mango, peepal, grass etc. are included in this category.



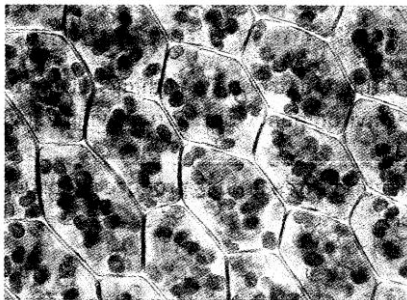
#### Consumers

Consumers are the living organisms which consume the food prepared by the green plants. This includes all the animals like tiger, elephant, human etc.



#### Decomposers

It includes the microorganisms which decomposes dead bodies of plants and animals.



Balance in the Nature:

All these three producers, consumers and decomposers work together to keep the balance in the nature. Green plants prepare food, consumers eat them and grow and when consumers died, decomposers decomposes their body into simpler substances.



## Habitats

The place where an organism lives is called its habitat. There are various types of habitats.



## Types of Habitats

There are mainly two types of habitats.

- (i) Aquatic habitat
- (ii) Terrestrial habitat



### Aquatic Habitat

A water based habitats is known as aquatic habitats.

**Hydrophytes:** Plants which live in water

**Hydrocoles:** Animals which live in aquatic habitat

**Phytoplanktons:** The microscopic plants which live in water.

**Zooplanktons:** The microscopic animals which live in water

Aquatic habitat has been divided into three groups

- ❖ **Marine Habitats:** Salt water habitats are known as marine habitats.
- ❖ **Costal Habitats:** The region where seas meets land, is known as coastal habitats.
- ❖ **Fresh Water Habitats:** Lakes, rivers, ponds, are known as fresh water habitats.



### Terrestrial Habitats

Land based habitats are known as terrestrial habitats. Terrestrial habitats have been divided into five groups



#### Desert Habitats

It is the region of land habitats with very low rainfall.

**Xerophytes:** The plants which live in desert.

**Xerocoles:** The animals which live in desert.

**Note:** the kind of habitat which is characterized by hot and dry places with scarcity of water is called xeric habitat.



#### Grassland Habitats

This is the region of terrestrial habitats of moderate rainfall.



#### Rainforest Habitats

This is the region of hot and wet weather with high rainfall.

## ➡ Tundra Habitats

This is the very cold region of terrestrial habitat which is covered by snow throughout the year.

## ➡ Mountainous Habitats

This is the region of landform that rises high above the surrounding terrain.

### Adaptation in Desert Organisms:

Desert plants have long and extensive root system, with which they go deep in the soil in search of water. The leaves and stems of some plants become thick and store water, e.g. agave, opuntia.

Desert animals like rats, snakes etc. dig deep burrows to live which protects them from extreme heat during the day.

### Adaptation in Water Organisms:

Aquatic plants have very short and small roots. Their stems are soft, hollow and light having large spaces filled with air. Submerged leaves are long and narrow whereas floating leaves are large and flat and have waxy upper surface.

Body of water animals are streamlined which are covered by scales and mucous.

They have fins and tail to swim in water and gills for breathing.

### Adaptation for Cold Weather:

The animals which live in very cold region have thick fur on their bodies to protect them from cold. They have thick layer of fat under skin to regulate their body temperature.

Some animals go to winter sleep called hibernation due to extreme cold and lack of the availability of food.

### Adaptation in Grassland Organisms:

Predators have long, strong and sharp claws in their front legs. Eyes in front of head enables them to find the exact location of their prey and light brown colour of their skin help them in hiding in the grassland. Prey have eyes in sides of their head to see in all direction. They have big ears for good hearing. They can run fast and their strong teeth enable them to eat hard plant stems.

## Commonly Asked

### QUESTIONS



#### The plants which live in water are called:

- (a) Hydrophytes
- (b) Hydrocoles
- (c) Xerophytes
- (d) Xerocolles
- (e) None of these

**Answer: (a)**



#### Which one of the following is an aquatic habitat?

- (a) Marine
- (b) Tundra habitat
- (c) Rainforest habitat
- (d) Grassland habitat

(e) None of these

**Answer: (a)**

## SUMMARY



- ❖ The environment consists of both living things and non-living things.
- ❖ The living organisms, which can make their own food, are called producers.
- ❖ Animals are known as consumers.
- ❖ The place where an organism lives is known as habitat.
- ❖ A water based habitat is known as aquatic habitat.
- ❖ A land based habitat is known as terrestrial habitat.

# Self Evaluation **TEST**



Duration  
10 Minutes

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1. **Who of the following is correct:**

**Rahul:** Living things are biotic components of environment.

**Rajesh:** Non-living things are abiotic components of environment.

- |                      |                        |
|----------------------|------------------------|
| (a) Rahul            | (b) Rajesh             |
| (c) Both are correct | (d) Both are incorrect |

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2. **Which one of the followings are decomposers?**

- |                        |                  |
|------------------------|------------------|
| (a) Green plants       | (b) Animals      |
| (c) Bacteria and fungi | (d) All of these |
| (e) None of these      |                  |

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3. **Which one of the following is an example of marine habitats?**

- |                   |                      |
|-------------------|----------------------|
| (a) Ocean         | (b) Seas             |
| (c) Ponds         | (d) Both (a) and (b) |
| (e) None of these |                      |

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4. **Which one of the following habitats have very cold weather and covered with snow throughout the year?**

- |                        |                      |
|------------------------|----------------------|
| (a) Marine habitats    | (b) Coastal habitats |
| (c) Grassland habitats | (d) Tundra habitats  |

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5. **Lion is an animal which lives in \_\_\_\_.**

- |                       |                         |
|-----------------------|-------------------------|
| (a) Desert habitat    | (b) Mountain habitat    |
| (c) Grassland habitat | (d) Rain forest habitat |
| (e) None of these     |                         |

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6. **Streamlined body is one of the adaptations found in:**

- |                      |                       |
|----------------------|-----------------------|
| (a) Water animals    | (b) Desert animals    |
| (c) Mountain animals | (d) Grassland animals |
| (e) None of these    |                       |
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**7. How do the desert animals survive the heat during the day?**

- (a) They go high on the mountains
  - (b) They stay in the burrows during the day
  - (c) They migrate to nearby forest during the day
  - (d) All of these
  - (e) None of these
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**8. Which one of the following statements is correct:**

**Statement 1:** Coastal habitats are the aquatic habitats

**Statement 2:** Coastal habitats are the terrestrial habitats

- (a) Statement 1
  - (b) Statement 2
  - (c) Both statements are correct
  - (d) Both statements are incorrect
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**9. The microscopic animals which live in water are called:**

- (a) Zooplanktons
  - (b) Phytoplankton's
  - (c) Hydrophytes
  - (d) All of these
  - (e) None of these
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**10. Which one of the following is correct for the term 'Xerocoles'?**

- (a) Animals which live in fresh water
  - (b) Animals which live in mountains
  - (c) Animals which live in forest
  - (d) Animals which live in desert
  - (e) None of these
- 

**Answers – Self Evaluation Test**

1.	C	2.	C	3.	D	4.	D	5.	C	6.	A	7.	B	8.	A	9.	A	10.	D
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