

CONCEPTS

- With over 47,000 plant species, India occupies tenth place in the world and fourth in Asia in plant diversity.
- India has 89,000 species of animals as well as a rich variety of fish in its fresh and marine waters.
- Plant community which grows naturally with no human help and is not disturbed by humans for a long time is termed as natural vegetation.
- Virgin vegetation which are purely Indian are known as endemic species and those which have come from outside India are termed as exotic plants.

**Relief**

- The nature of land influences the type of vegetation.
- Different types of soils provide basis for different types of vegetation.

**Climate**

- The character and extent of vegetation are mainly determined by temperature along with humidity in the air, precipitation and soil.
- Period of exposure to sunlight varies for different plants leading to their different rates of growth.
- Areas of heavy rainfall have more dense vegetation as compared to other areas of less rainfall.
- Forests are renewable resources and play a major role in enhancing the quality of the environment.
- Vegetation in most parts of India has been modified at some places, or replaced or degraded by human occupancy.

**Ecosystem**

- All the plants and animals in an area are interdependent and interrelated to each other in their physical environment, thus forming an ecosystem.
- A very large ecosystem on land having distinct type of vegetation and animal life is called a biome.

**Types of Vegetation**

- The major types of vegetation in India are Tropical Rainforests, Tropical Deciduous Forests, Tropical Thorn Forests and Scrubs, Montane Forests and Mangrove Forests.
- With warm and wet climate all year round the Tropical Rainforests have luxurious trees, shrubs and creepers.
- A large variety of animals are found in the rainforests.
- The most widespread forests of India — the Tropical Deciduous Forests — are also known as the Monsoon Forests.

- On the basis of the availability of water, these forests are further divided into moist and dry deciduous forests.
- The leaves of vegetation in Thorn Forests and Scrubs are mostly thick and small to minimise evaporation and have succulent stems to conserve water.
- Montane forests have a succession of natural vegetation belts in the same order as we see from the tropical to the Tundra region.
- Wet temperate forests are found between a height of 1000 and 2000 metres while temperate grasslands are found at higher elevations.
- At 3600 metres above sea level temperate forests and grasslands give way to alpine vegetation.
- The mangrove tidal forests are found in the areas of coasts influenced by tides.
- Dense mangroves are the common varieties with roots of the plants submerged underwater.

#### Wildlife

- India has more than 1200 species of birds, 2500 species of fish and between 5 to 8 per cent of the world's amphibians, reptiles and mammals.
- India is the only country in the world that has both tigers and lions.
- The Himalayas have a large range of animals that survive the bitter cold.
- Every species of animal has a role to play in the ecosystem; hence conservation is essential.
- Hunting and pollution is causing threat to animal species.
- To protect the flora and fauna of the country, the government has taken many steps.
- Fourteen biosphere reserves have been set up in the country to protect flora and fauna.
- 89 National Parks, 49 Wildlife Sanctuaries and Biosphere Reserves have been set up to take care of natural heritage.

## I. SUMMATIVE ASSESSMENT

### A. NCERT TEXTBOOK QUESTIONS

#### Questions Within The Lesson

**Q.1. Find out why are the southern slopes in Himalayan region covered with thick vegetation cover as compared to northern slopes of the same hills. (Page 43)**

**Ans.** The northern slopes of the hills in Himalayan region are at high altitude and have low temperature or are snow covered. This does not allow much vegetation. In the southern part of the hills there are plains and valleys watered by rivers and with fertile soil and pleasant temperature levels all required for dense growth of vegetation.

**Q.2. Find out why have the western slopes of the Western Ghats covered with thick forests and not the eastern slopes. (Page 43)**

**Ans.** The westward facing slopes receive much more rain than the eastward facing slopes and the Western Ghats are considerably wetter than the dry Deccan to the east.

Questions in the Exercise

**Q.1. Choose the right answer from the four alternatives given below : (CBSE 2010)**

(i) To which one of the following types of vegetation does rubber belong to?

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

**Ans.** Tropical Evergreen

(ii) Cinchona trees are found in the areas of rainfall more than :

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

**Ans.** more than 100 cm

(iii) In which of the following states is the Simlipal bioserve located?

- (a) Punjab (b) Delhi (c) Orissa (d) West Bengal

**Ans.** Orissa

(iv) Which one of the following bio-reserves of India is not included in the world network of bioserve?

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

**Ans.** Manas

**Q.2. Answer the following questions briefly.**

(i) Define an ecosystem.

**Ans.** An ecosystem comprises plants and animals existing interdependently and inter-related to each other in their physical environment.

(ii) What factors are responsible for the distribution of plants and animals in India?

**Ans.** The distribution of plant and animal life in India is determined by the following :

- (a) Temperature along with humidity in the air, precipitation and the nature of the soil.  
(b) Variation in sunlight due to variations in latitude, height above sea level, season and duration of the day in any specific region.  
(c) Amount of rainfall.  
(d) Soil conditions  
(e) Relief — mountains, plateaus or plains.

(iii) What is a bio-reserve? Give two examples.

OR

**What is a biosphere reserve? What is their importance? (CBSE 2010)**

**Ans.** Bio-reserves are intended to protect and conserve the diverse flora and fauna found within the country. In these reserves every plant and animal species is protected in its natural form.

The first bio-reserve came up at the trijunction of the state of Kerala, Tamil Nadu and Karnataka in 1986.

Two years later another bioserve was set up at Nanda Devi.

(iv) Name two animals having habitat in different types of vegetation.

<b>Ans.</b>	<b>Type of vegetation</b>	<b>Plants</b>	<b>Animals</b>
	Tropical Rainforests	Rosewood, Ebony	Elephants, Monkeys

Tropical Deciduous Forests	Teak, Sal	Lion, Tiger
Thorn Forests	Palms, Acacia	Rats, Rabbits
Temperate Forests	Oak, Chestnut	Yak, Wild sheep
Alpine and Tundra Vegetation	Pines, Silver fir	Snow Leopard, Yak

**Q.3. Distinguish between:**

- (i) Flora and Fauna
- (ii) Tropical Evergreen and Deciduous Forests

**Ans.** (i) Fauna refers to species of animals found in an region. Flora denotes plants of a particular region.

(ii) Tropical evergreen forests abound in areas with rainfall exceeding 200 cm in a year. Trees reach heights up to 60 m in these forests. The vegetation is luxuriant. There is no definite time for the trees to shed leaves. A large number of species exist together in such forests. Important trees are ebony, mahogany, rosewood, rubber and cinchona. Deciduous forests are spread over the region where the rainfall ranges between 70-200 cm annually. In dry summer, the trees shed their leaves for six to eight weeks. Commercially important wood is found in these forests. Important trees are teak, sal, shisham. etc.

**Q.4. Name different types of vegetation found in India and describe the vegetation of high altitudes.**

**Ans.** The different types of vegetation found in India are:

Tropical rainforests, Tropical Deciduous forests, Thorn forests, Temperate forests, Alpine and Tundra vegetation.

Alpine vegetation is found at places over 3,600 m in height. The trees common to these are silver fir, junipers, pines and birches.

The trees get stunted as they reach the snow line. There are shrubs and scrubs that ultimately merge into Alpine grasslands. *Tundra vegetation is limited to lichens and mosses.*

**Q.5. Quite a few species of plants and animals are endangered. Why?**

**Ans.** The main reason for extinction of certain species of plants is excessive commercialization. Plant species are endangered as more lands are being cleared for factories, housing colonies and roads. Pollution of air, water and soil adds to the danger to natural vegetation. Animal species are getting extinct due to hunting and poaching. Commercial exploitation of forestlands has also reduced space for animal habitats.

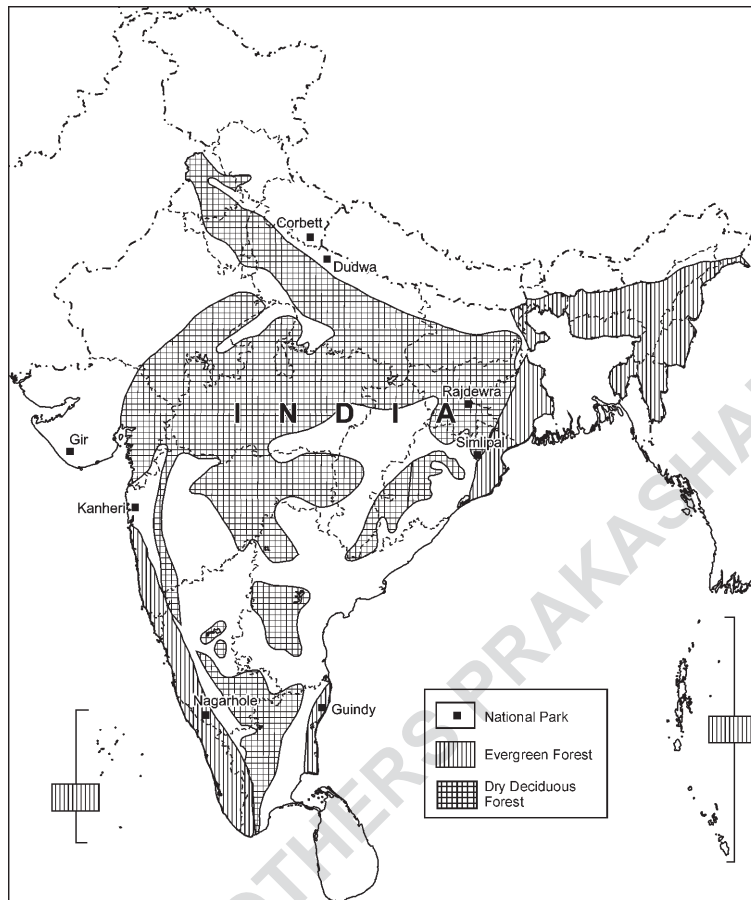
**Q.6. Why has India a rich heritage of flora and fauna? (CBSE 2010)**

**Ans.** India has a rich heritage of fauna and flora as geographically the country has a very wide range of physical, climatic and soil conditions. Our tradition of respecting all forms of life has also contributed to the preservation of plant and animal species over the centuries.

**MAP SKILLS**

**Q.1. On an outline map of India, label the following.**

- (i) Areas of Evergreen Forests
- (ii) Areas of Dry Deciduous Forests
- (iii) Two national parks each in Northern, Southern, Eastern and Western parts of the country.



OTHER IMPORTANT QUESTIONS (AS PER CCE PATTERN)

B. MULTIPLE CHOICE QUESTIONS (1 MARK)

**Q.1. From the point of view of natural vegetation and wildlife, India belongs to which of the following categories?**

- (a) One of the twelve mega biodiversity countries of the world
- (b) The richest wildlife zone in the world
- (c) The country with the greatest forest cover
- (d) A country lacking in biodiversity cover

**Ans. (a)**

**Q.2. Which of the following positions does India occupy in the world with regard to plant diversity?**

- (a) Fourth
- (b) Sixth
- (c) Tenth
- (d) Twelfth

**Ans. (c)**

**Q.3. Which one of the following is not included in the group of non-flowering plants?**

- (a) Ferns
- (b) Orchids
- (c) Algae
- (d) Fungi

**Ans. (b)**

**Q.4. Which of the following types of vegetation does not belong to the category of natural vegetation?**

- (a) Forests                      (b) Mangroves                      (c) Horticulture                      (d) Grasslands

**Ans. (c)**

**Q.5. Which of the following terms is used for the original plant cover of an area which has grown naturally without human aid and has been left undisturbed by humans for a long time?**

- (a) Natural vegetation   (b) Agriculture                      (c) Gardens                      (d) Plantations

**Ans. (a)**

**Q.6. Which of the following terms is used for a plant community which has grown naturally without human aid and interference? (CBSE 2010)**

- (a) Orchards                      (b) Virgin vegetation   (c) Cultivated fields   (d) Plantations

**Ans. (b)**

**Q.7. Which of the following terms is used for plants which are at present part of natural vegetation but have originally come to India from abroad?**

- (a) Indigenous plants   (b) Endemic species   (c) Endangered plants   (d) Exotic plants

**Ans. (d)**

**Q.8. Which of the following terms is used for virgin vegetation which is purely Indian in origin?**

- (a) Endangered species   (b) Endemic species   (c) Exotic species   (d) Normal species

**Ans. (b)**

**Q.9. Which of the following terms is used to denote plants of a particular region or period?**

- (a) Ferns                      (b) Flora                      (c) Fauna                      (d) None of the above

**Ans. (b)**

**Q.10. Which of the following terms is used to denote animal species of a particular region or period?**

- (a) Fern                      (b) Flora                      (c) Fauna                      (d) None of these

**Ans. (c)**

**Q.11. Which of the following factors influence the type and distribution of natural vegetation?**

- (a) Landform                      (b) Soil                      (c) Climate                      (d) All the above

**Ans. (d)**

**Q.12. Which of the following types of vegetation is common in fertile, level lands?**

- (a) Forests                      (b) Grasslands                      (c) Mangroves                      (d) Cultivated crops

**Ans. (d)**

**Q.13. Which of the following types of vegetation usually develops on undulating and rough terrains?**

- (a) Grasslands and woodlands                      (b) Mangroves  
(c) Cactus and thorny bushes                      (d) Cultivated crops

**Ans. (a)**

**Q.14. Which of the following types of vegetation grows in the sandy soil of the desert?**

- (a) Coniferous trees                      (b) Grasslands  
(c) Cactus and thorny bushes                      (d) Mangroves

**Ans. (c)**

- Q.15. Which of the following types of vegetation grows in wet, marshy soil?**  
 (a) Grasslands (b) Mangroves (c) Cactus (d) Alpine vegetation  
**Ans. (b)**
- Q.16. The character and extent of vegetation are mainly determined by which of the climatic factors?**  
 (a) Temperature (b) Humidity (c) Precipitation (d) All the above  
**Ans. (d)**
- Q.17. Due to which of the following reasons does the vegetation on the slopes of the Himalayas and the hills of the peninsula above the height of 915 metres change from tropical to subtropical, temperate and alpine vegetation?**  
 (a) Soil (b) High humidity  
 (c) Fall in temperature (d) Very heavy rainfall  
**Ans. (c)**
- Q.18. Which of the following types of vegetation grows in areas with mean annual average temperature of above 24°C?**  
 (a) Tropical (b) Subtropical (c) Temperate (d) Alpine  
**Ans. (a)**
- Q.19. Which of the following types of vegetation zones is found in the higher reaches of the Himalayas with mean annual average temperature below 7°C?**  
 (a) Tropical (b) Subtropical (c) Alpine (d) Temperate  
**Ans. (c)**
- Q.20. Trees grow faster in which of the following seasons?**  
 (a) Winter (b) Summer (c) Rainy season (d) Autumn  
**Ans. (b)**
- Q.21. Why are the southern slopes in Himalayan region covered with thick vegetation as compared to northern slopes of the same hills?**  
 (a) On account of more exposure to sunlight  
 (b) On account of more precipitation  
 (c) On account of less exposure to colder winds (d) All the above  
**Ans. (d)**
- Q.22. Why are the western slopes of the Western Ghats covered with thick forests and not the eastern slopes?**  
 (a) On account of more precipitation  
 (b) On account of less exposure to cold winds  
 (c) On account of more exposure to sunlight (d) All the above  
**Ans. (a)**
- Q.23. Which of the following types of resources can forests be considered as?**  
 (a) Exhaustible resources (b) Non-renewable resources  
 (c) Renewable resources (d) Abiotic resources  
**Ans. (c)**
- Q.24. How do forests influence the climate of a place?**  
 (a) Modify local climate (b) Control wind force and temperature  
 (c) Cause rainfall (d) All the above

Ans. (d)

**Q.25. By which of the following ways do forests control the soil cover of an area?**

- (a) Control soil erosion (b) Provide humus to the soil  
(c) Regulate stream flow (d) All the above

Ans. (d)

**Q.26. Due to which of the following reasons has the vegetation of most of the areas been modified or replaced or degraded?**

- (a) Shelter to wildlife (b) Human occupancy  
(c) Soil erosion (d) Change of climate

Ans. (b)

**Q.27. India's natural vegetation has undergone many changes due to which of the following factors?**

- (a) Growing demands for cultivated land (b) Development of industries and mining  
(c) Overgrazing of pastures (d) All the above

Ans. (d)

**Q.28. Which of the following states and union territories of India has the largest percentage of its area under forest cover?**

- (a) Andaman and Nicobar Islands (b) Arunachal Pradesh  
(c) Andhra Pradesh (d) Madhya Pradesh

Ans. (a)

**Q.29. Which of the following states of India has the least percentage of its area under forest cover?**

- (a) Assam (b) Punjab (c) Himachal Pradesh (d) Sikkim

Ans. (b)

**Q.30. Which of the following states of India has the largest percentage of the area under forest cover?**

- (a) Maharashtra (b) Uttar Pradesh (c) Nagaland (d) Orissa

Ans. (c)

**Q.31. Ebony, mahogany and rosewood trees are grown in which type of the following forests ?** (CBSE 2010)

- (a) Deciduous forest (b) Tropical rainforest (c) Tropical thorn forest (d) Coniferous forest

Ans. (b)

**Q.32. At which of the following places are Royal Bengal tigers found ?** (CBSE 2010)

- (a) Mahanadi delta (b) Godawari delta (c) Kaveri delta (d) Sunderban delta

Ans. (d)

**Q.33. Moist tropical deciduous forests are more prominent in the eastern and central parts of India because :** (CBSE 2010)

- (a) Most of the rivers are found in these parts.  
(b) The soil is ideally suited for such activities  
(c) These areas experience 100 to 200 cm of annual rainfall  
(d) There is commercial significance of such forests in these areas.

Ans. (c)



**Q.34. The yak, shaggy-horned wild ox and the Tibetan antelope are found in which one of the following regions? (CBSE 2010)**

- (a) Tibet (b) Uttarakhand (c) Himachal Pradesh (d) Ladakh

**Ans. (d)**

**Q.35. Which among the following natural vegetation is most predominant in India? (CBSE 2010)**

- (a) Tropical deciduous forest (b) Alpine forest  
(c) Thorny bushes (d) Mangrove forest

**Ans. (a)**

**Q.36. Which one of the following is the Biosphere Reserve of India? (CBSE 2010)**

- (a) Gir (b) Nilgiri (c) Kanheri (d) None of these

**Ans. (b)**

**Q.37. Where in India do flamingos migrate to nest in large numbers? (CBSE 2010)**

- (a) Thar (b) Rann of Kachchh (c) Coastal areas (d) Himalayas

**Ans. (b)**

**Q.38. Which forest is affected by tides in coastal areas? (CBSE 2010)**

- (a) Alpine (b) Coniferous (c) Deciduous (d) Mangroves

**Ans. (d)**

**Q.39. Dachigam in Jammu and Kashmir is a (CBSE 2010)**

- (a) National Park (b) Wildlife Sanctuary (c) Bird Sanctuary (d) Reserve Forest

**Ans. (b)**

**Q.40. Plant community which has grown naturally without human aid and has been left undisturbed by humans for long time, is termed as : [2011 (T-2)]**

- (a) Tundra vegetation (b) Virgin vegetation (c) Taiga plants (d) None of the above

**Ans. (b)**

**Q.41. Which one of the following trees are found in tropical rainforests? [2011 (T-2)]**

- (a) Mahogany (b) Teak (c) Sal (d) Peepal

**Ans. (a)**

**Q.42. Which parts of Himalayas are covered with dense forest? [2011 (T-2)]**

- (a) Northern (b) Eastern (c) Western (d) Southern

**Ans. (d)**

**Q.43. How many types of plant species are found in India? [2011 (T-2)]**

- (a) About 45,000 (b) About 40,000 (c) About 47,000 (d) About 20,000

**Ans. (c)**

**Q.44. In which of the following states is Dachigam wildlife sanctuary located? [2011 (T-2)]**

- (a) Jammu and Kashmir (b) Punjab  
(c) Himachal Pradesh (d) Uttarakhand

**Ans. (a)**

**Q.45. Which one of the following states does not have the Tropical deciduous forests? [2011 (T-2)]**

- (a) Jharkhand (b) Western Orissa (c) Chhattisgarh (d) Rajasthan

**Ans. (d)**

- Q.46. Ebony, Mahogany and Rosewood trees are grown in which of the following forests?** [2011 (T-2)]
- (a) Coniferous forests (b) Tropical rainforest  
(c) Tropical thorn forest (d) Deciduous forest
- Ans. (b)**
- Q.47. The elephants are found in the hot-wet forests of \_\_\_\_\_.** [2011 (T-2)]
- (a) Punjab and Haryana (b) Rajasthan and Gujarat  
(c) West Bengal and Jharkhand (d) Assam and Karnataka
- Ans. (d)**
- Q.48. Which of the following is not a important tree of tropical rainforest?** [2011 (T-2)]
- (a) Ebony (b) Rosewood (c) Mahogany (d) Sandalwood
- Ans. (d)**
- Q.49. Which one of the following animals lives in the swampy and marshy lands of Assam and West Bengal?** [2011 (T-2)]
- (a) Tiger (b) Lion (c) One-horned Rhino (d) Elephants
- Ans. (c)**
- Q.50. A very large ecosystem on land having distinct type of vegetation and wildlife is called** [2011 (T-2)]
- (a) Ecology (b) Biome (c) Biodiversity (d) Biosphere reserve
- Ans. (b)**
- Q.51. Which medicinal plant has high antibiotic and antibacterial properties** [2011 (T-2)]
- (a) Sarpagandha (b) Neem (c) Kachnar (d) Babool
- Ans. (b)**
- Q.52. The Yak (ox) and the Bharal are found in \_\_\_\_\_.** [2011 (T-2)]
- (a) Uttarakhand (b) Himachal Pradesh  
(c) Jammu and Kashmir (d) Ladakh
- Ans. (d)**
- Q.53. Silver fir is found in the following type of vegetation zone :** [2011 (T-2)]
- (a) Mangrove forests (b) Thorn forests (c) Montane (d) Deciduous forest
- Ans. (c)**
- Q.54. Trees in a thorn forest are :** [2011 (T-2)]
- (a) Tall (b) dense (c) scattered (d) None of these
- Ans. (c)**
- Q.55. Which is the natural habitat of the Indian lion?** [2011 (T-2)]
- (a) Sundarban delta in Bengal (b) Gir forest in Gujarat  
(c) Thorn forest in Rajasthan (d) Deciduous forest in Madhya Pradesh
- Ans. (b)**
- Q.56. Which one of the following types of vegetation does rubber belong to?** [2011 (T-2)]
- (a) Tundra (b) Tidal (c) Himalayan (d) Tropical evergreen
- Ans. (d)**

**Q.57. Which of the following trees is used for treating blood pressure? [2011 (T-2)]**

- (a) Jamun (b) Tidal (c) Neem (d) Sarpagandha

**Ans. (d)**

**Q.58. Which of the following forests is found in heavy rainfall areas of the Western Ghats, island groups and upper parts of Assam? [2011 (T-2)]**

- (a) Tropical evergreen (b) Tropical deciduous  
(c) Mountain forest (d) Tidal forests

**Ans. (a)**

**Q.59. Ebony and rosewood trees are found in the areas of rainfall : [2011 (T-2)]**

- (a) more than 200 cm (b) more than 100 cm  
(c) more than 70 cm (d) less than 50 cm

**Ans. (a)**

**Q.60. In which of the following parts of India evergreen forests are found? [2011 (T-2)]**

- (a) Assam (b) Rajasthan (c) Orissa (d) Uttar Pradesh

**Ans. (a)**

**Q.61. Tropical rainforests grow well in areas receiving \_\_\_\_\_ rainfall. [2011 (T-2)]**

- (a) 200 cm (b) 150 cm (c) 100 cm (d) 70 cm

**Ans. (a)**

**Q.62. Most widespread vegetation in India is [2011 (T-2)]**

- (a) Coniferous forests (b) Tropical rainforests  
(c) Tropical deciduous forests (d) Mangrove forests

**Ans. (c)**

**Q.63. In which year Wildlife Protection Act was implemented in India? [2011 (T-2)]**

- (a) 1952 (b) 1962 (c) 1972 (d) 1982

**Ans. (c)**

**Q.64. Ebony, mahogany, rosewood, rubber and cinchona are the important trees of? [2011 (T-2)]**

- (a) Tropical deciduous forests (b) Mangrove forests  
(c) Tropical evergreen forests (d) Montane forests

**Ans. (c)**

**Q.65. Which one of the following bio-reserves of India is not included in the world network bio-reserve? [2011 (T-2)]**

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

**Ans. (a)**

**Q.66. Which of the following types of natural vegetation have originally come to India from abroad? [2011 (T-2)]**

- (a) Rare species (b) Endemic Species  
(c) Endangered species (d) Exotic Species

**Ans. (d)**

### C. SHORT ANSWER TYPE QUESTIONS (3 MARKS)

**Q.1. Give a brief description of tropical evergreen forests.**

**Ans.** Tropical evergreen forests are found in areas receiving heavy rainfall of over 200 cm, well distributed throughout the year. They are also known as rainforests.

The warm, wet climate throughout the year supports luxuriant vegetation of all kinds including trees, shrubs and creepers. The trees grow very tall, reaching a height of 60 metres. As the trees grow very close to each other they form a thick canopy. The different types of vegetation form a multi-layered structure. The climate supports large number of broad-leafed trees of different species. Ebony, mahogany, rosewood, rubber, cinchona are commercially important trees.

These trees donot shed their leaves at the same time as there is no distinct dry season. This makes the forests evergreen as they retain their green look throughout the year.

**Q.2. What are the characteristics of the trees of deciduous forests? (CBSE 2010)**

**Ans.** Deciduous forests are found in areas receiving rainfall of 70 to 200 cm with a distinct dry season. They are also known as Monsoon Forests. Trees of this forest type shed their leaves for about six to eight weeks in dry summer. So they have a distinct period for shedding their leaves. The trees have widespread out branches like the neem and mango. Leaves are smaller in size than that of the rain forests to reduce transpiration. The trees also have less height than evergreen trees. The trees are prized for their hardwood commercially valuable timber is collected from these forests. These forests are more open and less luxuriant and trees are more spread out. On the basis of availability of water, deciduous forests are divided into moist deciduous, e.g. teak, sal, shisham, sandalwood, and dry deciduous, e.g. sal, peepal, neem, palas.

**Q.3. Write a short note on the flora and fauna of India.**

**OR**

**Why has India a rich heritage of flora and fauna ? (CBSE 2010)**

**Ans.** The term flora is used to denote plants and the term fauna is used to denote animal species of a particular region or period. India is rich in flora and fauna and is marked by great bio-diversity. With about 47,000 plant species, India occupies tenth place in the world and fourth in Asia in plant diversity. 15,000 flowering plants are endemic or indigenous to India. They account for 6 per cent of world's total number of flowering plants. A large number of non-flowering plants like ferns, algae and fungi are also found in India. Plants of all climatic regions ranging from tropical to Tundra are found in India. India is rich in fauna or animal life also. It has more than 89,000 species of animals and 1200 species of birds. 13 percent of the world's total number of birds are found in India. 5 to 8 percent of the world's amphibians are found in India. It has 2500 species of fishes in its marine and freshwaters. This accounts for nearly 12 percent of the world's stock. India is the only country in the world which has both lions and tigers.

**Q.4. Distinguish between extinct and endangered species.**

**Ans.** Extinct species are those species of flora and fauna which are no more surviving. Even after searches of known or likely areas where they may occur, they are no more found. A species may be extinct from an area, region, country, continent or the entire earth. Asiatic cheetah and pink-head duck are extinct in India. Dodo and dinosaurs are extinct from the entire earth.

Endangered species are those species of flora or fauna which are in the danger of extinction. They have declined in number at an alarming rate. If the negative factors that have reduced

their number is not checked, their survival is difficult. Black buck, Indian rhino, Indian wild ass, Sangai and Indian tiger are endangered species in India. Black Panda is an endangered species throughout the world.

**Q.5. Give a brief description of temperate forests.**

**Ans.** Temperate forests are found in areas with cool climate. In India, temperate forests are found in the mountainous regions of the north. Here, a rise in altitude corresponds with a fall in temperature and supports the growth of temperate forests. The wet temperate type of forests are found in areas with elevation between 1000 and 2000 metres rainfall is high in these areas. So, evergreen broad-leafed hardwood trees predominate these areas. Oak and chestnut are important species of these temperate forests. At elevations between 1500 and 3000 metres, temperate forests containing coniferous trees are found. These forests cover mostly the southern slopes of the Himalayas and places having high altitude in northeast India. The trees of these forests are tall, straight and conical in shape. The leaves are narrow and needle shaped and seeds are found in hard cones. Pine, deodar, silver fir, spruce and cedar are important trees found in these forests.

**Q.6. Discuss the type of vegetation found in a thorn forest.**

**OR**

**Describe any three features of thorn forests. (CBSE 2010)**

**Ans.** Thorn forests are found in regions with less than 70 cm of rainfall. This type of vegetation is found in northwestern India, in the desert and semi-arid areas.

The vegetation consists of low and open forests with short thorny trees and thorny bushes, scrubs and grasses in between. Trees are scattered and have long roots, penetrating deep into the soil to tap groundwater. The leaves are thick and small to reduce evaporation and are often transformed into spines and thorns to minimise evaporation. The cacti growing in the deserts have thick succulent stems to conserve water. Acacias, palms, euphorbias, khair, babul and cacti are the main plant species of the thorn forests.

**Q.7. What are dry deciduous forests? How do they differ from moist deciduous forests?**

**OR**

**Write three main characteristics of tropical deciduous forest ? (CBSE 2010)**

**Ans.** The tropical deciduous or monsoon forests are sub-divided into dry deciduous and moist deciduous forests on the basis of availability of water. The dry deciduous forests are found in areas receiving rainfall between 100 cm and 70 cm. Teak, sal, peepal, neem, palas are important trees of these forests. In contrast, the moist deciduous forests are found in areas receiving rainfall between 200 cm and 100 cm. The trees of both the dry deciduous and moist deciduous forests shed their leaves during a distinct dry period in summer. But the trees of the dry deciduous forests are bare for a longer period as their dry periods lasts for more time than that of the moist deciduous forests. The dry deciduous forests are more open and less dense. They do not have bamboo thickets like the moist deciduous forests. Large parts of the dry deciduous forests have been cleared for cultivation or used for grazing. Both forests have commercially important hardwood trees. But timber from the moist forests are of better quality and in larger quantity. Teak, sal, shisham, sandalwood, mulberry and bamboos are important species of the moist forests.

**Q.8. Distinguish between a tropical evergreen forest and a dry deciduous forest.**

**Ans.** The points of distinction between a tropical evergreen forest and a dry deciduous forest are as follows :

<b>Tropical Evergreen Forests</b>	<b>Dry Deciduous Forests</b>
(I) Tropical evergreen forests are found in areas receiving heavy rainfall of more than 200 cm, well distributed throughout the year. They are also called rainforests.	Dry deciduous forests are found in areas receiving rainfall between 100 cm and 70 cm. They are a sub-type of temperate deciduous or monsoon forests.
(II) The trees of this forest have no definite time for shedding their leaves as there is no distinct dry season. So, the forest appears green all the year round.	The trees of this forest shed their leaves during a distinct dry period of six to eight weeks in summer. So, the forest appears bare or has a brown look during summer.
(III) This forest has luxuriant vegetation comprising tall trees, shrubs and creepers.	This forest is more open, with shorter trees having widely spaced branches. There are open stretches in between with grasses growing there.
(IV) Ebony, mahogany, rosewood, rubber and cinchona are important trees of this forest.	Teak, sal, peepal and neem are important species of trees of this forest.

**Q.9. Describe the main objectives of the Project Tiger and the Project Rhino and their effect on the wildlife in India. (Important)**

**Ans.** The Project Tiger and Project Rhino are two well known wildlife conservation projects. They have been undertaken to protect the Indian tiger and the one-horned rhino of India which are endangered species.

Their objectives are as follows :

- (i) Protect the endangered species from poaching, hunting and illegal trading.
- (ii) Save the natural habitats of these animals so that they can breed naturally and multiply in numbers.
- (iii) Maintain a survey of the number of existing tigers and rhinos.

These well publicised projects have played a great role in protecting the endangered animals. Under the projects government has undertaken steps to save and protect the existing animals by banning hunting and poaching.

**Q.10. What is an ecosystem ? How do the human beings influence the ecology of a region ? (CBSE 2010)**

**Ans.** All the plants and animals occur in distinct groups of communities in areas having similar climatic conditions. All the plants and animals in an area are interdependent and interrelated to each other in their physical environment called the ecosystem. Human beings are an integral part of the ecosystem. They utilise the vegetation and wildlife. The greed of human beings leads to over utilisation of these resources. They cut the trees and kill animals creating an ecological imbalance.

**Q.11. Describe the kind of vegetation and wildlife found in the Ganga-Brahmaputra delta.**

**(CBSE 2010)**

**Ans.** The Ganga-Brahmaputra delta is covered by mangrove forests, mainly Sundari trees which provide durable hard timber. Palm, coconut, keora, agar also grow in some parts of the delta. Royal Bengal tiger is the famous animal found here. Turtles, crocodiles, gharials and snakes are also found in these forests.

**Q.12. What are the steps taken by the Government to protect flora and fauna in India? Write any three.**

**[2011 (T-2)]**

**Ans.** To protect the flora and fauna of the country, the government of India has taken many steps, as stated below :

- (i) Fourteen biosphere reserves have been set up in the country at different places to protect flora and fauna. Out of these four have been included in the world network of biosphere reserves.
- (ii) Project tiger, Project Rhino, Project Great Indian Bustard and many other eco-developmental projects have been introduced.
- (iii) 89 National parks, 49 wildlife sanctuaries and zoological gardens are set up to take care of our natural heritage.

**Q.13. In which region are the thorny forests and scrubs found in India? Mention any two characteristics of such type of vegetation?**

**[2011 (T-2)]**

**Ans.** The thorny forests and scrubs in India are found in regions with less than 70 cm of rainfall. This type of vegetation is found in the North-Western part of the country including semi-arid areas of Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Uttar Pradesh and Haryana. Acacias, palms euphorbias and cacti are the main plant species.

The two important characteristics of such type of vegetation are as follows :

- (i) Trees are scattered and have long roots penetrating deep into the soil in order to get moisture.
- (ii) The stems of the trees are succulent to conserve water. Leaves are mostly thick and small to minimize evaporation.

**Q.14. Explain the different biodiversity of India.**

**[2011 (T-2)]**

**Ans.** India is one of the twelve mega biodiversity countries of the world.

With about 47,000 plant species India occupies **tenth** place in the world and **fourth** in Asia in plant diversity.

There are about 15000 flowering plants in India which account for 6 percent of the world's total number of flowering plants. The country has many non-flowering plants such as ferns, algae and fungi. Besides, India has 89,000 species of animals as wells a rich variety of fish in its fresh and marine water.

**Q.15. Name the two sub-type of Tropical deciduous forests. State any two features of each type also.**

**[2011 (T-2)]**

**Ans.** The two sub-types of Tropical deciduous forests are (i) Moist Deciduous and (ii) Dry Deciduous type. These divisions are made on the basis of the availability of water.

- (i) Moist deciduous forests are found in regions receiving rainfall between 200 and 100 cm. The main characteristics of vegetation are (a) thick cover of forest, characterized by climbers and epiphytes. Bamboo and ferns are common. (b) All the trees are evergreen. They do not shed their leaves at a time. Therefore, the forest will remain green all the year round.



- (ii) The dry deciduous forests are found in areas having rainfall between 100 cm and 70 cm. The principal characteristics of dry deciduous forests are (a) These forest shed their leaves during early spring or summer when sufficient moisture is not available. The forest appears bare and brown during summer. (b) The forest is more open in which grow important trees like teak, sal peepal, neem.

**Q.16. Name the vegetation found at high altitude in our country and mention animals are found in this region. [2011 (T-2)]**

**Ans.** At higher altitudes, generally more than 3600 metres above sea level, temperate forest and grass lands give way to the Alpine vegetation. Silver fir, junipers, pines and birches are the common trees. These trees are progressively stunted as they approach the snow line.

The common animals found in these forests are Kashmir stag, spotted deer, wild sheep, Jack rabbit, Tibetan antelope, yak, snow leopard, squirrels, shaggyhorn, wild ibex, bear and rare red panda, sheep and goats with thick hair.

**Q.17. How are forests useful to us? Give Examples. [2011 (T-2)]**

**OR**

**How are forests important for human beings? Explain.**

**Ans.** Forests provide to man food, fibre, fodder, timber, fuel wood and hosts of other essential items. It provides raw materials to industry and transport.

Forest is a renewable resource and is widely used as domestic fuel in Third World countries. Forest also influences the environment by modifying local climate, controlling soil erosion and deposits humus in the soil, regulating stream flows.

Minor forest products provide livelihood to many forest dwellers. Besides, forest is the home of various wild animals and birds. It offers recreation to man and boosts the Tourism industry.

**Q.18. What do you mean by natural vegetation? What is their importance? [2011 (T-2)]**

**Ans.** Natural vegetation refers to a plant community which has grown naturally without human aid and has been left undisturbed by humans for a long time. This is also known as a **virgin vegetation**. Cultivated crops and fruits, orchards form also part of vegetation but not natural vegetation.

The importance of natural vegetation lies on to modify local climate, control soil erosion, regulate stream flow, support a variety of industries, provide livelihood for many communities and offer panoramic view for recreation. It controls windforce, regulate temperature and causes rainfall. It also provides humus on the soil and shelter to the wild life. India's natural vegetation has undergone drastic changes. Still, it holds key position in areas of inaccessible hilly regions and Marusthali.

#### D. LONG ANSWER TYPE QUESTIONS (4 MARKS)

**Q.1. Describe the major vegetation types found in the Himalayas.**

**OR**

**Why does mountain vegetation change with altitude ? Explain with example . (CBSE 2010)**

**Ans.** In mountainous areas, the decrease in temperature with increase in altitude leads to corresponding changes in natural vegetation. As such, there is a succession of vegetation and a distinct arrangement ranging from the tropical to the tundra region in the montane forests of hilly and mountainous regions of the Himalayas. Tropical evergreen forests with rosewood, ebony and ironwood are found in rainier parts of the foothills and in higher altitudes upto



above 1000 metres. Tropical deciduous forests of sal, teak, palas and bamboo are found in the foothills upto a height of 1000 metres. Wet temperate forests with evergreen broad-leafed trees like oaks and chestnut predominate between a height of 1000 and 2000 metres. Temperate coniferous forests with softwood trees like pine, deodas silver fir, spruce and cedar grow at altitude between 1500 and 3000 metres. They are followed by temperate grasslands at higher elevation. At high altitude of more than 3600 metres temperate forests and grasslands give way to alpine vegetation. Silver fir, junipers, pines and birches are common trees. As they approach the snowline they get progressively stunted. Shrubs, scrubs and then alpine grasslands are found at higher elevations.

At still higher altitudes in shaded slopes, moss and lichens, typical of Tundra vegetation, grow.

**Q.2. Describe how rainfall and relief influence the vegetation of an area.**

**Ans.** Factors like rainfall and relief influence the natural vegetation of an area

**Rainfall :** Climate plays an important role in determining the natural vegetation of a region. Rainfall determines the type, character and extent of vegetation in an area. Areas of heavy rainfall have dense vegetation with rich forests while arid areas and semi-arid areas with less rainfall have thorny and scrub vegetation. Areas with more than 200 cm of annual rainfall have tropical evergreen rainforests. Tropical moist deciduous forests are found in areas with 100 to 200 cm of rainfall. Tropical dry deciduous forests are found in areas receiving rainfall between 100 cm and 70 cm. In regions with less than 70 cm of rainfall the natural vegetation consists of thorny trees and bushes.

**Relief :** The type of vegetation found in an area depends upon the relief or landform of the area. The fertile level lands of plains are generally devoted to agriculture. Much of the natural vegetation is cleared or altered in such areas. Grasslands and woodlands develop in areas with undulating and rough terrains. Mountainous areas have succession of vegetation types according to the altitude of the area.

**Relief and Rainfall.** Windward slopes of Western Ghats are covered with thick forests because they receive heavy rainfall. The eastern slopes do not have thick forests because they are on the leeward side and receive less rainfall.

**Q.3. Give a brief account about the wildlife of India.**

**Ans.** Our country, India, has a rich natural heritage of fauna – 89,000 animal species, 1200 species of birds, 2500 species of marine and freshwater fish and 5 to 8 per cent of the world's amphibians, reptiles and mammals are found in India.

The wildlife in the different natural habitats are varied and rich. They include :

- (i) The majestic Indian lions found in the Gir forest of Gujarat, the last remaining habitat of Asiatic Lion. India is the only country in the world that has both lions and tigers.
- (ii) Tigers found in the national parks and wildlife sanctuaries in the forests of Madhya Pradesh, the Sunderbans of West Bengal and Himalayan region.
- (iii) The large Asian elephants of the hot wet forests of Assam, Karnataka and Kerala.
- (iv) The endangered one-horned rhinoceroses found in the swampy and marshy lands of Assam and West Bengal.
- (v) Indian wild ass of the Rann of Kachchh.
- (vi) Camels found in Thar desert.

- (vii) Ladakh's freezing high altitudes are home to yak, the shaggy horned wild ox, the Tibetan antelope, the bharal (blue sheep), wild sheep and the kiang (Tibetan wild ass), ibex, bear, snow leopard and rare red panda are found in some areas of the Himalayas.
- (viii) Indian bison, nilgai, chousingha (four-horned antelope), gazel, different species of deer and several species of monkeys are found in India.
- (ix) Many colourful birds, including peacock which is our national bird, are found in India.
- (x) Turtles, crocodiles and gharials are found in rivers, lakes and coastal areas. Snakes like cobras and others are found in different areas.

**Q.4. Why are some of the animals and plants endangered in India? How can they be protected? (Important)**

**OR**

**What steps have been taken by the government to protect flora and fauna of the country. (CBSE 2010)**

**OR**

**Write three measures to protect wildlife. (CBSE 2010)**

**OR**

**Write any three measures to conserve ecosystem. (CBSE 2010)**

**Ans.** Endangered species are those species of flora and fauna which are in the danger of extinction. In India, about 1,300 plant species are endangered. Quite a few animal species, like the one-horned rhino, Indian tiger, Indian wild ass, black buck, red panda, Asiatic elephants, Indian bustard, are endangered.

The main causes that have lead to threat upon. India's flora and fauna, endangering many species are :

- (i) Hunting and poaching for illegal trade of animal tusks, horns, bones, skin, etc.
- (ii) Reckless cutting of forests to bring land under cultivation and settlement have destructed the natural habitats of wild creatures and wiped off valuable species of trees.
- (iii) Pollution due to chemical and industrial waste, acid deposits, have brought down numbers of plants and animals.
- (iv) Introduction of alien species that may be hostile to existing species.

Understanding the grave threat, conservation of forests and wildlife have been taken up. Government, NGOs, wildlife organisations and volunteers have taken up activities to protect wildlife and plants. They include :

- (i) Fourteen biosphere reserves to protect biodiversity.
- (ii) Project Tiger, Project Rhino, Project Great Indian Bustard and other eco-development projects to protect endangered species.
- (iii) Setting up of 89 National Parks, 492 Wildlife Sanctuaries, Zoological Gardens, Protected and Reserved Forests, Botanical Gardens to protect the endangered species along with other types of flora and fauna.
- (iv) Wildlife Protection Acts to safeguard wildlife.
- (v) Afforestation, social programmes and awareness campaigns can also help to protect endangered species.

**Q.5. Write a note on the formation and distribution of mangrove forests in India. (Important)**

**OR**

**Mention two regions in India where you will find mangrove forests. What are the features of the mangrove forests? (CBSE 2010)**

**Ans.** The mangrove or tidal forests are found in coastal areas under the influence of tides. The deltaic areas with clayey soil and saline water during tides have mangrove forests.

The plants of these areas have adapted themselves to the alteration of freshwater and saline water as well as to the sticky mud and silt. The roots of these plants are submerged under water. They have breathing roots protruding on the surface. The trees have stilt like roots to support the trunk of the tree in the wet soil.

The forest are dense with hardwood trees like sundari, keora, agar, palm and coconut in some parts.

The mangrove forests are found in :

- (i) The Ganga-Brahmaputra delta which are known as Sunderbans on account of the sundari trees that predominate here. It provides durable hard timber.
- (ii) Deltas of the rivers Mahanadi, Godavari, Krishna and Kaveri on the east coast of India.

**Q.6. Write a note on the importance of biosphere reserve. What are its objectives?**

**Ans.** Biosphere reserves are a series of multipurpose protected areas linked through a global network, intended to demonstrate the relationship between conservation and development. Their sole purpose is conservation of flora and fauna.

The biosphere reserves play an important role in maintaining the ecological balance in the ecosystem. In the biosphere, all living beings are interrelated and interdependent on each other for survival. This life supporting system is called ecosystem. Vegetation and wildlife are two valuable resources of the biosphere. The biosphere reserves are set up to protect them and maintain diversity.

The main objectives of the biosphere reserves are :

- (i) to protect and conserve the biological diversity, i.e., preserving plant and animal species of the area in natural forms.
- (ii) to protect flora and fauna from over-exploitation.
- (iii) to undertake research and experimentation in forestry.
- (iv) to save endangered species and prevent extinction of valuable species. There are fourteen such biosphere reserves in India.

**Q.7. Give the main causes for depletion of biodiversity in India. (CBSE 2010)**

**Ans.** The varied climate and landform of India support of rich variety of natural vegetation. But only about 23 per cent of the land area of India is at present under forests. It is far lower than the desired 33 per cent outlined in the National Forest Policy.

The main reasons behind the reduction of the natural vegetation of India are as follows :

- (i) Deforestation. Large areas of forests have been recklessly cleared by man due to the following reasons :
  - (a) to meet the growing demand for cultivated land,
  - (b) to acquire land for setting up industries,
  - (c) to provide land for settlement and urbanisation.

- (ii) Shifting cultivation in hilly areas of northeast and Central India.
  - (iii) Mining. Large areas are cleared of natural vegetation for the purpose of mining.
  - (iv) Constructional activities like building of dams submerge areas of valuable forests and destruct the natural vegetation.
  - (v) Natural hazards like forest fires and landslides affect natural vegetation in hilly areas. The Tsunami of 2004.
  - (vi) Cyclonic storms affect plant cover of the areas where they strike. Overgrazing of pastures.
  - (vii) Wiped off valuable rainforests in the Andaman and Nicobar Islands.
- These above mentioned human-made and natural factors have accelerated the process of extinction of natural vegetation in India.

**Q.8. What type of dangers does the wildlife sanctuaries of India face? How can they be protected better? Write a brief note on each.**

**Ans.** 492 Wildlife Sanctuaries have been set up in India to protect and conserve wildlife. The government has demarcated them and maintains them. But certain external factors and loopholes in internal management of these areas creates problems and affect their purpose.

Dangers faced by wildlife sanctuaries of India are as follows :

- (i) Poaching or illegal killing of animals for trade of their hides, skins, tusk, horns and bones.
- (ii) Hunting of animals for game.
- (iii) Killing of animals by villagers in instances of migration of animals to inhabited areas during floods. In North Bengal often elephants move out from the forests to cultivated fields and are killed by the villagers.
- (iv) Shortage of trained personnel to take care of the animals within the sanctuaries. This leads to death of sick animals.
- (v) Shortage of funds for management of the sanctuaries.

The wildlife sanctuaries can be protected better in the following ways :

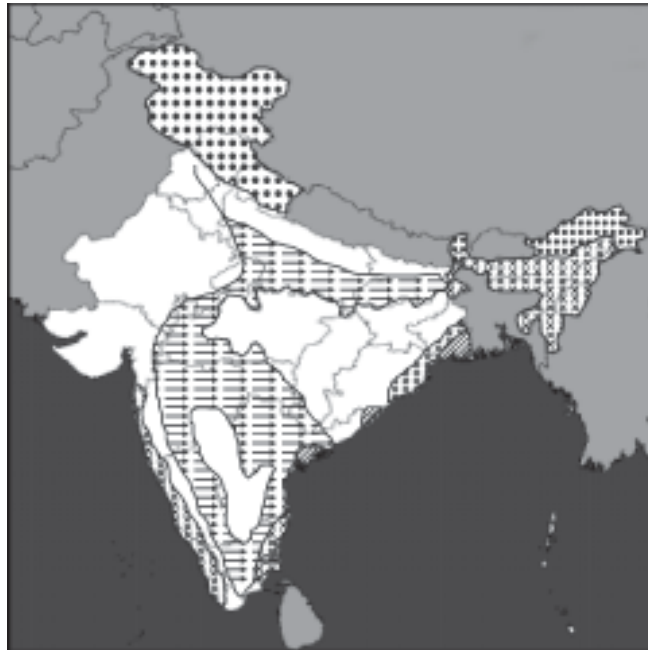
- (i) Strict vigilance of the areas within the sanctuaries.
- (ii) Enforcing strict measures against people encroaching the wildlife sanctuaries without proper permission.
- (iii) Making laws against poaching and hunting more strict and punishing people who dare to destroy the sanctity of the wildlife sanctuaries.
- (iv) Training the personnel to take proper care of animals within the wildlife sanctuary.
- (v) Creating a proper, protected boundary for the wildlife sanctuaries.
- (vi) Creating public awareness regarding the need of wildlife sanctuaries.

#### E. MAP WORK (4 MARKS)

**Q.1. Mark and label the following in a outline map of India**

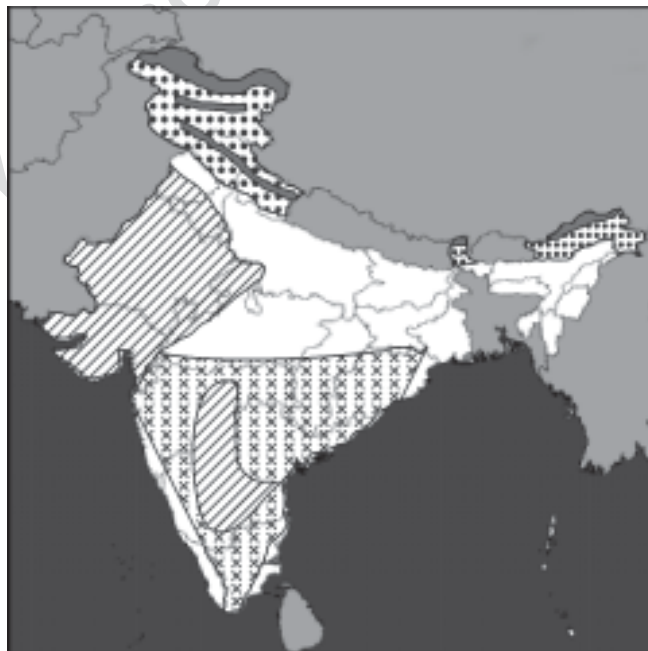
- (a) Places occupying tropical evergreen rainforests
- (b) Places occupying tropical dry deciduous forests
- (c) Places where mangrove forests occur
- (d) Alpine vegetation places





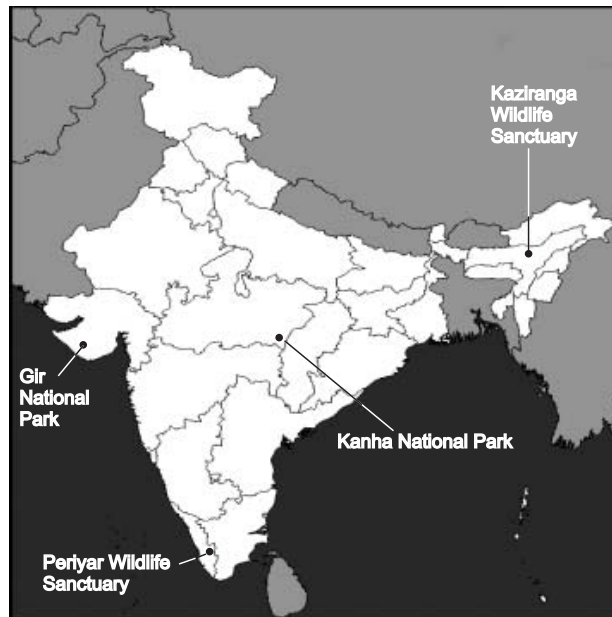
**Q.2. In the following outline map of India, mark and label the following:**

- (a) Scrub and thorn forests of India
- (b) Montane forest
- (c) Tundra vegetation
- (d) Deciduous forest region of peninsular India



**Q.3. On the outline map of India, mark and label the following:**

- (a) The Kaziranga Wildlife Sanctuary
- (b) The Kanha National Park
- (c) The Periyar Wildlife Sanctuary
- (d) The Gir National Park



## II. FORMATIVE ASSESSMENT

### I. PROJECT WORK

**Q.1. Make a mini flower garden with your own name carved in flower plants.**

**Requirement :**

- Flower box
- Soil
- Pencil
- Flower seeds

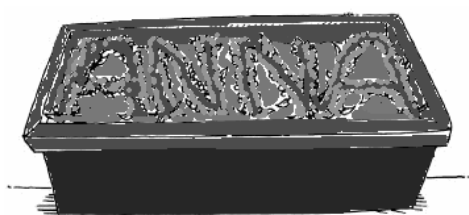
Grow a Garden in the Shape of Your Name:

Step 1 : Prepare the soil in a large, rectangular flower box or in a garden.

Step 2 : Use a sharp stick or pencil to write your name in the dirt.

Step 3 : Sprinkle flower seeds in the marks you made.

Step 4 : Sprinkle loose soil over the seeds and keep them watered. Soon, you'll see your name sprouting from the ground in bright green. Keep watering your name and watch it bloom.



Flower box



**Q.2. Collect the leaves of ten different types of trees. Paste them in a scrapbook.**

Write the names of the trees from which you have collected the leaves. Identify and mention the type of vegetation to which they belong.

**Example**

**Ans.**



Needle shaped leaves  
Tree — Deodar  
Type of vegetation —  
Coniferous Forest.



Broad evergreen leaves  
Tree — Rubber  
Type of vegetation —  
Tropical Rain Forest

## II. ACTIVITIES

**Q.1. Vegetation Search : Where do I grow?**

Given below are some soil types in different landforms.



Sandy soil—Desert



Deltaic soil—Delta



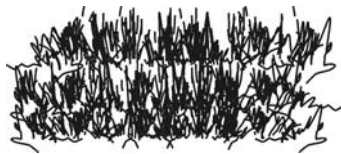
Mountain soil—Hill slopes



Undulating rough terrain

Draw the type of vegetation found in these areas shown in the diagrams, choosing from the plants given below.

Ans.



Grasslands in undulating rough terrain



Cacti — Sandy soil of desert



Mangroves or tidal forests in claye soil of delta



Coniferous trees in mountain soil of hill slopes

### III. ASSIGNMENTS

**Q.1. Classify :**

Classify the following trees and vegetation according to the type of forests where they occur : Mahogany, Cinchona, Cactus, Khair, Arjun, Acacias, Sundri, Palm, Silver fir, Junipers, Chestnut, Rosewood, Rubber, Bamboo, Sal, Shisham, Peepal, Keora, Agar, Spruce, Cedar

Ans.

Type of Vegetation	Trees found
Tropical Evergreen Rainforest	Mahogany, Cinchona, Rosewood, Rubber
Tropical Deciduous Forest	Khair, Arjun, Bamboo, Sal, Shisham, Peepal
Tropical Thorn and Scrub Forest	Cactus, Acacias
Montane Forest	Silver fir, Junipers, Chestnut, Spruce, Cedar
Mangrove Forest	Sundri, Palm, Keora, Agar

**Q.2. Animal Locator**

Locate the following animals to the respective wildlife sanctuary where they are found:

Animals : Rhinoceros, Lion, Tiger, Wild Ass, Snow Leopard, Gharial

Ans.

Wildlife Sanctuaries	Animals
Sunderbans	Tiger / Gharial
Gir National Park	Lion
Jim Corbett National Park	Tiger
Hemis High Altitude Park	Snow Leopard
Kaziranga National Park	Rhinoceros
Rann of Kachchh	Wild Ass




**Q.3. Make a list of five forest products in two columns that are useful to man.**


Ans.	Edible	Non-Edible
A	Fruits	Timber
B	Nuts and berries	Lac
C	Roots	Gum
D	Honey	Rubber
E	Medicinal herbs	Firewood and leaf litter

**Q.4. Label the following five medicinal plants : Aloe Vera, Pudina, Tulsi, Neem, Arjun**


Ans.




Aloe Vera




Neem



Tulsi



Arjun



Pudina

**Q.5. What are the uses of these medicinal plants, state two uses of each?**

Medicinal Plants	Uses
Neem	Antibiotic for wounds, antibacterial soap and cleansers.
Tulsi	Cure for cough and cold, anti-stress organic tulsi-gingar tea.
Aloe Vera	Antibacterial facial cleansers, in creams.
Pudina	Digestive medicines, mouth freshner.
Arjun	Fresh juice cure for earache, used to regulate blood pressure.

#### IV. GROUP DISCUSSION

**Q.1. Discuss with the students of your classroom about the importance of afforestation in India and its benefits.**

**Q.2. Hold a class discussion on steps taken by the Government to protect the flora and fauna of the country.**

Ask the students to suggest steps to protect plants and animals individually.

The students can bring newspaper cuttings and pictures from magazines to highlight the need to protect flora and fauna and some measures taken in this regard. Stress the importance of endangered species.

#### V. QUIZZES

##### Q.1. Animal Hunt

Given below are a list of animals. Name one area where it is found :

Ans.	Animals	State/Area
	1. Elephant	Hot wet forests of Kerala
	2. One-horned rhinoceros	Swampy and Marshy lands of Assam – Kaziranga wildlife sanctuary
	3. Wild ass	Rann of Kachchh in Gujarat
	4. Camel	Thar Desert of Rajasthan
	5. Tiger	Sunderbans in West Bengal
	6. Yak	Ladakh in Himalayan region / Sikkim
	7. Kiang (Tibetan wild ass)	High altitudes of Himalayas in Ladakh
	8. Lion	Gir forest of Gujarat
	9. Black buck	Rajasthan
	10. Bharal (blue sheep)	Freezing high altitude areas of Ladakh

##### Q.2. Word Jumble

Rearrange the alphabets in the following words to form the correct word for which a hint is provided in brackets.

- (a) OFRLA (*term denoting plants of a particular region*)
- (b) MEOBI (*very large ecosystem on land having plants and animals*)
- (c) RMONGAVE (*vegetation occurring in the delta region*)
- (d) TAUCCS (*Desert growth*)
- (e) PALPEE (*Common deciduous tree found all over India*)

**Ans. (a) FLORA (b) BIOME (c) MANGROVE (d) CACTUS (e) PEEPAL**

