

## CHAPTER -5

### CONSERVATION OF PLANTS AND ANIMALS

#### EXERCISES

##### 1 Mark Questions

**Q1: What is meant by deforestation?**

**Answer:** Deforestation means clearing of forests, and using that land for other purpose like building houses and factories.

**Q2: What is meant by biosphere?**

**Answer:** Biosphere is that part of the earth in which living organisms exist or which supports life.

**Q3: Name the organization that produces the Red List.**

**Answer:** IUCN (International Union for Conservation of Nature and Natural Resources).

**Q4: Name two animal species which have become extinct in the past years.**

**Answer:** Dodo and thylacine.

**Q5: What is Red Data Book?**

**Answer:** Red Data Book is the source book which keeps a record on population status of the species included in the Red List.

**Q6: What are National Parks?**

**Answer:** National parks are reserves that protect the flora and fauna of the place.

**Q7: What are Biosphere reserves?**

**Answer:** Biosphere reserves are the areas meant for conservation of microorganisms, plants and animals.

**Q8: Define species.**

**Answer:** Species is a group of individuals which are capable of interbreeding with each other.

## **2 Mark Questions**

**Q1: Explain how deforestation leads to reduced rainfall.**

**Answer:** Removal of trees and plant life from a particular area for the construction of industries, agriculture and other purposes is termed Deforestation.

Photosynthesis, in plant life, takes place through the absorption of CO<sub>2</sub> from the earth's atmosphere. When plant life is destroyed, the Carbon Dioxide levels in the atmosphere will increase drastically, leading to the trap of heat radiation which causes global warming. This rise in temperature will affect the water cycle.

Disturbance in the water cycle will lead to a chain of events, and in the end, the rainfall pattern changes and results in droughts.

**Q2: Why should the paper is saved? Prepare a list of ways by which you can save paper.**

**Answer:** If one ton of clean white paper is to be produced, seventeen full-grown trees are cut down. Trees play a major role in maintaining a balance in nature. So, it is essential to save paper in order to protect the trees and avoid the impact of the loss of trees on the living organisms that depend on these trees.

Ways to save paper are

- Collection and recycling of used paper.
- Using both sides of a paper for writing.
- Spreading awareness about the importance of paper among school children and youth.
- Intelligent and proper use of paper.

**Q3: How can you contribute to the maintenance of the green wealth of your locality? Make a list of actions to be taken by you.**

**Answer:** I can take care of the green wealth of my locality by growing plants in my locality. I shall motivate the people of my neighborhood to plant more trees and take care of the existing trees by creating awareness about the importance of plant life in an ecosystem. In order to make this possible, I would initiate the proceedings and organize weekly events on the same. Creating awareness among the children and youth would be of top priority as they will easily understand the

issues that we are facing. Planting new trees is as important as looking after the existing ones. So, my volunteers and I would water the plants and trees on a regular basis.

**Q4: Find out about national parks in your state. Identify and show their location on the outline map of India.**

**Answer:** Perrier National Park, located in the state of Kerala.



**Q5: When we conserve forests, we conserve wildlife and soil also”. Discuss.**

**Answer:** Wildlife conservation is related to forest conservation. Man has cleared forests, converted grasslands into farmlands and flooded large areas by constructing dams. This has destroyed the habitat of the wildlife. Forests prevent soil erosion and maintain the fertility of the soil.

**Q6: “Water is renewable but oil is not”. Explain.**

**Answer:** Water evaporates from forest and other vegetation and condenses in the upper layers of the atmosphere to form clouds and then it rains. The water goes

down in the soil and is therefore, a renewable source.

Oil is found below the earth in crude form. It is formed after millions of years.

When the oil is used, it is lost. Therefore, it is not a renewable source.

**Q7: What is the difference in conservation of renewable and non-renewable resources?**

**Answer:** Conserving of renewable resources is to utilize them in such a way that nature is able to replenish them as fast as they are used. In the case of non-renewable resources it is not so. These resources take a long time in their formation and will get finished very soon. So, they should be used judiciously.

## 5 Mark Questions

**Q1: Differentiate between the following.**

**(a) Wildlife sanctuary and biosphere reserve**

**(b) Zoo and wildlife sanctuary**

**(c) Endangered and extinct species**

**(d) Flora and fauna**

**Answer:**

**(a) Wildlife sanctuary and biosphere reserve**

<b>Wildlife sanctuary</b>	<b>Biosphere reserve</b>
The area reserved in a forest for the protection of wild animals.	The area meant for the protection or conservation of the biodiversity. It also helps in maintaining the culture of that area.

**(b) Zoo and wildlife sanctuary**

<b>Zoo</b>	<b>Wildlife sanctuary</b>
A place where animals are protected in an artificial habitat, for an exhibition.	A place where animals are protected in an artificial habitat, for an exhibition.

(c) Endangered and Extinct species

<b>Endangered species</b>	<b>Extinct species</b>
The species of animals whose numbers are diminishing to such a level that they might face extinction.	The species of animals whose number is zero because of changes in their habitat and other calamities.

(d) Flora and Fauna

<b>Flora</b>	<b>Fauna</b>
The plants which are found in a particular area; e.g. Jamun, sal, etc.	The animals which are found in a particular area; e.g., leopard, cheetah, elephant, etc.

**Q2: the animals which are found in a particular area; e.g., leopard, cheetah, elephant, etc.**

**Answer:**

**(a) Effects of deforestation on wild animals**

Removal of trees and plant life from a particular area for the construction of industries, agriculture or for other such purposes is termed Deforestation. Plant life forms an integral part of the ecosystem, and they form the natural habitat of various animals in an ecosystem. Destroying plant life will ultimately threaten the existence of animals in a particular ecosystem and may lead to their extinction.

**(b) Effects of deforestation on the environment**

In plants, Photosynthesis takes place through the absorption of CO<sub>2</sub> from the earth's atmosphere. The percentage of CO<sub>2</sub> in the atmosphere increases rapidly if the plant life of an area is destroyed. Increased concentrations of CO<sub>2</sub> result in the

trapping of excessive heat radiations within the Earth's atmosphere contributing to global warming. This results in the rise of the temperature of the Earth and disturbs the water cycle which occurs in nature. Hence, rainfall pattern changes, leading to droughts and floods.

#### **(c) Effects of deforestation on villages**

The soil particles are held together in a place by the roots of the plants, trees and other vegetation. In the event of water flow or a high-speed wind over the top layer of the soil, the soil particles get removed easily as there are no plants to hold them in place. Lately, soil erosion has increased by deforestation activities. Soil loses fertility and humus. Hence, fertile land fit for agriculture turns into a desert.

#### **(d) Effects of deforestation on cities**

The risk of natural calamities like floods and drought in urban areas has increased by deforestation. It will also lead to global warming because of increased CO<sub>2</sub> levels in the atmosphere. Global warming is a result of continuous pollution from automobiles and industries. The water cycle in the vicinity is also affected.

#### **(e) Effects of deforestation on Earth**

Deforestation leads to increased chances and occurrences of desertification, droughts and floods. Carbon Dioxide level in the earth's atmosphere also increases, which leads to global warming. The water cycle is disrupted, and there is also an increased risk of natural calamities.

#### **(f) Effects of deforestation on the next generation**

Our environment is slowly changing due to the activities of deforestation, both directly and indirectly. Soil erosion, global warming, desertification, drought, greenhouse effect, floods and many other problems are caused only because of deforestation. Ultimately, the next generation will face the consequences of deforestation.



### **Q3: What will happen if?**

**(a) We go on cutting trees**

**(b) The habitat of an animal is disturbed**

**(c) The top layer of soil is exposed**

**Answer:**

**(a) If we go on cutting the trees**

If we go on cutting the trees, the animals will lose their natural habitat as an essential part of their ecosystem is destroyed. This reduces the biodiversity of the affected areas. The temperature of the Earth also increases and paves the way to global warming. Global warming, in turn, affects the water cycle. Hence, rainfall pattern changes, leading to droughts and floods. As a result, risks of soil erosion, global warming, desertification, greenhouse effect increase.

**(b) If the habitat of an animal is disturbed**

All the basic necessities for an animal, like food, water, shelter and protection, are provided by the habitat in which the animal lives-in. disturbing the habitat of the animals forces them to move to another place in search of food, water, shelter and protection. The animals, in due course, may get killed by other animals.

**(C) If the top layer of the soil is removed**

Removing the top layer of the soil gradually exposes the lower layers of the soil. The lower layers of the soil are hard and rocky in nature and are less fertile. This is because of the reduced quantity of humus. Soil erosion on a continued basis will turn land barren and infertile.

**Q4: Answer in brief.**

- (a) Why should we conserve biodiversity?**
- (b) Protected forests are also not completely safe for wild animals. Why?**
- (c) Some tribals depend on the jungle. How?**
- (d) What are the causes and consequences of deforestation?**
- (e) What is Red Data Book?**
- (f) What do you understand by the term migration?**

**Answer:**

(a) The number and variety of various life forms, such as plants, animals and microorganisms in the area, are called Biodiversity. Both plants and animals have a mutual dependence on each other for their survival. As they are related to one another, the destruction of one will automatically destroy the other. Hence, biodiversity has to be conserved in order to maintain nature's balance.

(b) People who live near the forests depend on the resources of the forests in order to fulfil their day-to-day needs. Therefore, it is not safe for animals living in protected forests. The animals would be threatened by the presence of the human population. This results in the killing of wild animals and selling their products for huge sums of money.

(c) The forests provide food and other resources to the tribal people. It is inevitable for them to depend on forests and their resources for everyday needs.

(d) Causes of deforestation

There are a lot of causes of deforestation. A few of them are listed below.

I. In order to accommodate the ever-expanding urban population, forest areas are often cleared and converted into lands for various uses.

II. For agricultural activities, like crop cultivation and cattle grazing, forest lands are cleared.

III. Firewood is a major product from the forests, and it is one of the main reasons for cutting trees on a large scale.

### Consequences of deforestation

There are a lot of fatal consequences caused by deforestation. A few of them are listed below.

1. Soil erosion
2. Loss of biodiversity
3. Floods
4. Droughts
5. Global warming as a result of climate change
6. Disruption of the water cycle

(e) The Red Data Book is a sourcebook which has an international list of all plant and animal species which are endangered, that is, on the verge of extinction. The International Union for Conservation of Nature and Natural resources (IUCN) maintains the books and adds/removes the names of the species by conducting a comprehensive survey.

(f) The movement of an organism or a group of organisms from its natural habitat to another place on a standard basis at a particular time each and every year is known as migration. The organisms do so in order to avoid uninhabitable conditions of climate or for the process of breeding.

**Q6: In order to meet the ever-increasing demand in factories and for shelter, trees are continually being cut. Is it justified to cut trees for such projects? Discuss and prepare a brief report.**

**Answer:** No Cutting trees in order to meet the ever-growing demands of the human population is not at all justified. There are a vast number of organisms, like wild animals, insects, and birds, living in the forests. The forests provide good-quality air for animals, birds, humans and other organisms. This is because of the process of plant respiration by which they consume harmful carbon dioxide and give out good quality Oxygen. Thus, they keep greenhouse gases and global warming under check. The roots of the flora of the forests help in preventing soil erosion. Natural Calamities such as floods and droughts could also be prevented by their presence. They help in increasing the soil's fertility and conserving the biodiversity of the ecosystem.

Overutilization of forests and their resources by cutting a large number of trees in order to satisfy the demands of the ever-increasing human population leads to many long-term problems like

- Soil erosion
- Greenhouse effect
- Global warming
- Floods
- Droughts

Besides the above-listed problems, the effects of large-scale deforestation will leave an everlasting mark on the face of human civilization. The balance of nature is disturbed by the destruction of trees. Hence, it is of utmost priority and importance to conserve forests.

## Fill in the blanks

1. A place where animals are protected in their natural habitat is called \_\_\_\_\_

**Answer:** Sanctuary

2. Species found only in a particular area is known as \_\_\_\_\_

**Answer:** Endemic species

3. Migratory birds fly to far away place because of \_\_\_\_\_ changes

**Answer:** Climatic

4. The interaction between the animals and plants exist in a particular region or habitat is called \_\_\_\_\_.

**Answer:** Biodiversity

5. The process of cutting of trees to make useful tools or objects such as furniture, house and rubber etc. leads to the condition, called \_\_\_\_\_.

**Answer:** Deforestation

6. \_\_\_\_\_ causes the desertification.

**Answer:** Deforestation

7. The species that are near to extinct called \_\_\_\_\_.

**Answer:** Endangered species

## **Multiple Choice Questions**

**1. Conversion of fertile land into deserts is known as**

- (a) Deforestation
- (b) desertification
- (c) conservation
- (d) none of these.

**Answer:** (b) desertification

**2. The variety of life on the earth is commonly referred to as**

- (a) biodiversity
- (b) biosphere
- (c) afforestation
- (d) none of these.

**Answer:** (a) Biodiversity

**3. The first national park in India is**

- (a) Bandipur national park
- (b) Kaziranga national park
- (c) Jim Corbett national park
- (d) Satpura national park.

**Answer:** (c) Jim Corbett national park

**4. All type of plant life is known as**

- (a) Fauna
- (b) flora
- (c) forest
- (d) none of these.

**Answer:** (b) flora

**5. When no member of a species exists, it is known as**

- (a) Endemic species
- (b) endangered species
- (c) extinct
- (d) vulnerable species.

**Answer:** (c) extinct

**6. Snow leopard is**

- (a) Vulnerable species
- (b) endangered species
- (c) extinct
- (d) endemic species.

**Answer:** (b) endangered species

**7. A species found only in one particular place is known as**

- (a) Endemic
- (b) vulnerable
- (c) endangered
- (d) extinct.

**Answer:** (a) Endemic

**8. Migration of birds takes place because**

- (a) They like to travel
- (b) to find abundant food
- (c) to meet other birds
- (d) none of these.

**Answer:** (b) to find abundant food

**9. Growing new trees in forests is known as**

- (a) Deforestation
- (b) desertification

- (c) afforestation
- (d) none of these.

**Answer:** (c) afforestation

**10. How many Biosphere Reserves in India has the Indian Government established?**

- (a) 10
- (b) 5
- (c) 14
- (d) 20

**Answer:** (c) 14



## PUZZLE

Complete the word puzzle.

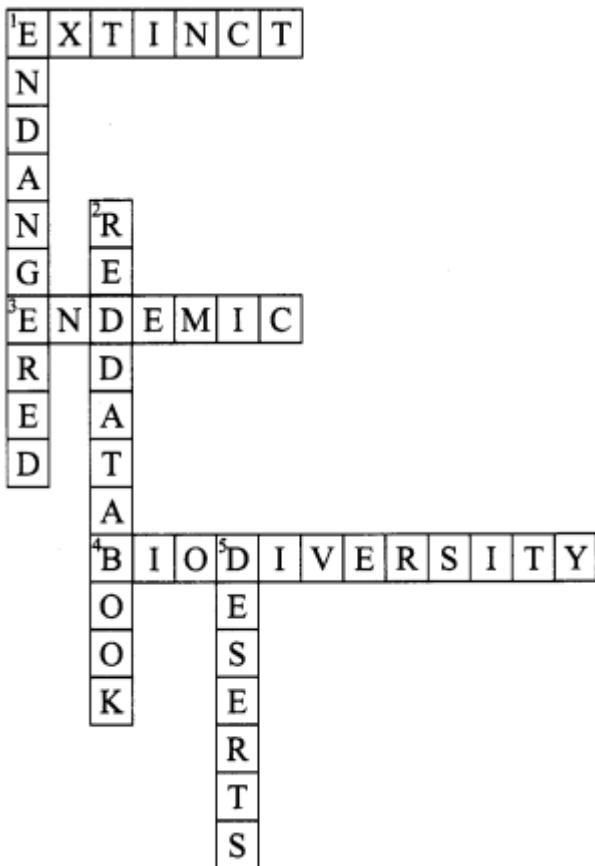
**Down**

1. Species on the verge of extinction.
2. A book carrying information about endangered species.
5. Consequence of deforestation.

**Across**

1. Species which have vanished.
3. Species found only in a particular habitat.
4. Variety of plants, animals and microorganisms found in an area.

Answer:



## SUMMARY

- **Biodiversity:** Occurrence of innumerable number of different types of organisms and the whole range of their varieties (biotypes) adapted to different climates, environments and areas.
- Wildlife sanctuary, national park and bio-sphere reserve are names given to the areas meant for conservation and preservation of forest and wild animals.
- Biodiversity refers to the variety of living organisms in a specific area.
- Plants and animals of a particular area are known as the flora and fauna of that area.
- Endemic species are found only in a particular area.
- Endangered species are those which are facing the danger of extinction.
- Red Data Book contains a record of endangered species.
- Migration is the phenomenon of movement of a species from its own habitat to some other habitat for a particular time period every year for a specific purpose like breeding.
- We should save, reuse and recycle paper to save trees, energy and water.
- Reforestation is the restocking of destroyed forests by planting new trees.
- **Flora:** Different types of plants belonging to an area. Example: Silver ferns, sal, teak, mango, etc.
- **Fauna:** All animals found in an area. Example: dog, frog, insects, bull, jackal, etc.
- Endemic Species: Species of plants and animals found exclusively in a particular area. These are not naturally found anywhere else.
- **Extinct Species:** Species of plants and animals which have already been lost. Example: Dodo, Indian cheetah, Pink-headed duck, etc.
- **Threatened Species:** Species that is liable to become extinct if it is not allowed to realise its full biotic potential by removed the caused of threat.

### **Type of Threatened Species:**

**(i) Endangered Species:** A species of animal or plant that is seriously at risk of extinction. Example: Indian rhinoceros, Asiatic lion, Asiatic wild ass, etc

**(ii) Vulnerable Species:** A vulnerable species is a species of animals or plants which are likely to become endangered unless something changes. Example: Chinkara deer and black buck, golden langur, etc

**(iii) Rare Species:** Species whose population are originally small and scattered in the world.

- **National Parks:** Protective areas reserved exclusively for the betterment of the wildlife. These are established at the approval of legislature.  
**Example:** Hazaribagh National Park in Jharkhand, Desert National Park in Rajasthan, etc.
- **Sanctuaries:** Hunting prohibited areas set up by government are known as sanctuaries. These are only for the protection of wild animals. Example: Jaldapara in Madarihat (West Bengal), Keoladeo Ghana in Bhagalpur (Rajasthan)
- **Migration:** The regular, periodic, two way movements of birds and some animals from their place of residence to some other place along well defined routes. It is linked to seasonal factors, breeding, shortage of foods, etc. The Bhagalpur bird sanctuary is known for the migratory birds.