

GEOGRAPHY

Chapter 5: Natural Vegetation and Wild Life



Natural Vegetation and Wild Life

Natural vegetation refers to plants which have not been grown by humans. They have grown independently without any human interference. Natural vegetation may also be called virgin vegetation. While plant life is called flora, animal life is known as fauna.

Factors Affecting Natural Vegetation

Land

Land affects the growth of natural vegetation as different kinds of vegetation grow on mountains, plateaus, plains and in deserts. For example, a variety of grasslands and woodlands develop on mountains and uneven terrains.

Soil

Soil determines the growth of different types of vegetation. While mangrove forests grow on wet and marshy deltaic soils, cactus and thorny bushes grow on sandy soils.

Temperature

Temperature affects the growth of natural vegetation. Temperature affects humidity, precipitation and the type of soil. We find the growth of conical-shaped trees at higher altitudes. At much higher altitudes, the vegetation becomes scarce because of extremely cold conditions.

Photoperiod

Photoperiod refers to the period of sunlight which an object or a tree receives. Sunlight varies at different places at different latitudes, different altitudes and in different seasons. Trees grow faster in summer because of the longer duration of sunlight.

Precipitation

Precipitation affects the growth of natural vegetation. Areas receiving high rainfall, such as the equatorial regions, experience rich growth of vegetation. Vegetation cover is sparse in regions such as hot and cold deserts which receive less than 25cm of rainfall.

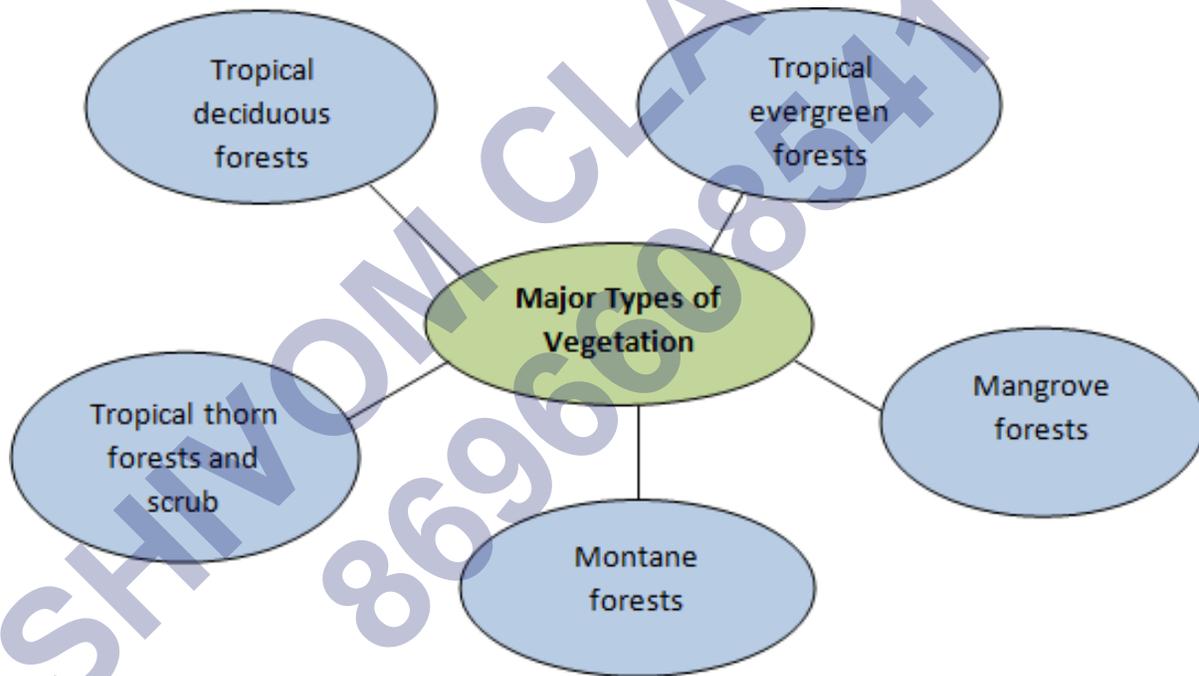
An Ecosystem

An **ecosystem** is a community of all living beings in a given area. All living organisms of an ecosystem are interdependent. They interact not only with each other but also with their non-living environment.

Very large ecosystems found at various places with flora and fauna adapting to the environment are known as **biomes**. For example, desert regions have their own biomes which are different from the biomes of the equatorial forests.

The interference of humans in the natural environment for their own benefit may lead to the destruction of an ecosystem. Indiscriminate felling of trees and killing of animals have resulted in an imbalance of the ecosystem.

Major Types of Vegetation



Tropical Evergreen Forests

- These forests are found in the areas of heavy rainfall in the Western Ghats, Lakshadweep Islands, Andaman and Nicobar Islands, upper parts of Assam and the coast of Tamil Nadu.
- Trees in the tropical evergreen forests may reach up to the height of 60 meters or more. There is rich growth of plant life because the region receives more than 200 cm of rainfall.
- There is no definite season for plants to shed their leaves. All trees do not shed their leaves

at the same time. Hence, these forests always appear green.

- Ebony, mahogany, rosewood, rubber and cinchona are some important varieties of plants.
- Elephants, deer, monkeys and lemurs are some common animals which are found in the tropical forests. The one-horned rhinoceros is found in the forests of Assam.

Tropical Deciduous Forests

- These forests are also known as monsoon forests.
- The trees shed their leaves for about six to eight weeks during summers. They grow in regions which receive rainfall between 200cm and 70cm.
- On the basis of precipitation, these forests are divided into moist deciduous forests which receive rainfall of 200–70 cm and dry deciduous forests which receive rainfall of 100–70 cm.
- These forests are found in West Odisha, the eastern slopes of the Western Ghats, Chhattisgarh, Jharkhand and the northeastern states of the country.
- Bamboo, teak, sal, shisham, sandalwood and mulberry are some important trees.
- Lions, tigers, deer, pigs and elephants are some common animals which are found in the region. Various species of birds, lizards, snakes and tortoises are also found here.

Differences between the evergreen forests and deciduous forests:

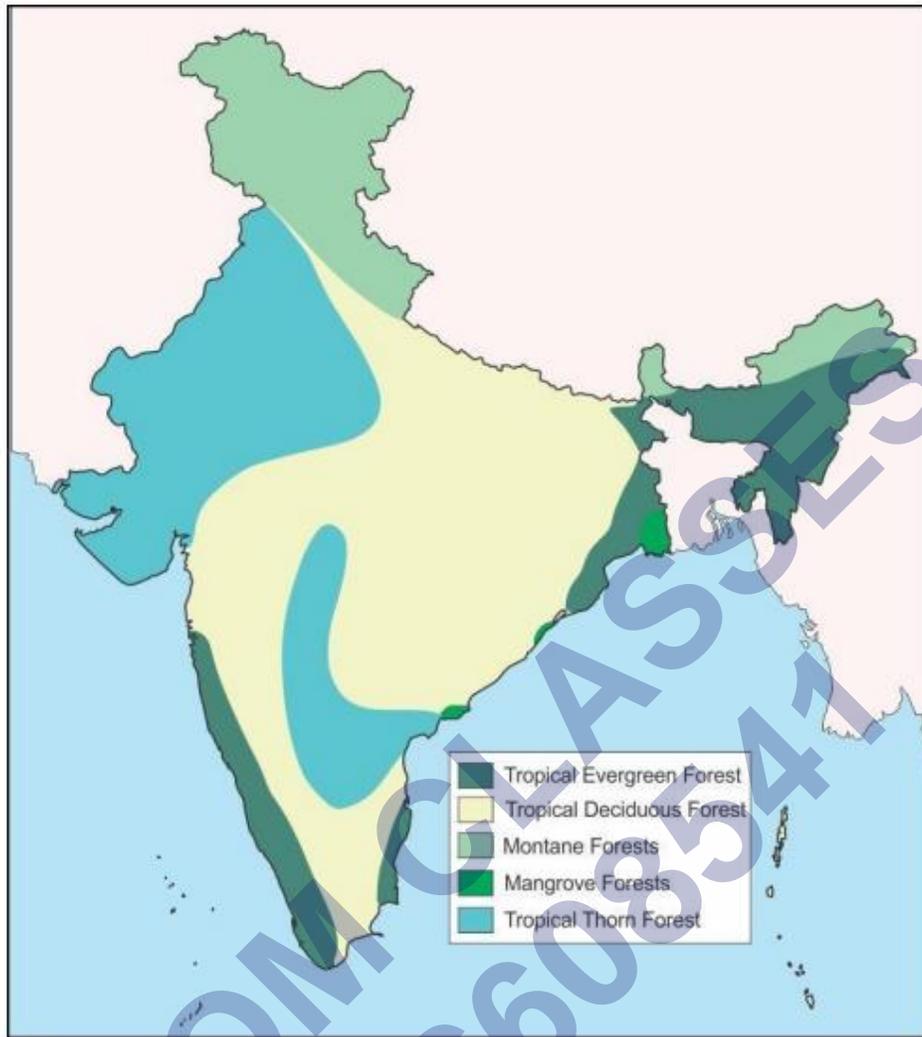
| Tropical evergreen forests | Deciduous forests |
|---|---|
| Tropical evergreen forests are found in regions which receive more than 200 cm of rainfall. | Deciduous forests are found in regions which receive rainfall of 200–70 cm. |
| The trees do not shed their leaves at the same time as there is no particular season for shedding their leaves. | The trees shed their leaves for about six to eight months during the dry season. |
| These forests are dense. | These forests are less dense. |
| These forests are found in the Andaman and Nicobar Islands, Lakshadweep Islands, upper parts of Assam and Tamil Nadu and on the western slopes of the Western Ghats. | These forests are found in the northeastern states, parts of Central India, West Odisha and Chhattisgarh. |
| Some common species of trees are ebony, mahogany, rosewood and rubber. | Some common species of trees are sandalwood, teak and sal. |

The Thorn Forests and Scrub

- This vegetation occurs in regions which receive less than 70 cm of rainfall.
- This kind of vegetation is found in the northwestern parts of India such as the semi-arid regions of Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Uttar Pradesh, and Haryana.
- Main trees are acacias, palms, euphorbia, and cacti.
- These plants are adapted to survive in dry regions. Plants have long roots which go deep into the soil in search of water. Leaves are waxy, small and thick to reduce transpiration.
- Some common animals found in the region are foxes, wolves, rats, tigers, lions, wild asses and camels.

Montane Forests

- Montane forests grow in the mountainous regions. As the temperature decreases with an increase in height, there is a change in the cover of natural vegetation on increasing altitude.
- Between the heights of 1000–2000 meters, wet temperate types of forests are found. Trees have broad leaves such as oak and chestnut.
- Temperate forests are found at 1500–3000 metres. Coniferous trees predominate in this region. Pine, cedar, fir, deodar and spruce are some important trees. These forests are found in the southern slopes of the Himalayan Mountains.
- Temperate grasslands are found at higher altitudes.
- Above 3,600 meters, Alpine vegetation can be found. Silver firs, pines, junipers and birches are some important trees. However, at still higher altitudes, their growth becomes stunted.
- At the highest altitude, mosses and lichens are found.
- Yaks, Tibetan antelopes, Kashmir stags, snow leopards, bears, sheep, goats and the rare red pandas are some common animals which are found in the montane forests.



Map of India showing its natural vegetation

Mangrove Forests

- The mangrove forests are found in the coastal areas which are influenced by tides. The roots of the mangrove trees are submerged in water.
- Mangrove forests are found in the deltaic areas of the Ganga, Mahanadi, Krishna, Godavari and Kaveri rivers.
- In the Ganga Brahmaputra delta, Sundari trees are found. These trees are known for their hard and durable timber.
- Palm, coconut, keora and agar are trees which also grow in the deltaic regions.
- The royal Bengal tiger is a famous animal of the forests. Apart from it, turtles, gharials, crocodiles and snakes are also found.

Wild Life in India

India has a rich wild life. It has more than 89,000 species of animals and more than 1,200 species of birds.

- While elephants are found in the forests of Assam, Karnataka and Kerala, the unique one-horned rhinoceros is found in the swampy and marshy conditions of Assam and West Bengal.

India is the only country in the world which has both tigers and lions. While the last natural habitat of the Asiatic lions is the Gir forests of Gujarat, the royal Bengal tigers are found in the Sundarban delta.

- In the Himalayan regions, many animals such as yaks, snow leopards and wild oxen are found. They have thick fur to survive in the extreme cold climatic conditions.
- In the rivers and coastal areas, turtles, crocodiles and gharials are found. In India, more than 2,500 species of fish are found which contribute to nearly 12% of the world stock.
- Varieties of birds are also found in India. Peacocks, ducks, pheasants, parakeets, pigeons, and cranes are some common birds found in India.

However, many species of animals are endangered. Hunting, poaching and continuous destruction of the forest cover to bring land under cultivation are reasons which have led to the destruction of ecosystems and of wildlife

The Government of India has taken many steps to preserve the flora and fauna of the country. These are

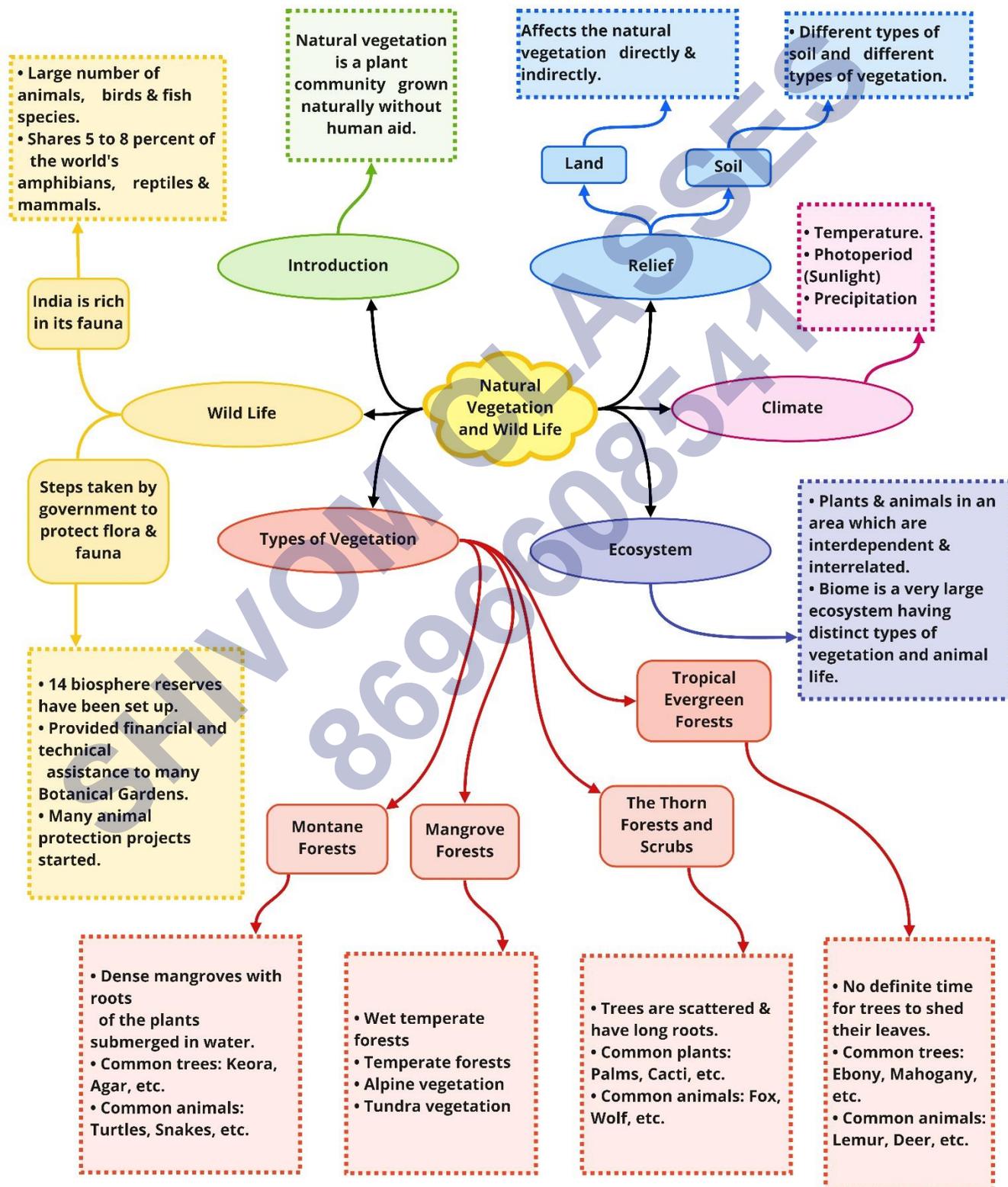
- Fourteen biosphere reserves have been set up by the Government to protect the flora and fauna. Biosphere reserves are areas of terrestrial and coastal ecosystems which promote the conservation of plants and animals. Four biosphere reserves—the Sundarbans (West Bengal), Nanda Devi (Uttarakhand), the Gulf of Mannar (Tamil Nadu) and Nilgiris (Kerala, Karnataka and Tamil Nadu) are notable.
- Many botanical gardens have also been set up, and financial and technical assistance is granted to them.
- Many developmental programmes such as Project Rhino and Project Tiger have been introduced.

- India has 490 wildlife sanctuaries and zoological gardens, and 89 national parks to protect its flora and fauna.
- Many awareness programmes have been launched by the Government to make people aware of our fast-depleting plant and animal resources.
- Poaching and hunting have been declared as crimes punishable by law.



One horned rhino are found in Assam.

Class : 9th Geography
Chapter - 5 : Natural Vegetation and Wild Life



Important Questions

Multiple Choice Questions:

Question 1. The first biosphere of India is:

- (a) Nilgiri
- (b) Manas
- (c) Nanda Devi
- (d) Sunderban

Question 2. Alpine and Tundra vegetation is found at the height of:

- (a) 6000 meters
- (b) 9000 meters
- (c) 4500 meters
- (d) 4000 meters

Question 3. Number of species founded in our country are:

- (a) 1200
- (b) 1500
- (c) 800
- (d) 600

Question 4. The bio-reserve in not included in the world network of biosphere.

- (a) Dihang-Dibang
- (b) Manas
- (c) Nanda Devi
- (d) Gulf of Mannar

Question 5. India has rich heritage of flora and fauna because of:

- (i) Different types of soil (ii) Temperature variation (iii) Varying ammonate of Rainfall (iv) Terrain
 - (v) Land forms
- (a) (i) and (ii)
 - (b) (ii) and (v)
 - (c) Expect (v) all are correct
 - (d) All options are correct.

Question 6. Name the natural habitat of Indian lions:

- (a) Gir forests
- (b) Tundra Region
- (c) Thorny bushes and scrubs
- (d) Evergreen forest

Question 7. When was India's first bio-reserve set up?

- (a) In 1985
- (b) In 1986
- (c) In 2001
- (d) In 1880

Question 8. What is the place of India in the world in terms of plant diversity?

- (a) 10th
- (b) 8th
- (c) 9th
- (d) 6th

Question 9. Rubber belongs to which type of given below vegetation:

- (a) Himalayan
- (b) Tundra
- (c) Tidal
- (d) Tropical Evergreen

Question 10. How many national parks are there in India?

- (a) 86
- (b) 106
- (c) 96
- (d) 74

Question 11. Which type of the natural vegetation is found in areas of receiving rainfall between 70 cms to 200 cms.

- (a) Tropical deciduous Forest
- (b) Tundra vegetation
- (c) Himalayan vegetation and forest
- (d) Thorny forest

Question 12. How many species of animals are found in India?

- (a) 36000
- (b) 89000
- (c) 47000
- (d) 74000

Question 13. How many tiger reserves are there in India?

- (a) 16
- (b) 12
- (c) 86
- (d) 98

Question 14. The number of biosphere sat up in India are:

- (a) 12
- (b) 16
- (c) 17
- (d) 36

Question 15. Cinchona trees are found in the areas of rainfall more than

- (a) 100cm
- (b) 50cm
- (c) 70cm
- (d) Less than 50cm

Very Short:

1. What position does India occupy in the world with regards to plant diversity?
2. What position in Asia, does India hold in plant diversity?
3. What is the number of flowering plants in India?
4. What percentage of flowering plants does India contribute to the world's total?
5. What is Natural Vegetation?
6. Give another name for natural vegetation.
7. Why are cultivated crops, fruits and vegetables not considered as natural vegetation?
8. What is the difference between flora and fauna?
9. Why is there a great diversity in flora and fauna?
10. What is the main occupation of people where land is fertile and level?

Short Questions:

1. Give reasons why India's natural vegetation has undergone many changes?
2. Where are mangrove forests found? How are they formed? Which is the most important tree of the Ganga Delta?
3. Name any three medicinal plants of India and mention for what they are used.
4. 'Bird life in India is colorful'. Explain.
5. How many National Parks and Wildlife Sanctuaries have been set up by the government to take care of the natural heritage of India? Why have these been established by the government?
6. A great variety of flora is found in India. Give three geographical factors responsible for this diversification of flora.
7. Write three measures to conserve Ecosystem.

Long Questions:

1. Why are the forests important to man? What has been the result of man's interference with nature?
2. Mention the steps taken by the government to protect the flora and fauna.
3. Describe the features of the Mangrove forests?
4. Give a brief account of the wildlife in India in five points.

Answer Key:

MCQ:

1. (a) Nilgiri
2. (c) 4500 meters
3. (a) 1200
4. (a) Dihang-Dibang
5. (d) All options are correct.
6. (a) Gir forests
7. (b) In 1986
8. (a) 10th
9. (d) Tropical Evergreen
- 10.(a) 86

11.(a) Tropical deciduous Forest

12.(b) 89000

13.(a) 16

14.(a) 12

15.(a) 100cm

Very Short Answer:

1. Tenth place.
2. Fourth place.
3. 15,000 flowering plants.
4. 6%
5. Natural vegetation refers to the plants which have grown naturally without human aid and have been left undisturbed by humans for a long time.
6. Virgin vegetation
7. They are grown with the help of man.
8. Flora refers to the plants of a particular region or period. The species of animals are referred to as fauna.
9. Differences in land, soil and climate cause a great diversity in the flora and fauna of a region.
10. Agriculture.

Short Answer:

Ans: 1. India's natural vegetation has undergone many changes due to the:

- growing demand for cultivated land
- development of industries and mining
- urbanisation and overgrazing of pastures

Ans: 2. Mangrove forests are found in the coastal areas mainly in the deltas of the rivers. These forests are also known as the tidal forests as they are formed by the tides which bring in mud and silt and accumulate it on the coasts. The most important tree of the Ganga Delta is the Sundari tree which is hard and durable.

Ans: 3. Jamun: The juice has digestive properties. The powder of the seed is used for curing diabetes.

Arjun: The fresh juice of leaves is a cure for earache and regulate blood pressure.

Tulsi Plant: It is used to cure cough and cold.

Ans: 4. (a) The country has about 2,000 species of birds. Some of the wetlands of India are popular with migratory birds.

(b) Peacocks, pheasants, ducks, parakeets, cranes and pigeons are some of the birds inhabiting the forests and the wetlands of the country.

(c) In places where the desert merges with the sea, like the Rann of Kachchh, flamingoes with their pink plumage, come in large numbers.

Ans: 5. 103 National Parks and 535 Wildlife Sanctuaries have been set up to take care of the natural heritage of India. These have been established to protect and save the flora and fauna, and maintain the balance of the ecosystem.

Ans: 6. India has a great variety in flora because of:

(a) Varied relief of mountains, plains, plateaus and desert. They have their own different types of flora. In the mountainous regions, wet temperate forests are found between the height of 1000-2000 m, coniferous forests are found between 1500 and 3000 m. Trees like the pine, deodar, spruce and cedar are found. In regions of less rainfall (less than 70 cm) and in semi-arid regions the vegetation consists of acacias, palms and cacti.

(b) In areas of heavy rainfall like the Western Ghats, which receive more than 200 cm of rainfall, tropical evergreen forests are found.

(c) Different types of terrain and soil – like alluvial, black, red, laterite support different types of vegetation e.g., black soil is good for growing cotton.

Ans: 7. Ecosystem can be conserved by:

(a) avoiding cutting of trees indiscriminately.

(b) checking rapid growth of population. Otherwise overcrowding will result in imbalances and the pollution of the environment.

(c) checking the smoke from the chimneys and vehicles. Waste from farms, factories and cities should be scientifically treated so that we can save our ecosystem and preserve it for the benefit of mankind.

Long Answer:

Ans: 1. The importance of forests are as follows:

- Forests increase the quality of environment.
- They modify the climate.
- They control the erosion of the soil.
- Control soil erosion.
- Regulate stream flow.

- They support many industries and thus provide a livelihood for the rural population.
- Forests provide humus to the soil and shelter to the wildlife.

The interference of man with nature has resulted in the extinction of many plants and animals.

Ans: 2. (a) Eighteen biosphere reserves have been set up for the protection of the flora and fauna.

(b) Financial and technical assistance is provided to many Botanical Gardens since 1992.

(c) Many eco-developmental projects have been introduced e.g., Project Tiger, Project Rhino, Project Great Indian Bustard etc.

(d) 103 National Parks and 535 Wildlife Sanctuaries set up to take care of the natural heritage.

(e) Setting up of Zoological gardens.

Ans: 3. Mangrove forests are found in the coastal regions which are affected by tides.

Dense mangroves are the common varieties of trees.

The roots of the plants are submerged in water and can be seen only during low tide.

The Sundari trees found in the Ganga-Brahmaputra delta provide durable hard timber.

Palm, coconut, keora, agar also grow in some parts of the delta.

Royal Bengal Tiger is the famous animal in these forests.

Ans: 4. (a) India is rich in its wildlife. It has about 90,000 animal species, about 2000 species of birds and about 2546 species of fish.

(b) Elephants are found in the hot wet forests of Assam, Karnataka and Kerala. One-horned rhinoceros live in swampy and marshy lands of Assam and North-west Bengal.

(c) Rann of Kutch and Thar desert are habitat of wild asses and camels. Lions are found in Gir hills of Gujarat and Tigers in the Sundarbans of West Bengal.

(id) The Himalayas harbour a wide wild variety of animals, e.g., yaks, snow-leopards, bear, Tibetan antelope [bharal (blue sheep), musk-deer, kiang (Tibetan wild ass)], etc.

(e) In rivers, lakes and coastal areas, turtles, crocodiles and gharials are found.