

## 1. Answer the following questions in details :

### (1) Write a detailed note on types of forest.

- There are three types of forests on the basis of administration, ownership and management.
- Types of forests according to administration :
  - Reserved Forests : This type of forests are under the control of the Government directly. Here there is a restriction on lumbering, collection of woods or for pasturing.
  - Protected Forests : These forests are looked after by the administration. Local people are permitted to collect the wood and to graze their animals without causing any harm to the trees.
  - Unclassified Forests : These forests are still not classified. There is no restriction on tree felling or animal grazing.
- Classification of forests according to ownership, administration and management :
  - The forests of India are classified into three types on the basis of ownership, administration and management aspects.
    - (1) State Forest
    - (2) Communal Forest
    - (3) Private Forest
  - (1) State Forest : Central or State Government controls such forests. Most of the forests of the country fall under this category.
  - (2) Communal Forest : Local Self Government institutions. (Gram Panchayat, Municipalities, Corporations, District Panchayat) have control over such forests.
  - (3) Private Forests : This type of forest is owned by individuals. Such forests are found more in Odisha, Meghalaya, Punjab and Himachal Pradesh. Some of the forests of these types are in hapazard condition or some of them are totally barren.

### (2) State the remedies for forest conservation.

- Research should be carried out to find the option of wood.
- There should be a total ban for cutting trees which are not grown fully.
- Wherever the trees are to be cut inevitably for the development work or for necessity, new trees of the same species should be grown.

- Those industries which receive their raw material from the forests should be compelled for afforestation for future needs.
- Under the name of eco-tourism the forest cover should not be damaged and should be strictly controlled.
- Widespread public awareness programmes should be organized among the local people.
- In place of firewood, alternative options like solar energy, natural gas etc. should be implemented.
- Social forestry and agro forestry should be developed intensively by taking planned steps for the necessity of fodder and fire wood.
- Forest resources should be used sparingly. In order to make the process of tree growth faster and healthier, infested trees should be removed.
- Forest fire causes heavy damage to forests. A separate system or force at national level should be created for dousing the fire.
- An area should be demarcated and reserved for animal pasture.
- One must try to maintain environmental balance and natural beauty.
- Due to easy travel thousands of pilgrims reach the religious places in forested area to attend the bhandara, fairs or the parikrama at that time if the litter should be cleared properly otherwise the forests get polluted.
- The importance of forest and their conservation strategies should be included in the syllabus of schools and colleges.

### (3) Describe various projects of wild life protection.

- Some schemes are implemented in India to protect the wild life. Under this scheme, some projects are started for those animal species which are in danger or which are likely to be extinct in near future.
- (1) Tiger Project :
  - As per one estimate, there were more than 40,000 tigers in India in the beginning of the 20th century.
  - Due to unrestricted illegal hunting and deforestation there was a big danger for the existence of tigers. In such circumstances, this project to save tigers was started in 1971.
  - Till now this project is implemented in about 44 regions.

- Under the project, a series of steps were taken to keep their natural habitat protected and to maintain ecological balance at national level.
- (2) Elephant Project :
  - This project was started in 1992. Its main objective was to provide the elephants protective in their natural habitats and protect habitats and their migratory corridors.
  - Today there are 26 protection zones for elephants in the country.
  - After the implementation of this project there has been an increase in the number of elephants in the forests.
  - Besides this project also works for the maintenance of domesticated elephants.
- (3) Rhino Project :
  - This project is created for the protection of one horned rhino of India.
  - In India most of the rhinos are found in Assam state.
  - They are also found in less number in Sundarban of West Bengal.
  - According to the strategy of 'Rhino Vision 2020', an increase in the number of rhinos is targeted at 3000.
- (4) Crocodile Project :
  - This species of alligators which is found in fresh water was on the verge of extinction in the decade of 1970.
  - The Government of India took timely steps to start this project.
- (5) Vulture Project :
  - Vulture is the cleanliness worker of the nature.
  - It also eats the meat of dead animals.
  - Due to the unusual decrease in its number, this project was started in 2004.
  - There are about 9 subspecies of vulture in India.
- (6) Snow Leopard Project :
  - This species which is found at an altitude of about 3000 meters in Himalaya lives in snow only.
  - This project was started in 2000 with the purpose to increase the knowledge about snow leopard among the local people, so the people would be aware to protect it.
  - Besides these, other projects which are operational including Kashmiri Hangool Project, Red Panda Project, Manipur Tamil Project for the special species of deer found in Manipur, Ganga - Dolphin project on Ganga - Brahmaputra rivers etc.

## 2. Answers in brief :

### (1) What is meant by bio-reserve zone ?

- The average area of such zone is larger than 5000 sq. kilometers. It is formed according to International norms.
- In such proclaimed area, all external human movements are totally restricted.
- The purpose is to protect the physical and cultural diversity of any region.
- Special arrangements are created for research and training about bio-reserves.
- Nilgiri, Gulf of Mannar, Great Nicobar, Sundarban, Panchmadhi, etc. are considered to be the important bio-reserves of the nation.
- Besides all vegetations, insects and land of that area, the life style of the people living there is also protected.
- The Rann of Kachchh of Gujarat was declared as a Bio-reserve zone in 2008 for the protection of its special environmental conditions.
- There are 18 bio protection zones in India and 1 in Gujarat. India ranks at 12<sup>th</sup> position in the bio diversity point of view.
- There are 103 national parks and 531 sanctuaries in India. There are 4 national parks and 23 sanctuaries in Gujarat.

### (2) Where would we find Tigers in Gujarat ?

- In the beginning of last century, tigers were seen in Idar, Ambaji and Danta forest in Gujarat.

### (3) State the reasons for forest destruction.

- The quantity of carbon dioxide increases in the atmosphere. Green house effects become more intense.
- With the removed forest cover the soil is eroded and the problem of farm fertility increases.
- In the forests of peninsular India, the forest area has decreased largely due to deforestation.
- Many living organisms have lost their abodes.
- As a result, the wild animals approach urban settlements in search of food and water.

- More instances are recorded of carnivorous animals killing the domestic animals of those shepherds who live near the forests.

#### (4) Write notes about the wild life on the verge of extinction.

- There were more tigers seen in the beginning of twenty century. At that time tigers were seen in the forests of Idar, Arnbaji and Danta. Today tigers are totally extinct in Gujarat.
- Cheetah is also extinct from Indian forests.
- Many bird species which were easily seen in Indian forests are now hardly seen. Some of them like vulture, duck with pink throat, cranes and owls are on verge of extinction.
- Chilotro bird, once widespread in Arunachal of North-East is not seen so easily.
- There is a danger of survival to the alligators of the fresh waters of rivers and Ganga River Dolphin.
- The number of sea turtles approaching the coasts of Odisha and Gujarat is constantly decreasing.
- Water fowls once found frequently in Narmada, Tapi, Mahi and Sabarmati rivers of Gujarat is almost extinct.
- Thus. many forest animals of the world are on the verge of extinction today.

### 3. Answer the following questions in brief.

#### (1) What is meant by a sanctuary ?

- Wild life sanctuary is established for the protection of some species. The sanctuary can be established by the Government after a certain process.
- Human activities are permitted within certain limit.
- Domesticated animals can be allowed to graze after due permission from the authorities. Thus, it is an ecological system.
- Perriyar, Chandraprabha, Eturnagaram etc. are famous Sanctuaries.

#### (2) What is a National Park ?

- Compared to the sanctury this is more protected zone.

- More than one ecosystems are included here. There is a complete ban on animal grazing. It is not centred around one species as it is in a sanctuary.
- It is established through the coordination of state and central Government.
- Kaziranga, Corbett, Velavadar, Marine national park, Gir, Dachigam etc. are important national parks. There are 4 national parks in Gujarat.

(3) In which state is the Nal Sarovar located ?

- Nal Sarovar is located in the State of Gujarat.
- 

4. Select the correct option from the options given for each question and write the answer :

(1) Which wildlife is extinct from Gujarat .....

- (A) Gudhkhar      (B) Bear      (C) Tiger      (D) Leopard

(2) Forests over which the Local Self Govt. institutions (Grampanchayat. municipality, corporations) have control .....

- (A) Village forests      (B) Sanctuary forest  
(C) Collective forest      (D) Jhoom forest (community)

(3) How many species of animals and birds are there in the world ?

- (A) Twelve lakh      (B) Twenty one lakh      (C) Seven lakh      (D) Fifteen lakh