# OUR FOREST

7
CHAPTER

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## INTRODUCTION

Forests are one of the most usefull reneuable resources. They provide habitat to many type of animals & plants.

The forest is a biotic community spread over a large area of land & composed of tall trees, herbs, shrubs, climbers & wild animals

## INTERDEPENDENCE OF PLANT & ANIMALS

A forest is home to many kinds of plants, animals & microorganism. These living organisms depend on each other for their survival

## DEPENDENCE OF ANIMALS ON PLANT

### For food :

All animals depend for their food directly or indirectly on green plants. Herbivores feed on plant material directly while carnivores feed on the herbivores.

### For Oxygen :

Plants produce oxygen during photosynthesis and animals use this oxygen for respiration.

### For shelter :

Some animals depend on plants for shelter and safety. Trees provide protection from rain and shade from the heat of the sun to the animals. Most of the birds make their nest on branches of trees. Monkeys, apes and bats also live on trees.

## DEPENDENCE OF PLANTS ON ANIMALS

### For Carbon Dioxide :

Animals produce carbon dioxide during respiration which is released in the atmosphere. Plants use this carbon dioxide for preparing food by the process of photosynthesis. In this way plants play an important role in maintaining carbon dioxide and oxygen balance in nature.

### For Pollen and Seed Dispersal :

A number of insects, birds and bats help in pollination. Some animals help in dispersal of fruits and seeds.

### For Supplying Nutrients :

Animal excreta and their dead bodies add nutrients to the soil. They act as manure and provide mineral for plant growth.

## RECYCLING OF NUTRIENTS IN A FOREST

Plants are called producers as they can produce their own food. They are also called autotrophs. Animals are called consumers they cannot produce their own food & depends on plants.

Animals are also called heterotrophs. Decomposers are the micro organisms which break down dead remains of plant and animals into simpler substances & release these nutrient into soil, water & air.

## FOOD CHAIN

The process of food transfer from plants through a series of organisms with repeated eating and being eaten is called a food chain.

For example, a grasshopper eats a green plants, a frog eats a grasshopper a frog is eaten by a snake and snake is eaten by an eagle

Plant → Grasshopper → Frog → Snake → Eagle

Food and energy get transferred several times between organisms but ends with dead animals and plants. Bodies of dead organism are then broken down into simpler nutrients in the soil by decomposers.

## FOOD WEB

All food chains are interlinked. This interconnected network of food chains is called food web.

For example, grass or plants may be eaten by grasshoppers as well as rabbits, cattle and deer. These herbivores, in turn, may be eaten by carnivores like frogs, birds, snakes, tigers or hawks depending on their food habits.

## BIODIVERSITY IN A FOREST

Our forest is a home for several kinds of plants and animals. These plants and animals live close relation with each other. some examples of plants and animals found in forest are as follows

### ◈ Forest Plants :

Sal, teak, semal, sheesham, neem, palash, fig, khair, amla, bamboo, etc.

### ◈ Forest Animals :

- Bear, jackal, porcupine, elephant, monkey, lion, tiger, leopard butterfly, spider etc.

## USE OF FOREST

Forest are beneficial to a man in several ways which are given below.

### ◈ Provide Timber :

Timber is used for making furniture, railway sleepers, carts, boats, ships, sports goods, ploughs, etc.

### ◈ Provide Food :

Tribal people living in the forest take tubers roots, leaves and fruits of plants as their food.

### ◈ Provide Medicines :

Leaves of eucalyptus, neem and tulsi are well known for their medicinal value. Cinchona, ephedra, ishabgul and aloe vera plants also have medicinal value.

◈ **Provide Other Forest Products :**

Forests provide a large number of important products such as gum, oil, spices, fodder, resins, bamboo, lac, silk, honey, etc.

◈ **Prevent Soil Erosion and Floods :**

Roots of trees bind the soil particles together and prevent the soil from being washed or blown away

◈ **Regulate Climate of a Place :**

Forest increases the water vapour in the atmosphere by transpiratoion. Helps in keeping the air cool and also helps in inducing rain.

◈ **Improve Quality of Soil :**

Dead fallen leaves of trees decay and form humus that increases the porosity and fertility of the soil.

◈ **Reduce Atmosphere Pollution :**

forests reduce atmospheric pollution by using carbon dioxide for photosynthesis and by collecting suspended particulate matter on their leaves. Thus, trees help in checking global warming

◈ **Control Water Flow :**

The thick layer of humus in the forest absorbs and holds rainwater like a sponge. The leaves of the trees also reduce the force of the rain drops to keep soil intact. The latter allows a gradual run off of water to· prevent flash floods. This ensures perennial supply of water to streams, springs and wells

◈ **Provide Fuelwood :**

Wood is one of the most important fuels used for cooking in several rural areas even today. Charcoal is also used during winters to keep ourselves warm

◈ **Aesthetic Value :**

Forests give a beautiful and pleasing look. Many people go to forests for recreation because temperature in forests is lower than normal and the air is pure. Forests are a good place for picnic, hunting, hiking, camping, fishing, photography, etc.

## ➢ CONSERVATION OF FOREST

The maintenance and upkeep of forests is cal1ed **forest** conservation. The following steps should be undertaken to conserve forests:

- Massive afforestation work should be undertaken to cover large areas of land with useful plants
- Large scale cutting of forest trees must be stopped. If it is essential to cut a few trees, then make sure to plant more trees in their place.
- Forest fires should be prevented. Huge forest areas are destroyed by fire every year. People should avoid smoking or cooking in the forest areas.
- Overgrazing by cattle, horses, sheep and goats should be prevented.
- Forests must be protected from insects and pests.
- All activities leading to soil erosion should be controlled.

- Air, water and soil pollution should be reduced so that trees and other vegetation can survive and develop in a forest.
- Plants should be given free of cost to the people for growing them near their house.
- People should be made aware of the impact of forest on their life through advertisements, television, radio and plays.
- Guidelines of international organizations like WWF and UNESCO for forest conservation should be followed.
- Van Mahotsava which is celebrated every year should be made more popular, meaningful and effective.

# EXERCISE # 1

## A. Single Choice Type Questions

**Q.1** The first link in all food chains is -
(A) Herbivores (B) Carnivores
(C) Green plants (D) All of these

**Q.2** Which of the following is a producers ?
(A) Herbivores (B) Green plants
(C) Carnivores (D) Decomposer

**Q.3** Which of the following is not a forest product ?
(A) Wood (B) Honey
(C) Nylon (D) Gum

**Q.4** Which of the following is a decomposer ?
(A) Tulsi (B) Snake
(C) Fungi (D) Lion

**Q.5** The lowest layer in the forest is occupied by -
(A) Trees (B) Shurbs
(C) Herbs (D) All of these

## B. Fill In The Blanks

**Q.6** Humus is rich in _____

**Q.7** Soil helps forests to _____ and _____

**Q.8** Plants are called _____ in a food chain.

**Q.9** Destruction of forests leads to _____ erosion.

**Q.10** Forests occupy _____ percent of the geographical area in India.

## C. Match The Following

**Q.11** Match the items in column-A with the items in Column-B.

| | Column-A | | Column-B |
|---|---|---|---|
| 1 | Green plants | a | Afforestation |
| 2 | Deer | b | Decomposer |
| 3 | Tiger | c | Carnivore |
| 4 | Bacteria and fungi | d | Herbivore |
| 5 | Planting trees on large scale | e | Producer |
| | | f | Deforestation |

# EXERCISE # 2

## A. Very Short Answer Types Questions

**Q.1** Mention two ways in which plants are useful to animals.

**Q.2** What do you mean by producers?

**Q.3** Name two plants that give us medicines.

**Q.4** Name two animals and two trees found in forests.

**Q.5** Give one example of a food chain taking place in a forest.

**Q.6** What are the ultimate sources of food for all animals ?

## B. Short Answer Types Questions

**Q.7** What is a food chain? Explain with an example.

**Q.8** Why are forests being cut these days ?

**Q.9** In what way do forests prevent floods ?

**Q.10** What is a food web ?

**Q.11** How will snakes be affected if all rats disappear from the forest ?

**Q.12** How are animals classified according to their role in the food chain ?

**Q.13** Why are forests considered as renewable natural resources ?

**Q.14** How do forests help to control soil erosion ?

## C. Long Answer Types Questions

**Q.15** What are decomposers and what role do they play in the forest?

**Q.16** Why do we say that there is no waste in a forest ? Explain.

**Q.17** What is meant by interdependence of plants and animals ?

**Q.18** List five methods for the conservation of forests.

**Q.19** How do trees help in checking noise pollution ?

**Q.20** What measures should be taken to conserve forests ?

**Q.21** Why are forests beneficial to man ? Explain it in points.

**Q.22** What are the differences between food chain and food webs ? Explain it with suitable examples.