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Class 7th **Chapter – 12**

Forest: Our Lifeline

Forests are one of the most useful renewable resources. They are our national wealth. They provide habitat to many types of animals and plants. About one-third land surface of the world is covered with forest. In India about 21% of the country's total area consists of forest land. There are many kinds of forests. The type of forest in a particular area depends on climate and soil type. Trees are dominant in forest. Shrubs, herbs and climbers are also present. Forest are important part of our life. "This is because the forests serve a green lungs and water purifying systems in nature".

INTERDEPENDENCE OF PLANTS AND ANIMALS

A forest is home to many kinds of plants, animals and microorganisms. These living organisms depend on each other for their survival. They are also interconnected and interdependent.

Dependence of Animals on Plants

Animals depend on plants in various ways:

1. 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.

2. For Oxygen

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

3. 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 the nest on branches of trees. Monkeys, apes and bats also live on trees.

STRUCTURE OF TREE

Crown

Crown is the top part of the tree from which branches grow above the stem. The crown includes the top part of the tree. Different types of trees have crowns having different shapes and size. The major function of Crown of trees are to absorb sun's light energy, carry out photosynthesis, release oxygen and carry out respiration and transpiration process.

The Canopy

Canopy is the outermost layer of the leaves formed by an individual tree or by the group of trees. The branches of the tall trees look like a roof over the other plants in the forest. It restricts the sunlight and rains from getting into the layers which are below the canopy.

Understorey

The different horizontal layers formed by different types of crowns in the forest is known as understory. Giant and tall trees constituted the top layer followed by shrubs and tall grasses, and herbs formed the lowest layer.

BIODIVERSITY IN A FOREST

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

Forest Plants: Sal, teak, semal, sheesham, neem, Thus we palash, fig, khair, amla, bamboo etc.

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

Thus we see that forests provide a natural home for many animals and plants and show great biodiversity.

FOREST AS A DYNAMIC LIVING ENTITY

A forest provides favourable conditions for the growth and development of plants, animals and microorganisms. The wide variety of animals such- as herbivores and carnivores help the forest to regenerate and grow. Decomposers break down the dead remains of plants and animals into simpler forms. These decomposers supply nutrients to the growing plants in the forest.

USES OF FOREST

1. Provide Timber: We get timber from trees such as sal, teak, pine, etc. Timber is used for making furniture, boats, ships, ploughs, etc.

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

3. Provide Medicines: Various drugs of medicinal importance are obtained from various plants in the forest. Leaves of eucalyptus, neem and tulsi are well known for their medicinal value. Cinchona, ephedra, ishabgul and aloe vera plants also have medicinal value.

4. Provide Other Forest Products: Forests provide a large number of important products such as gum, oils, spices, fodder, resins, bamboo, lac, silk, honey, etc. Horns, hides, musk, ivory etc, are provided by forest animals.

5. Prevent Soil Erosion and Floods: Roots of trees bind the soil particles together and prevent the soil from being washed or blown away. Trees also help in preventing floods

6. Regulate Climate of a Place: Forest increases the water vapour in the atmosphere by transpiration. The increase in water vapour content helps in keeping the air cool and also helps in inducing rain.

7. Improve Quality of Soil: Dead fallen leaves of trees decay and form humus that increases the fertility of the soil.

8. Reduce Atmospheric 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.

9. Provide Fuel wood: Wood is one of the most important fuels used also for cooking in several rural areas even today.

CONSERVATION OF FOREST

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

- 1. Massive afforestation work should be undertaken to cover large areas of land with useful plants.**
- 2. Large scale cutting of forest trees must be stopped.**
- 3. Forest fires should be prevented**
- 4. Overgrazing by cattle, horses, sheep and goats should be prevented.**
- 5. Forests must be protected from insects and pests.**
- 6. All activities leading to soil erosion should be controlled.**
- 7. Air, water and soil pollution should be reduced so that trees and other vegetation can survive and develop in a forest.**
- 9. People should be made aware of the impact of forest on their life through advertisements, television, radio and plays.**
- 10. Existing laws to protect national parks, wildlife sanctuaries and biosphere reserves should be properly implemented.**
- 11. Van Mahotsava which is celebrated every year should be made more popular, meaningful and effective.**

THE CHIPKO MOVEMENT

The popular movement launched by the village people of the Terai

forests in the Himalayan foothills to hug trees to prevent them from cutting was named "Chipko Andolan". It was perhaps the first well-known development program initiated by the common people to protect forests. It started in March 1973 in the remote hill town of Gopeswar in Chamoli district of Uttarakhand. The movement was led by a reputed environmentalist Sunderlal Bahuguna. Women of the villages were in the forefront and took active participation in this movement.

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