

## CONSERVATION OF PLANTS AND ANIMALS

### 1. Fill in the blanks:

- a. A place where animals are protected in their natural habitat is called sanctuary.
- b. Species found only in a particular area are known as endemic species.
- c. Migratory birds fly to faraway places because of climatic changes.

### 2. Differentiate between the following:

#### a. Wildlife sanctuary and biosphere reserve

A wildlife sanctuary is an area where animals are protected from any disturbance to them and their habitat. Example: Bharatpur sanctuary.

A biosphere reserve is a large area of protected land for conservation of wild life, plant and animal resources and traditional life of the tribals living in the area. Thus the biosphere reserve helps to maintain the biodiversity and culture of that area. Example: Great Nicobar Biosphere Reserve.

#### b. Zoo and wildlife sanctuary

Zoo is the place where wild animals are kept in cages and not allowed to move freely in their habitat. They are looked after by the zoo authorities and given food in their cages.

In a wild life sanctuary the wild animals are free to move in their habitat without disturbance. The animals have to search for their food.

#### c. Endangered and extinct species

Those animals and plants whose numbers are very low and face extinction are endangered species. Example: Sparrow.

Those animals and plants that are no more present on earth are extinct species. Example: Dinosaurs.

#### d. Flora and fauna

All the plants growing in an area are called flora of that area.

All the animals living in an area are called fauna of that area.

### 3. Discuss the effects of deforestation on the following.

**a. Wild animals:** Natural habitat of animals is lost due to deforestation. The animals get crowded in smaller habitats and competition for space and food increases too much. This causes extinction of many species.

**b. Environment:** The pollution of air increases because less CO<sub>2</sub> is absorbed. This causes increase in temperature and less rainfall. Ground water is not recharged. So ground water level decreases. The top fertile layer of soil gets eroded and so the fertility of soil decreases. There is less humus in the soil to support plant growth.

**c. Villages (Rural areas):** Due to deforestation, increase in temperature disturbs the water cycle and reduces the rainfall. No water is available for irrigation of the fields. The soil in farms gets eroded due to strong winds and becomes less fertile. The yield of crops gets decreased.

**d. Cities (Urban areas):** Due to deforestation, the temperature in cities decreases too much. Amount of air pollution also increases due to vehicles. There are frequent dust storms causing poor visibility on the roads. The ground water level is very low in the cities.

**e. Earth:** Due to deforestation, CO<sub>2</sub> level in air increases causing global warming. The increase in temperature disturbs the water cycle and reduces rainfall. Global warming causes melting of ice caps on the mountains and rise in sea level. This cause floods in coastal areas.

The soil becomes unfertile and hard rocky layer gets exposed due to soil erosion. This causes desertification.

**f. The next generation:** Deforestation increases pollution of air, global warming, reduces rainfall, decrease in ground water level and soil erosion. These problems will be faced by the next generations and will go on increasing.

Less rainfall will lead to less food production in the farms. Prices of food items will increase very high. Next generations will also face shortage of fresh water and unfavourable climate change due to deforestation.

#### **4. What will happen if:**

##### **a. We go on cutting trees.**

If we go on cutting the trees it will lead to deforestation. The deforestation will lead to:

Increase in CO<sub>2</sub> level on earth and global warming.

Temperature and pollution level of air will increase.

Natural habitat of wild animals will be lost and many animals will get extinct.

Water cycle will get disturbed and less rainfall will lead to draught and increase in prices of food items.

Soil erosion will take place causing desertification of large areas.

We will face shortage of products such as timber and firewood, which are obtained from forests.

##### **b. The habitat of an animal is disturbed.**

If the natural habitat of animals is disturbed or destroyed, natural balance in the ecosystem will get disturbed and many animals will get extinct. The animals will not be able to live freely in their habitat.

##### **c. The top layer of soil is exposed.**

If the top layer of soil is exposed due to deforestation, the top fertile soil containing humus will get eroded. This will make the area less fertile. The hard rocky layer will get exposed and lead to desertification.

#### **5. Answer in brief:**

##### **a. What is biodiversity? Why should we conserve biodiversity?**

Biodiversity refers to the variety of living organisms in an area.

Biodiversity should be conserved so that:

Proper ecological balance is maintained in the environment.

All organisms get sufficient food without any competition in the food web.

Endangered species can be saved from extinction.

##### **b. Protected forests are also not completely safe for wild animals. Why?**

Protected forests are also not completely safe for wild animals because:

People living around the forests encroach upon the forest and destroy the natural habitat to build their settlements.

Poachers enter the forests and kill the animals for their skin, teeth and bones.

There is illegal cutting of trees in the protected forest areas.

##### **c. Some tribals depend on the jungle. How?**

Tribals living in the jungle depend on the jungle for:

**a. Food-** They roam in the jungle to collect food and honey.

**b. Wood-** Wood collected from jungle is used as firewood to cook the food. Wood is also used to make tools for hunting, fishing and as a building material.

**c. Medicines-** Tribals use medicinal plants growing in the jungle for curing their ailments.

**d. Hide and skin-** The skins of animals is used by the tribals as clothes to protect them from cold weather.

##### **d. What are the causes and consequences of deforestation?**

Deforestation means clearing of forests and using the land for other purposes.

**Causes of deforestation are:**

a. Natural causes: Forest fires and droughts.

b. Human causes:

Procuring land for cultivation.

Building houses and factories.

Making furniture and using wood as fuel.

**Consequences of deforestation are:**

a. Increase in carbon dioxide level in the air.

- b. Increase in temperature and pollution level on earth.
- c. Lowering in ground water level.
- d. More chances of natural calamities like floods and droughts.
- e. Soil erosion leading to loss of humus and fertility of the top soil.
- f. Desertification of large areas.
- g. Decrease in water holding capacity and nutrient content of the soil.

**e. What is Red Data Book?**

Red Data Book is the source book that keeps a record of all the endangered animals and plants. There are different Red Data Books for plants, animals and other species of living organisms.

**f. What do you understand by the term migration?**

Migration is the phenomenon of movement of a species from its own habitat to some other habitat for some period of time every year for some purpose like breeding (reproduction). For example: Migratory birds from Siberia in Russia visit India every year during the winters to lay eggs because climatic conditions in Russia are very cold and not favourable for them.

**6. In order to meet the ever increasing demand in factories and for shelter, trees are being continuously cut. Is it justified to cut trees for such projects?**

Yes, cutting trees for shelter and supply in factories is proper and justified. But equal number (or more) of trees should be replanted so that the land remains covered with trees and there is least damage to the environment and natural habitat of wild animals.

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

We can help in maintaining the green wealth of our locality by,  
Planting as many trees as possible in open unused land.

Grown up trees should not be cut down for firewood and other purposes.

Recycling and reuse of paper and wood should be done to avoid cutting of wood.

**8. Explain how deforestation leads to reduced rainfall.**

Deforestation reduces the number of plants in an area. The plants take CO<sub>2</sub> from air for photosynthesis. Fewer trees would take up less CO<sub>2</sub>. So the amount of CO<sub>2</sub> would increase in the air.

CO<sub>2</sub> traps the heat rays reflected by the earth and cause increase in temperature of the air. This is called Global Warming. Due to this water cycle gets disturbed and causes reduced rainfall. This causes drought.

**9. Why should paper be saved? Prepare a list of ways by which you can save paper.**

Paper is made from the pulp of wood. It takes about 17 full grown trees to make just one ton of paper. Production of paper on a large scale needs regular supply of trees. This causes deforestation of large areas of land. So, we should save paper.

Paper can be saved by:

- a. Recycling of used paper.
- b. Reusing paper- Note books of previous year having blank pages should be used as rough copies. Wastage of paper for fun should be avoided.

**10. Write a note on the following:**

**a. Species:** A species is a group of organisms who can reproduce among themselves. The organisms of a species have many common characters.

**b. Endemic Species:** Endemic species are those species of plants and animals which are found only in one particular area. They are not naturally found anywhere else. For example, Bison, Indian giant squirrel and flying squirrel are the endemic fauna (animals) of Pachmarhi Biosphere Reserve in central India.

**c. Ecosystem:** An ecosystem is a part (or area) of the natural environment. It consists of two things:

All the plants, animals and microorganisms living in that area.

The non- living components like climate, soil, water and air.

The living organisms in the ecosystem use the natural resources in the area.

**d. Reforestation:** The process of re-growing forests by planting new trees. The planted trees should be of the same type, which were found in the forest. Reforestation helps in developing the natural environment which was damaged due to deforestation.

**e. Global warming:** The increase in temperature of the atmosphere all over the world is called global warming.

Global warming is due to increase in the amount of CO<sub>2</sub> in the atmosphere due to burning of fossil fuels and deforestation. The plants take up CO<sub>2</sub> for photosynthesis. Less number of plants means that less CO<sub>2</sub> is taken up from the atmosphere.

CO<sub>2</sub> traps heat in the atmosphere and leads to increase in temperature all over the earth. This disturbs the water cycle causing less rainfall. The glaciers on top of high mountains melt away and there is rise in the sea level. This causes submerging of the coastal areas and unfavourable climate change.

**11. Explain how deforestation leads to less rainfall in an area? What are the consequences?**

Deforestation reduces the number of plants which take up CO<sub>2</sub> from the air for the process of photosynthesis. Thus the amount of CO<sub>2</sub> increases in the atmosphere due to burning of fossil fuels. CO<sub>2</sub> traps heat in the atmosphere and causes global warming. This disturbs the normal flow of monsoon winds which bring rainfall. Thus water cycle gets disturbed and less rainfall occurs in the area.

Less rainfall causes drought and less production of food in the farms. This causes death of many people and heavy rise in prices of food grains and other food items.

The level of ground water decreases and very less fresh drinking water is available.

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