

LESSON – 4 ADAPTATIONS IN ANIMALS

GIVE REASONS FOR THE FOLLOWING:

1. Polar bears have blubber.

Polar bears live in the North Pole, which is a very cold area. The thick layer of blubber or fat under the skin helps in saving heat for the bear.

2. Camels have wide feet.

Camels that live in the desert have wide feet and strong legs to help them walk on sand without sinking.

ANSWER THE FOLLOWING QUESTIONS IN BRIEF:

1. How does the camel feed on thorny plants in the deserts?

The thick lips and tongue of the camels helps them to feed on Thorny desert plants without feeling pain

2. What is aestivation? Give one example of an animal that aestivates.

Some animals remain inactive during summers to maintain energy and body temperature this is called aestivation. Crocodile is an example of an animal that aestivate.

3. What is camouflage? Why do animals show camouflage?

The body covering of some animals is such that they blend with their surroundings. This helps predators to hunt and prey to hide easily from the predators. This is Called camouflage

4. How are the teeth of herbivores different from that of carnivores?

Teeth of herbivores- They have sharp well-developed incisors, molars and premolars

Teeth of carnivores- They have well developed canines to tear flesh

ANSWER THE FOLLOWING IN DETAIL:

1. Discuss the adaptations in movement in different land animals.

Most of the animals that live on land have four limbs. The two limbs in front are forelimbs and the two at the back are called hind limbs.

- Human beings have highly developed limbs, hind limbs are used to move and fore limbs are to hold objects.
- Animals like horse, pigs have a strong hooves to help them move
- Kangaroos have very long and strong and limbs to hop
- Crocodiles and lizards have short limbs to crawl
- Snakes are limbless animals that use the scale is present on the underside of their body to move

2. What are the different animal adaptations based on their feeding habits?

Herbivores: The animals that eat plants or other plant parts. Horses, cow, sheep are examples of Herbivores

Carnivores: The animals that eat the flesh of other animals. Some examples of carnivorous are lion, tiger, cat and wolf

Omnivorous: The animals that eat both meat and plants. Dogs, pigs, squirrels and humans are few examples of omnivorous

3. How are different aquatic animals adapted for movement?

Animals that live in water move by paddling and pushing back the water.

- Fish have a streamlined body to cut through water to fence to swim and maintain their balance under tail fin to change their directions.

- Frogs have webbed feet to swim or paddle in water.
- Turtles have four pattern like limbs to swim in water these are called flippers.

LN-5 ADAPTATIONS IN PLANTS

GIVE REASONS FOR THE FOLLOWING STATEMENT.

1. Desert plants have small leaves or no leaves.

- Desert plants have small leaves or no leaves because they help the plant in preventing water loss due to transpiration.

2. Mangrove trees have roots above the ground.

- Mangrove trees have roots above the ground because these trees will grow in marshy regions which have more water and little or no air. Therefore, the roots of these trees do not get enough air to breathe.

ANSWER THE FOLLOWING QUESTIONS IN BRIEF.

1. What are the adaptations of plants that live in deserts?

- Plants in the desert region adapt themselves to obtain water from the soil and prevent loss of water.

2. What are conifers? How do they survive in their habitat?

- Conifers are a group of trees and shrubs that grow in cooler and mountainous regions which are coned in shaped. They survive in their interior cells from the cold.

3. How do plants survive in marshy areas?

- Plants in the marshy regions survive with more water and little or no air. Thus, the roots of these plants grow out of the soil to breathe from the air.

4. What are the differences between deciduous and evergreen trees?

Deciduous Trees	Evergreen Trees
<ul style="list-style-type: none"> • The trees that shed their leaves in autumn and get new leaves in spring. These trees 	<ul style="list-style-type: none"> • The trees that remains green throughout the year. These trees are called evergreen

are called deciduous trees.	trees.
• Example: Peepal tree and Gulmohar tree.	• Example: Mango tree and banyan tree.

ANSWER THE FOLLOWING QUESTIONS IN DETAIL

1. State the differences between the three types of water plants.

Floating Plants	Fixed Plants	Underwater Plants
<ul style="list-style-type: none"> Plants float on the surface of water. The roots of these plants are not fixed in the bottom of soil. They are light body which float easily. 	<ul style="list-style-type: none"> The roots of these plants are fixed at the bottom. They have a long, hollow stem that are light and flexible. The leaves of these plants are broad and flat. 	<ul style="list-style-type: none"> These plants are completely submerged in water. They have a long and flexible stem which moves along with water. The leaves are thin and tiny.
<ul style="list-style-type: none"> Example: Duck weed, Water lettuce 	<ul style="list-style-type: none"> Example: Water lily, Lotus. 	<ul style="list-style-type: none"> Example: Hydrilla, pondweed.

2. How are plants in the desert region different from the plants in hilly areas?

- The plants in the desert region adapt themselves to obtain water from the soil and prevent loss of water. The plants in hilly areas receive normal to heavy snowfall due to which the trees adapt to survive the extreme climatic conditions.

LN-6 PLANTS AROUND US

E. Give reason for the following statements.

1. More number of stomata are present on the underside of most leaves.

- Most leaves has under side stomata as this is an adaptation to prevent excess water loss

2. Stem is called the support system or backbone of the plants.

- Stem gives support to stand erect to the plant, so it is called the backbone of the plants.

G. Answer the following questions in brief.

1. How do leaves make their own food?

- The leaves use sunlight, water (from the stem) and carbon dioxide (from the air) to make food by photosynthesis process.

2. What is the function of stomata present in leaves?

- Stomata, the small pores present on leaves that help in the exchange of gas.

3. What is the function of chlorophyll?

- The green pigment in plants that helps to absorb sunlight.

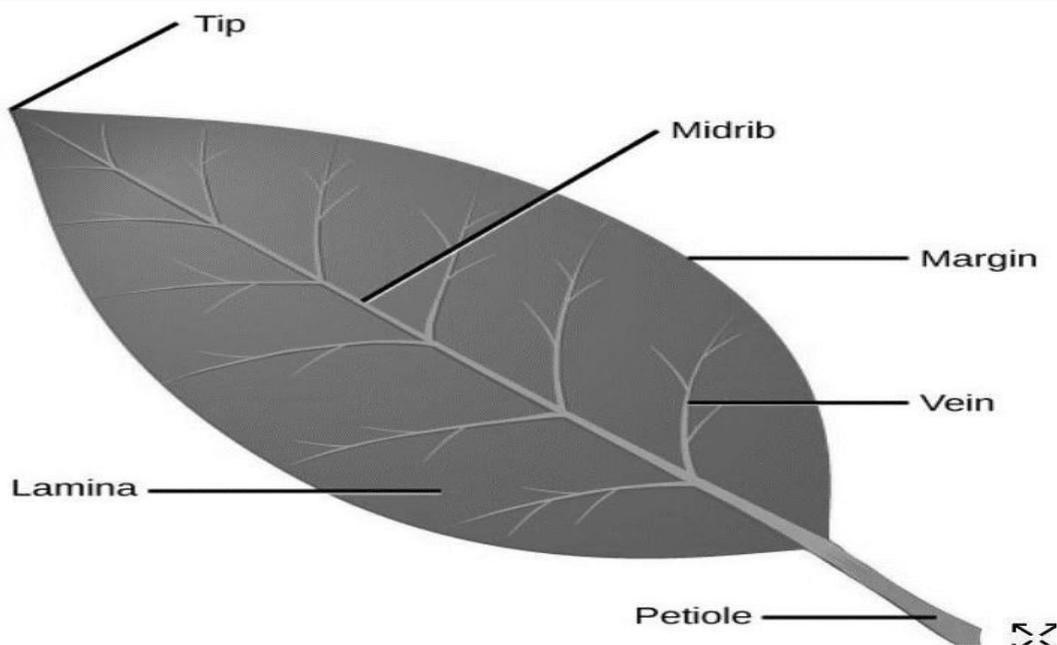
4. Define photosynthesis.

- The process by which green plants make their own food from carbon dioxide and water by using sunlight energy in the presence of chlorophyll is called photosynthesis.

H. Answer the following questions in detail.

1. Draw a well- labeled diagram of a leaf and write the function of each part.

- **Petiole:** Attaches the leaf to the stem.
- **Lamina:** Determine the shape of the leaf.
- **Midrib:** Give the *leaf* support so it won't bend and break in half.
- **Stomata:** Helps in respiration.



2. Explain the process of photosynthesis in detail with the help of a diagram.

- The process of plants preparing their own food in the presence of sunlight and chlorophyll is termed as **photosynthesis**.
- The process of photosynthesis requires carbon dioxide, water, minerals, sunlight and chlorophyll.
- During photosynthesis, chlorophyll containing cells of leaves use carbon dioxide and water in the presence of sunlight to synthesise carbohydrates along with the release of oxygen.
- Carbohydrates ultimately get converted to starch, and hence, the presence of starch in leaves indicates the occurrence of photosynthesis.

