

## **FOREST ECOSYSTEM**

### **Introduction**

A forest ecosystem is the one in which tall trees grow that support many animals and birds. The forests are found in undisturbed areas receiving moderate to high rainfall. The forest occupies nearly 40% of the world's land area. In India it occupies only 19% of its total land area.

### **Types of forest ecosystem**

Depending upon the climate conditions, forests can be classified into the following types.

1. Tropical Rain forests.
2. Tropical deciduous forests.
3. Tropical scrub forests.
4. Temperate rain forests.
5. Temperate deciduous forests.



## Features of different types of Forests

### 1. Tropical Rain forests

They are found near the equator. They are characterized by high temperature. They have broad leaf trees like teak and 1. and the animals like lion, tiger and monkey.

### 2. Tropical deciduous forests

They are found little away from the equator. They are characterized by a warm climate and rain is only during monsoon. They have different types of deciduous trees like maple, oak and hickory and animals like deer, fox, rabbit and rat.

### 3. Tropical Scrub forests

These are characterized by a dry climate for longer time. They small deciduous trees and shrubs and animals like maple, oak and hickory and animals like deer, fox, etc.,

### 4. Temperate Rain Forests

They are found in temperate areas with adequate rainfall. They are characterized by coniferous trees like pines, firs, red wood etc., and animals like, squirrels, fox, cats, bear etc.,



### **5. Temperate deciduous forests**

They are found in areas with moderate temperatures. have major trees including broad leaf deciduous trees like oak, hickory and animals like deer, fox, bear, etc.,

#### **Characteristics of forest ecosystems**

1. Forests are characterized by warm temperature and adequate rainfall, which make the
2. generation of number of ponds, lakes etc.,
3. The forest maintains climate and rainfall.
4. The forest support many wild animals and protect biodiversity.
5. The soil is rich in organic matter and nutrients which support the growth of trees.
6. Since penetration of light is so poor, the conversion of organic matter into nutrients is very fast.





## Structure and Function of forest ecosystem

### I. Abiotic components

Climatic factors (temperature, light, rainfall) and minerals The abiotic components are inorganic and organic substances found in the soil and atmosphere. In addition minerals, the occurrence of litter is characteristic features, majority of forests.

### II. Biotic components

1. **Producers:** The plants absorb sunlight and produce photosynthesis

Trees, shrubs and ground vegetation..

## **2. Consumers**

(a) Primary consumers (herbivores) :They directly depend on the plants for their food.

Example : Ants, flies, insects, mice, deer, squirrels.

b. Secondary consumers (primary carnivores):They directly depend on the herbivores for their food

Examples: Snakes, birds, fox.

c. Tertiary consumers :They depend on the primary carnivores for their food

Examples : Animals, like tiger, lion, etc.

## **3. Decomposers**

Bacteria and fungi.

They decompose the dead plant and animal matter, of decomposition in tropical and subtropical forests is in rapid than in the temperate forests.





