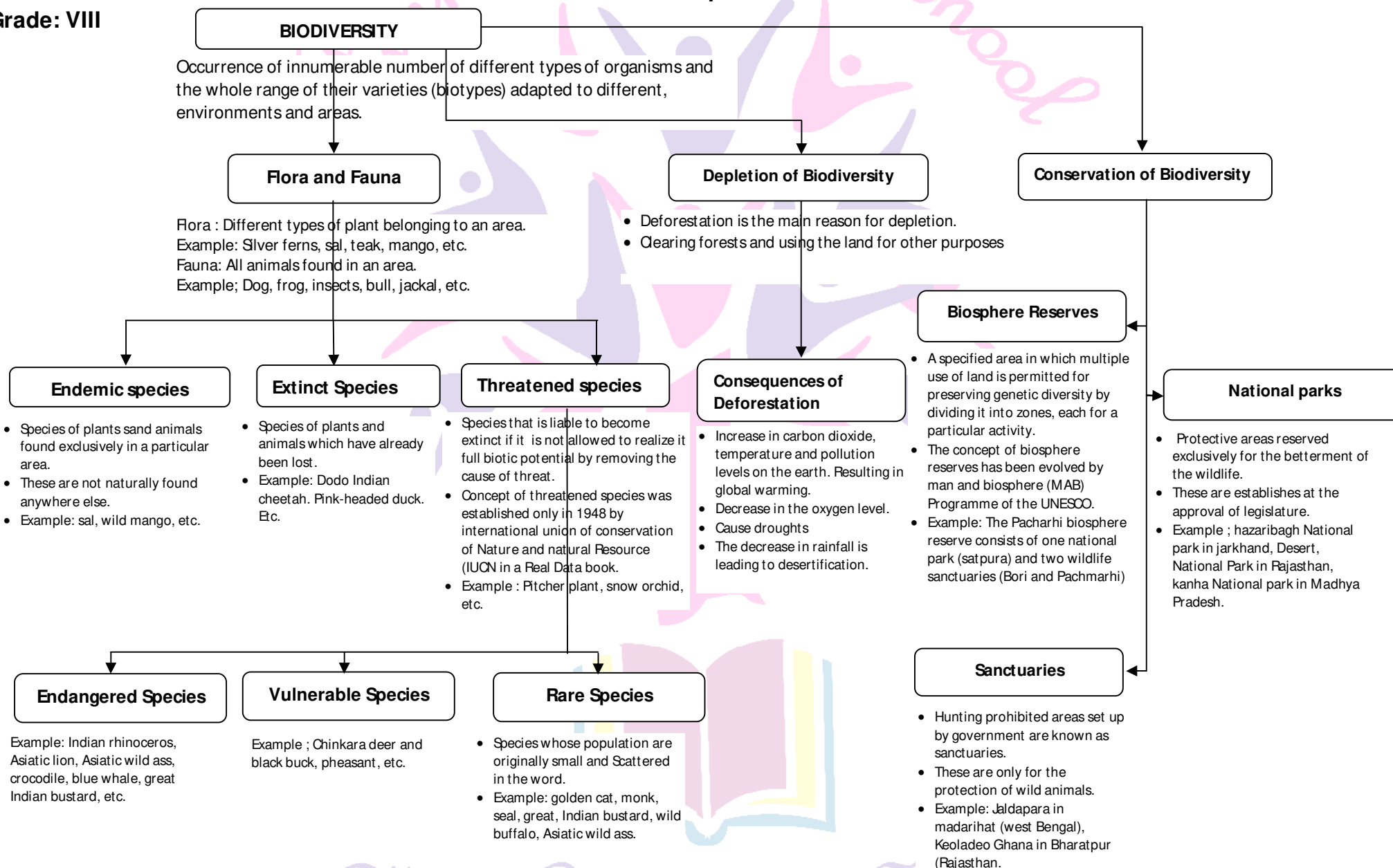


Lesson 7. Conservation of Plants and Animals

Grade: VIII

Basic concepts – A Flow Chart





Know the Terms

- **Deforestation** : A forest is a large area covered with trees and plants. It provides habitat for animals and plants. The process of clearing away forests by cutting them down or burning them is called deforestation.
- **Biodiversity** : It refers to the variety of organisms existing on the earth, their inter-relationships and relationships with the environment.
- **Species** : It is a group of population which is capable of interbreeding. This means that the members of a species can reproduce fertile offsprings only with the members of their own species.
- **Endangered Animals** : Animals whose numbers are diminishing to a level that they might face extinction are called endangered animals.
- **Extinct Animals** : The species which no longer exist anywhere on the earth are called extinct animals.
- **Migration** : The process of an animal (or bird) to move from one place to another on the basis of season is called migration.

Objective Type Questions

(1 Marks)

I. Multiple Choice Questions

1. Wild buffalo is an endangered species because : **(NCERT Exemplar)**
 - (a) Its population is diminishing.
 - (b) It has become extinct.
 - (c) It is found exclusively in a particular area.
 - (d) Its poaching is strictly prohibited.
2. Which one of the following changes may occur due to desertification? **(NCERT Exemplar)**
 - (a) Decreases in atmospheric temperature.
 - (b) Increase in water holding capacity of soil.
 - (c) Increased chances of floods.
 - (d) Conversion of fertile land into a desert.
3. Which one of the following statements is true about a Biosphere Reserve? **(NCERT Exemplar)**
 - (a) It is a protected area where only endemic species live.
 - (b) It is meant only for the conservation of plants and animals.
 - (c) It is meant to conserve both, the biodiversity and the culture of that area.
 - (d) There are no other protected areas within its limits.



4. The places meant for conservation of biodiversity in their natural habitat are

(NCERT Exemplar)

- | | | | |
|------------------------|-------------------------|--------------|------------|
| (i) Zoological garden | (ii) Wildlife sanctuary | | |
| (iii) Botanical garden | (iv) National park | | |
| (a) i & ii; | (b) ii & iii; | (c) iii & iv | (d) i & iv |

5. Which one of the following statements is true about endemic species? (NCERT Exemplar)

- (a) They are found exclusively in a specific habitat
- (b) Endemic species can never become endangered.
- (c) They are found only in zoos and botanical gardens.
- (d) They are not affected by the destruction of their habitat.

6. Which of the following features is correct for a wildlife sanctuary? (NCERT Exemplar)

- (a) It is an artificially created protected area for animals.
- (b) It is a protected area for threatened and endangered wild animals.
- (c) It is meant for conservation of only plant species.
- (d) Capturing and poaching of animals is strictly prohibited here.

7. Which statement is incorrect about endangered species? (NCERT Exemplar)

- (a) Their number has decreased drastically.
- (b) They might become extinct in the near future.
- (c) They pose a danger to other animals.
- (d) Their natural habitat needs to be protected.

8. What do black buck, elephant, python and golden cat together represent in a forest?

(NCERT Exemplar)

- | | | | |
|-----------|---------------|-----------|-------------|
| (a) fauna | (b) ecosystem | (c) flora | (d) species |
|-----------|---------------|-----------|-------------|

9. The Red Data Book keeps a record of all the

- | | | | |
|-----------------------|-------------------------|--------------|------------|
| (i) endemic species | (ii) endangered plants | | |
| (iii) extinct species | (iv) endangered animals | | |
| (a) i & ii | (b) ii & iii | (c) iii & iv | (d) i & iv |

10. Migratory birds fly to far away areas during a particular time of a year. Which of the following conditions present in their habitat during that time are responsible for this behaviour? (NCERT Exemplar)

- | | | | |
|----------------------------|---------------------------------|------------|-------------|
| (i) Unavailability of food | (ii) Extreme weather conditions | | |
| (iii) Overcrowding | (iv) Lack of nesting areas. | | |
| (a) ii & iii | (b) i & ii | (c) i & iv | (d) ii & iv |



11. In our country, large patches of forests are being cleared for cultivation of crops.

The environmental impact of such a practice will lead to:

(NCERT Exemplar)

- (a) Soil erosion (b) Soil pollution (c) Soil conservation (d) Soil fertility

1. (a)	2. (d)	3. (c)	4. (c)	5. (a)	6. (a)	7. (c)	8. (a)	9. (c)	10. (b)	11. (a)
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II. Multiple Choice Questions

- The place of living of an organism in environment is called
 - Home
 - Resort
 - Habitat
 - Reservoir
- Cutting of a forest at a large scale is called
 - Deforestation
 - Reforestation
 - Afforestation
 - All of these
- Deforestation takes place
 - Only by human activities
 - Only by natural reasons
 - Both of these
 - None of these
- The species which are at the verge of the extinction are called
 - Endemic
 - Extinct
 - Endangered
 - None of these
- The growing of more and more plants is called
 - Deforestation
 - Reforestation
 - Both of these
 - None of these
- Fauna indicates for
 - Plants
 - Animals
 - Both plants and animals
 - None of these
- The places where animals receive protection are called
 - Zoo
 - National Parks
 - Rock shelters
 - None of these



8. Project Tiger was launched on

a. 1st April 1973

b. 23 May 1973

c. 21 September 1973

d. 25 December 1973

9. Sanctuary is a place where

a. Animals are protected

b. Plants are protected

c. Office of forest department

d. None of these

10. Part of earth which supports the biodiversity is called

a. Biosphere Reserve

b. Sanctuary

c. Ecosystem Reserve

d. Biotic Community

1. c	2. a	3. c	4. c	5. b	6. b	7. a	8. a	9. a	10. a
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I. Fill in the blanks

1. _____ refers to the variety of living organisms in a specific area.

2. Plants and animals of a particular area are known as the _____ and _____ of the area.

3. _____ species are found only in a particular area.

4. _____ species are those which are facing the dangers of extinction.

5. We should save, _____ and _____ paper to save trees, energy and water.

6. _____ is the restocking of destroyed forest by planting new trees.

7. _____ contains a record of endangered species.

1. Biodiversity	2. Flora, fauna	3. Endemic	4. Endangered
5. reuse, recycle	6. Reforestation	7. Red Data Book	

II. Fill in the blanks

1. The cutting of trees is called _____.

2. The growing of new plants in place of cut trees is called _____.

3. The main example of Biosphere Reserve is _____.

4. The conversion of fertile land into desert is called _____.

5. Animals and plants which do not exist anymore are called _____.



6. Sat pur a Tiger Reserve is a _____.
7. Kazir anga is a _____.
8. The plant s typically belonging to a particular area are called _____.
9. A paper can be recycled _____ times.
10. Revised Forest Policy of 1952 is called _____.

1. Def or est at ion	2. Ref or est at ion	3. Pachmar hi biosphere Reserve	4. Desert ification	5. Ext inct
6. Project Tiger	7. National Park	8. Flora	9. 5 to 7	10 Forest Act

I. Match the Columns.

1. Match the items given in Column A with those in Column B suitably.

Column A		Column B	
(i)	Sat pur a	(a)	Protect animals
(ii)	Def or est at ion	(b)	Killing of animals
(iii)	Global Warming	(c)	Cutting of trees
(iv)	Poaching	(d)	National Park
(v)	Zoo	(e)	I ncreasing car bon dioxide

(i). (d)	(ii). (c)	(iii) . (e)	(iv) . (b)	(v) . (a)
----------	-----------	-------------	------------	-----------

2. Match the items given in Column A with those in Column B suitably.

Column A		Column B	
(i)	Plant at ion of trees	(a)	National Park
(ii)	Revised Forest Policy 1952	(b)	Surkhab
(iii)	Record of endangered animals and plant s	(c)	Bhar at pur animals and plant s
(iv)	Migr at or y bir ds	(d)	Ref or est at ion
(v)	Bir d sanct uary	(e)	For est Act 1980

(i). (d)	(ii). (e)	(iii) . (a)	(iv) . (b)	(v) . (c)
----------	-----------	-------------	------------	-----------

II. Match the Columns.

Column I	Column II
1. Black Buck	(i) Less rainfall
2. Rock shelters	(ii) Extinct a long time ago
3. Project Tiger	(iii) Threatened wild animal
4. Dinosaurs	(iv) Safeguarding the tiger population
5. Droughts	(v) Satpura National Park

1. (iii)	2. (v)	3. (iv)	4. (ii)	5. (i)
----------	--------	---------	---------	--------

I. True or False

- There can be a wildlife sanctuary within a biosphere reserve.
- Plants of a particular area are collectively termed as fauna.
- Deforestation leads to an increase in the water holding capacity of the soil.
- Bison is an endemic fauna of Pachmarhi Biosphere Reserve.

1. True	2. False	3. False	4. True
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II. True or False

- The animals found in a particular area are called flora.
- Deforestation is the major threat to survival of organisms.
- The conversion of fertile soil into desert is called desertification.
- Increase in rainfall causes droughts in that area.
- Pachmarhi Biosphere Reserve consists of one national park and two wildlife sanctuaries.
- A source book which keeps the record of all the endangered animals and plants is called Red Data Book.
- Dinosaurs are the extinct animals.
- Endangered animals are those whose numbers are very large.



9. The growing of trees is called deforestation.
10. Forest Act 1980 is the Revised Forest Policy of 1952.

1. False	2. True	3. True	4. False	5. True
6. True	7. True	8. False	9. False	10. True

Know the Terms

Intext Questions

1. Paheli is curious to know the purpose of making national parks, wildlife sanctuaries and biosphere reserves.

To conserve and preserve the animals and plants whose number are diminishing and are facing extinction, national parks, wildlife sanctuaries and biosphere reserves are established.

2. Boojho is curious to know how deforestation reduces rainfall on the one hand and leads to floods on the other.

Deforestation leads to global warming which increases the temperature of earth and this increase in temperature disturbs the water cycle and reduces rainfall. Deforestation also leads to a decrease in water holding capacity of soil and movement of water from the soil surface into the ground, which causes floods.

3. Paheli has heard that some of the endemic species may vanish. Is it true?

Yes, the destruction of habitat, increasing population and introduction of new species may affect the natural habitat of endemic species and endanger their existence.

4. Boojho wants to know the difference between a zoo and a wildlife sanctuary.

Both wildlife sanctuary and zoo are the places where animals are protected and preserved. But wildlife sanctuary provides natural habitat while in zoo animals live in artificial atmosphere.



5. Boojho wants to know whether tigers are still found in the forest. He is excited to see a tiger.

Tiger is one of the many species which are slowly disappearing from our forests. But, the Satpura tiger reserve is unique in the sense that a significant increase in the population of tiger has been seen here.

6. Paheli wants to know whether only big animals are facing the danger of extinction.

No, the small animals are much more in danger than the bigger animals. At times, we kill snakes, frogs, lizards, bats and owls ruthlessly without realizing their importance in the ecosystem. By killing them we are harming ourselves. They might be small in size but their role in the ecosystem cannot be ignored. They form part of food webs.

7. Boojho wonders if there is a record of the endangered species!

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

8. Paheli is curious to know what would happen if we had no wood. Is there any alternative available for wood? Boojho says that paper is one of the important products we get from forests. Boojho asks whether there are any alternatives available for paper.

If, there is no wood, then we will not receive fuels and many other things used for domestic purposes as paper, matchsticks, furniture etc. There is no alternative of wood and paper.

9. Boojho wants to know if there is any permanent solution for the problem of deforestation?

The answer to deforestation is reforestation, which is restocking of the destroyed forests by planting new trees.

Textbook Questions

1. Fill in the blanks :

- (i) A place where animals are protected in their natural habitat is called**
- (ii) Species found only in a particular area are known as**
- (iii) Migratory birds fly to far places because of changes.**

(i) wildlife sanctuary

(ii) endemic species

(iii) climatic



2. Differentiate between the following :

(i) Wildlife Sanctuary and Biosphere Reserve.

(ii) Zoo and Wildlife Sanctuary

(iii) Endangered and Extinct Species

(iv) Flora and Fauna

(i)

S. No.	Wildlife Sanctuary	Biosphere Reserve
(a)	It is a place where wild animals are protected in their natural environment. e.g., Bori pachmarhi	It is an area where biodiversities (both plants and animals) are conserved. e.g., Pachmarhi

(ii)

S. No.	Zoo	Wildlife Sanctuary
(a)	It is a place where animals are protect- ed and displayed for public view.	It is a place where wild animals are protected in their natural environment.
(b)	It is an artificial habitat e.g., Indore zoo, Assam state zoo	It conserves the natural habitat of animals e.g., Bori

(iii)

S. No.	Endangered Species	Extinct Species
(a)	(a) It is a population of species that is on the verge of becoming extinct e.g., blue whale, tiger	It is a population of species that no longer exists. Hence it is extinct, e.g., dodo, dinosaurs.

(iv)

S. No.	Flora	Fauna
(a)	(a) It is the variety of plants in a particular area e.g., sal, teak, mango etc. from the flora of Pachmarhi biosphere reserve.	It is the variety of animals in a particular area e.g., leopard, wolf etc. from the fauna of Pachmarhi Biosphere reserve.



3. Discuss the effects of deforestation on the following :

- (i) Wild animals
- (ii) Environment
- (iii) Villages (Rural areas)
- (v) Cities (Urban areas)
- (vi) Earth
- (vi) The next generation

The Effects of Deforestation :

(i) **Wild animals** : Due to destruction of natural habitat, most of animals facing extinction and then their number also diminished.

(ii) **Environment** : Deforestation disturbs the balance in nature due to which the level of oxygen has lowered and ground water level also lowered.

(iii) **Villages (Rural areas)** : Due to deforestation, the rainfall and the fertility of the soil will decrease and there are increased chances of natural calamities such as floods and drought. So, village life becomes difficult because it is mainly based on agriculture.

(iv) **Cities (Urban areas)** : Deforestation increases the level of carbon-dioxide which causes air pollution. Due to lack of trees, the problem of fuel and production of numerous things also will be affected.

(v) **Earth** : The deforestation increases the temperature and pollution level on the earth and it also is main cause of global warming.

(vi) **The Next Generation** : The life becomes very difficult for next generation due to increased level of pollution, temperature etc. and damaged ecosystem.

4. What will happen if :

- (i) We go on cutting trees?
- (ii) The habitat of an animals is disturbed?
- (iii) The top layer of soil is exposed?

(i) If we go on cutting trees, we will face the problem of food, wood, shelter etc. Also, the cutting of trees leads to the decrease in level of oxygen and also causes global warming.

(ii) If the habitat of an animal is disturbed the animal will face extinction and survival becomes very difficult for it.

(iii) The exposed layer has less humus and is less fertile. Gradually the fertile land can convert into deserts. It is called deforestation.



5. Answer in brief :

(i) Why should we conserve biodiversity?

(ii) Protected forests are also not completely safe for wild animals. Why?

(iii) Some tribe depend on the jungle. How?

(iv) What are the causes and consequences of deforestation?

(v) What is Red Data Book?

(vi) What do you understand by the term migration?

(i) Biodiversity refers to the variety in life existing on earth, their inter-relationships and their relationship with the environment. So, if biodiversity is not conserved, it will cause disbalancing of life-cycles on earth. So, we should conserve biodiversity.

(ii) Wild animals are killed or captured by man for various purposes, so only protection of forests is not completely safe for wild animals.

(iii) Some tribes still live in the jungle. The forests provide them food and economical support. By selling the wood and products of forests, they earn money. These tribes depend only on growth of forest.

(iv) Causes : The forests or trees are cut for procuring land for cultivation, building houses and factories, making furniture or using as fuel. Also some natural processes as forest fires and severe drought cause the deforestation.

Consequences : The deforestation increases the temperature and pollution level on the earth. It decreases the level of oxygen in the atmosphere and ground water level is also lowered. Deforestation disturbs the balance in nature. If continuous cutting of trees would continue, rainfall and the fertility of the soil will decrease. As a result, there are increased chances of natural calamities such as floods and drought.

(v) Red Data Book : Red data Book is the source book which keeps record of all endangered animals and plants. There are different Red Data Books for plants, animals and other different species.

(vi) Migration : It is the change of location of birds to far away specific areas due to climatic changes every year during a particular time. These birds fly for laying eggs as the weather in their natural habitat becomes very cold and inhospitable. Birds who cover long distance to reach another land are known as the migratory birds.



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

No, cutting of trees leads to many problems as global warming, desertification, drought, less rainfall, decrease in ground water level and oxygen etc.

7. How can you contribute to the maintenance of green wealth of your locality? Discuss in your class and make a list of actions to be taken by you.

If we have to maintain our green wealth for generations plantation of more trees is the only option. We should plant at least ten trees per year for cutting the effect of deforestation. Also, we should use other options of fuel instead of wood, which also helps us to stop the pollution.

8. Explain how deforestation leads to reduced rainfall.

The plants need carbon dioxide for photosynthesis. Fewer trees would mean less consumption of carbon dioxide and its increased amount in the atmosphere. This leads to global warming as carbon dioxide traps the heat of sun rays. The increase in temperature on earth disturbs the water cycle and reduces rainfall. This causes drought.

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

Do your self.

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

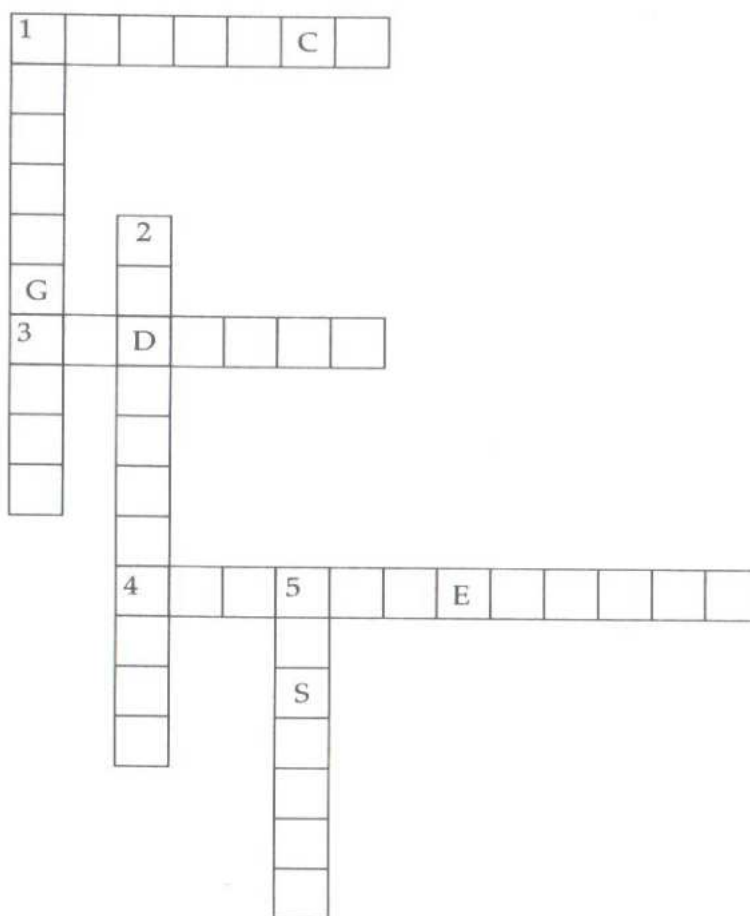
Paper should be saved because it takes around 17 full grown trees to make one tonne of paper. Trees are important to maintain a balance of nature. Therefore, in order to save trees and prevent the impact of their loss on living world, we need to save paper.

We can save paper by following ways :

- (i) Paper should be recycled.
- (ii) Use both sides of a paper for writing purpose.
- (iii) Spread awareness regarding the value of saving paper.

Next Generation School

11. 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.

Down :

1. Endangered
2. Red Data Book
5. Disturb



Across :

1. Extinct
 3. Endemic
 4. Biodiversity
-

I. Very Short Answer Type Questions

1. Name some National Parks and sanctuaries.

Bharatpur Sanctuary, Lockchao Wildlife Sanctuary Kaziranga National Park and Satpura National Park.

2. What is the major threat to survival of organisms?

Deforestation.

3. What do you mean by deforestation?

The clearing (cutting) of forests and using that land for other purposes is called deforestation.

4. Write two natural causes of deforestation.

- (i) Forest fire (ii) Severe droughts

5. Name some products which we get from forests.

Fruits, vegetables, timber, fodder and medicines.

6. What is sanctuary?

The areas where animals are protected from any disturbance to them and their habitat are called sanctuary.

7. What are National Parks?

The areas reserved for wildlife where they can freely use the habitats and natural resources are called national parks.

8. Name the part of earth which supports the biodiversity.

Biosphere Reserve

9. Write the name of two wildlife sanctuaries hosted by Pachmarhi Biosphere Reserve.

Bori and Pachmarhi

10. What are flora?

The plants typically belonging to a particular area are called flora.



11. What are fauna?

The animals typically belonging to a particular area are called fauna.

12. Give examples of flora of the Pachmarhi Biosphere Reserve.

Sal, teak, mango, jamun, silver ferns and arjun are the examples of flora.

13. Name some examples of fauna in Pachmarhi Biosphere Reserve.

Blue-bull, barking deer, cheetah, leopard, wild dog and wolf are the examples of fauna.

14. Name any two endangered species protected in our wildlife sanctuaries.

Black buck and golden cat.

15. Give examples of two endemic flora.

Sal and wild mango.

16. Name two endemic fauna.

Bison and flying squirrel are endemic fauna.

17. What do you mean by species?

A group of population which is capable of interbreeding is called species.

18. Which is the first reserve Forest of India?

Satpura National Park.

19. What is a Zoo?

The place where animals receive protection is called a zoo.

20. What are rock shelters?

Rock shelters are the evidence of prehistoric human life in the jungles of Satpura.

21. What is the information provided by rock shelters?

Rock shelters give us an idea of the life of primitive people.

22. How many rock shelters are found in Pachmarhi Biosphere Reserve?

Total 55 rock shelters are identified.

23. Name the plant found in the Satpura forests.

The finest Indian teak is found in the forest.

24. What is Satpura Tiger Reserve?

It is a Project Tiger which was launched by government to protect the tigers in the country.

25. When was Project Tiger launched?

1st April 1973.



26. What do you mean by endangered animals?

The animals whose numbers are diminishing to a level that they might face extinction are known as the endangered animals.

27. Write the name of an extinct animal.

Dinosaurs.

28. What is a Red Data Book?

A source book which keeps a record of all the endangered animals and plants is called a Red Data Book.

29. Does the same Red Data book keep the record of all plants and animals?

There are different Red Data Books for plants, animals and other species.

30. What are migratory birds?

The birds who cover long distances to reach another land are known as migratory birds.

31. Name some migratory birds.

Surkhab, Bar-headed Goose, Arctic tern, Siberian cranes, etc.

32. How many times a paper can be recycled?

5 to 7 times

33. Name the term related to the plantation of new plants.

Reforestation

34. What is the revised Forest Policy of 1952 called?

Forest Act 1980.

35. What happens when cutting of trees continues?

If cutting of trees remain continue then rainfall and fertility of soil will decrease.

36. What is the cause of droughts?

The global warming disturbs water cycle and reduce rainfall. This cause droughts.

37. What do you mean by desertification?

The process of conversion fertile land into deserts is called desertification.

38. Why forests called hot spots biodiversity?

Forests are the habitats of a large number of species of plants and animals. So they are called hot spots.

39. What are acts and rules about forest?

The rules and regulation about the protection of forests and wildlife are called acts and rules.



II. Very Short Answer Type Questions

1. Mention any one action that you have undertaken to conserve trees. (NCERT Exemplar)

I have planted some trees and I look after them carefully so that they are well protected.

2. Mention the aim of Forest Conservation Act. (NCERT Exemplar)

The aim of Forest Conservation Act is conservation of natural forests and meeting the basic needs of the people living in or near the forests.

3. Name the first reserve forest of India. (NCERT Exemplar)

Satpura National park is the first reserve forest of India.

4. What is biodiversity?

Biodiversity refers to the variety of organisms existing on the earth, their inter-relationships and relationships with the environment.

5. Name the major threat to survival of great variety of plants and animals on earth.

Deforestation.

6. What are the factors that increase deforestation?

Agricultural expansion and wood harvest for domestic fuel.

7. Less rainfall causes what?

Drought

8. What is infiltration rate?

The rate of movement of water from the soil surface into the ground is called infiltration rate.

9. In which part of the earth do living organisms exist as it supports life?

Biosphere.

10. Name the biosphere reserve where the plants and animals are found similar to the upper Himalayan peaks.

Pachmarhi Biosphere Reserve.

11. Name the areas reserved for wildlife and can be used freely for habitats and nature resources.

National Park.

12. Name any two wildlife sanctuaries in Pachmarhi Biosphere Reserve.

Bori, Pachmarhi.



13. Name the endemic flora of the Pachmarhi Biosphere Reserve.

Sal and Wild mango.

14. Name the group of population that is capable of Inter-breeding.

Species.

III. Very Short Answer Type Questions

1. What is the unique feature of the biodiversity found in pacharhi Biosphere Reserve?

The biodiversity found in pachmarhi Biosphere Reserve is similar to that found in upper Himalayan peaks and lower Western Ghats.

2. What is biosphere?

The part of earth in which living organisms exist.

3. Name any two biosphere reserves of India.

Caziranga biosphere reserve (Assam) and Kanha biosphere reserve.

I. Short Answer Type Questions.

1. Why are wildlife sanctuaries important for conservation of plants and animals?

Wildlife sanctuaries are protected areas where human activities like plantation, cultivation, grazing, felling of trees, hunting and poaching are prohibited completely.

2. Why are endemic organisms in greater danger of becoming extinct?

Endemic organisms are confined to a limited geographical area. They cannot adapt or live outside their natural habitat. Any disturbance to their habitat will adversely affect them.

3. Does soil erosion affect the fertility of soil? How?

Yes, Soil erosion removes the fertile top layer of the soil thereby, exposing the hard rocky lower layers which are less fertile.

4. Is deforestation associated with global warming? Explain.

Yes, plants absorb carbon dioxide from the atmosphere for photosynthesis. Dioxide in the atmosphere. Carbon dioxide in the atmosphere traps heat rays reflected by the earth which results in global warming.



5. How does deforestation lead to frequent floods and droughts?

Deforestation results in decreased water holding capacity of soil. This reduces the infiltration of water into the ground which causes floods. On the other hand, deforestation leads to higher level of carbon dioxide in the atmosphere which causes global warming. Scarcity of trees disturbs the water cycle and may reduce rainfall leading to droughts.

II. Short Answer Type Questions.

1. What do you mean by deforestation?

The cutting of trees and forests day by day and using that land for other purposes like urbanisation and the industrialisation is called deforestation.

2. What are the causes of deforestation?

Causes of deforestation:

- (i) Procuring land for cultivation
- (ii) Building of houses and factories.
- (iii) Making furniture or using wood as fuel.

3. How does deforestation cause to decrease rainfall?

Deforestation would mean that carbon dioxide increases in the atmosphere. It causes global warming as carbon dioxide traps the heat rays reflected by earth. The increase in temperature on earth disturbs the water cycle and reduces rainfall. This could cause droughts.

4. What do you mean by desertification?

Deforestation changes the physical properties of soil. It causes soil erosion. Removal of top layer of the soil exposes the lower, hard and rocky layers. This soil has less humus and is less fertile. Gradually the fertile land gets converted into deserts. It is called desertification.

5. How does deforestation lead to a decrease in the water holding capacity of the soil?

Deforestation also leads to a decrease in the water holding capacity of the soil. The movement of water from the soil surface into the ground is reduced. So there are floods. The other properties of the soil like nutrient, content texture also change because of deforestation.

6. What is biodiversity?

Biosphere is that part of the earth in which living organisms exist or which support life. Biological diversity or biodiversity, refers to the variety of organisms existing on the earth, their interrelationships and their relationship with the environment.

7. What do you mean by Biosphere Reserves?

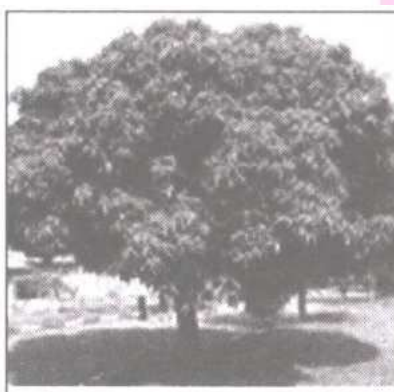
The large areas of protected land for conservation of wildlife, plant and animal resources and traditional life of the tribals living in that areas are called biosphere reserves. Pachmarhi biosphere Reserve is an examples of such reserves.

8. How can we protect wildlife?

Wildlife plays an important role in maintaining balance in the environment. Wildlife can be protected by making special and conserved areas. These areas are restricted for human activities which are against wildlife. Poaching, hunting and cutting of trees are strictly banned. Such areas are called Sanctuaries and National Parks which conserve flora and fauna of earth.

9. What do you mean by endemic species?

The species of plants and animals, which are found exclusively in a particular area are called endemic species. They are not naturally found anywhere else. A particular type of animal or plant may be endemic to a zone, a state or a country. Sal and wild mango are two examples of the endemic flora of the Pachmarhi Biosphere Reserve. Indian giant squirrel and Bison are endemic fauna of this area.



(a) Wild mango tree



(b) Giant squirrel

10. What do you mean by species? Explain some detailed features.

Species are group of population which are capable of interbreeding. This means that the members of a species can reproduce fertile offsprings only with the members of their own species and not with members of other species. Members of a species have common characteristics.



11. What are wildlife sanctuaries?

Wildlife sanctuaries are those places which provide protection and suitable living conditions to wild animals. In sanctuaries, killing (Poaching) or capturing of animals is strictly prohibited.

12. What do you mean by a National Park?

The protected vast areas which conserve animals, plants, landscapes and even the historical objects, are called National Parks. They are very large areas which can protect even whole sets of ecosystems in them. Satpura National Park, Kaziranga National Park are some National Parks in India.

13. Which types of animals are much more in danger of becoming extinct?

The small animals are much more in danger of becoming extinct than the bigger animals. We kill snakes, frogs, lizards, bats and owls ruthlessly without realising their importance in the ecosystem. They might be small in size but their role in the ecosystem cannot be ignored. They form a part of food chains and food webs.

14. Explain the term ecosystem.

The group of all the plants, animals and microorganisms in an area along with non-living components such as climate, soil, river, deltas is called an ecosystem.

15. What do you mean by migration? Write the causes of migration of birds.

Some species of birds fly to far away areas every year in a particular season. This phenomenon is called migration. Reasons of Migration;

- (i) In search of food
- (ii) Due to climatic changes
- (iii) For laying eggs
- (iv) To enjoy long summer days.

16. How does recycling and saving of papers related to deforestation?

Trees are used in making papers. About 17 full grown trees are used to make one tonne of paper. So wastage of paper is also a cause of deforestation. Therefore, we should recycle and save the papers. If we save papers, we can save many trees in a year. In this way recycling and saving of papers is directly related to avoid the deforestation.

17. What is the answer for deforestation?

Reforestation is the answer for deforestation. The reforestation means restocking of the destroyed forests by planting new trees. We should plant as many trees as we cut. If the deforested area is left undisturbed, it re-establishes itself. If we have to retain our green wealth for future generations. Plantation of more trees is the only option.



18. What do you mean by Forest Conservation Act?

In India, we have the Forest Conservation Act. This act is aimed at preservation and conservation of natural forests and meeting the basic needs of the people living in or near the forests.

III. Short Answer Type Questions- I

1. Why is it important to conserve forests? (NCERT Exemplar)

Forest conservation maintains the balance in nature, it acts as carbon activators absorbing CO₂ and keeps global warming away.

2. Can a forest regenerate naturally in a short period of time? (NCERT Exemplar)

Reforestation can take place naturally by leaving the deforested area undisturbed for a long period of time. During this period, the area re-establishes itself without the interference of human beings.

3. How are even small animals important in an ecosystem? (NCERT Exemplar)

Small animals might be small in size but their role in the ecosystem cannot be ignored. They are important in an ecosystem as they form part of food chains and food webs.

4. What is the unique feature of the biodiversity found in Pachmarhi Biosphere Reserve?

(NCERT Exemplar)

The biodiversity found in Pachmarhi Biosphere Reserve is similar to that of the upper Himalayan peaks and to that belonging to the lower western ghats.

5. What is ecosystem?

An ecosystem constitutes the plants, animals and micro-organisms in an area along with non-living components such as climate, soil, river deltas etc.

6. Write any two consequences of deforestation.

Consequences of deforestation :

(i) Deforestation increases the temperature and pollution level on the earth. It increases the level of carbon dioxide in the atmosphere.

(ii) It also disturbs the balance in nature and increases chances of natural calamities such as floods and droughts.



7. What do you understand by biological diversity?

Biological diversity, refers to the variety of organism existing on the earth, their inter relationships and their relationship with the environment.

8. What do you understand by Endemic species. Name two endemic flora and fauna.

Endemic species are those species of plants and animals that are found exclusively in a particular area. A particular type of animal or plant may be endemic to a zone, a state or a country e.g., Sal and wild mango are endemic flora, Bison and the Indian giant squirrel are endemic fauna of the Pachmarhi Biosphere Reserve.

9. Write briefly about Rock paintings.

Rock paintings are found inside the Satpura National Park. These are evidences of prehistoric human life in these jungles. Figures of animals and men hunting, dancing and playing musical instruments are depicted in these paintings.

10. Which animals are known as endangered animals?

Animals whose numbers are diminishing to level that they might face extinction are known as the endangered animals e.g., Dinosaurs became extinct a long time ago.

11. Why are small animals much more in danger of becoming extinct than the bigger animals?

At times, we kill snakes, frogs, lizards, bats and owls ruthlessly without realising their importance in the ecosystem. By killing them we are harming ourselves. They might be small in size but they play a significant role in the formation of food chains and food webs.

III. Short Answer Type Questions- II

1. Why are endemic organisms in greater danger of becoming extinct? (NCERT Exemplar)

Endemic organisms are confined to a limited geographical area. They cannot adapt or live outside their natural habitat; any disturbance to their habitat will adversely affect them. Thus, they are in greater danger of becoming extinct.

2. Why are wildlife sanctuaries important for conservation of plants and animals?

(NCERT Exemplar)

In a wildlife sanctuary, killing and capturing of wild animals are strictly prohibited. It does not allow any human activity which disturbs the wild animals in their habitat. So, in these



areas, animals live in natural environment, protected from people. This is the reason that sanctuaries are important.

3. A new species X is introduced in a forest. How is it likely to affect the local species of that area? (NCERT Exemplar)

The new species is likely to affect the local species as it poses threats in following manner :

- (i) Preying on native species
- (ii) Outcompeting for food or other resources.
- (iii) Causing or carrying disease.
- (iv) Preventing native species from reproducing.
- (v) Changing food webs.

4. Write in brief about wildlife sanctuary.

- (i) Wildlife sanctuaries provide protection and suitable living conditions to wild animals.
- (ii) Sanctuaries are places where killing (poaching) or capturing of animals is strictly prohibited.
- (iii) Indian sanctuaries have unique landscapes-forests, mountains and bush lands.
- (iv) Some of the threatened wild animals such as black buck, white eyed buck, elephant, gold cat and pink headed duck are protected and preserved in our wildlife sanctuaries.

5. What are the advantages of Aforestation?

Aforestation is restocking of the destroyed forests by planting new trees.

- (i) It retains our green wealth for future generations.
- (ii) It also aims at preservation and conservation of natural forests and meeting the basic needs of the people living in or near the forests.

I. Long Answer Type Questions

1. Is deforestation associated with global warming? Explain. (NCERT Exemplar)

Trees use carbon dioxide gas from the atmosphere for the process of food making called 'Photosynthesis'. When a lot of trees are cut down during deforestation, then lesser number of trees will be left. The lesser number of trees will use up less carbon dioxide due to which the amount of carbon dioxide in the atmosphere will increase. In this way, deforestation increases the level of carbon dioxide in the atmosphere. Carbon dioxide gas traps the sun's heat rays



reflected by the earth (causing greenhouse effect). Trapping of heat rays by carbon dioxide increases the temperature of earth's atmosphere. This will lead to global warming. The gradual increase in the overall temperature of earth's atmosphere due to greenhouse effect caused by the increased level of carbon dioxide in the atmosphere is called global warming.

2. What do you mean by protected area? Explain it with examples.

Protected area is the area where our flora and fauna and their habitats are protected. They are called sanctuaries, national parks and biosphere reserves. Plantation, cultivation, grazing, felling trees hunting and poaching are prohibited there.

Sanctuary : Areas where animals are protected from any disturbance to them and their habitat.

National parks : Areas reserved for wildlife where they can freely use the habitats and natural resources.

Biosphere Reserves : Large areas of protected land for conservation of wild-life, plant and animal resources and traditional life of the tribals living in the area.

3. List the various causes for loss of biodiversity (No details required).

Various causes of loss of biodiversity :

- (i) Increase in population.
- (ii) Deforestation.
- (iii) Overgrazing
- (iv) Pollution of air, water and soil
- (v) Habitat destruction
- (vi) Hunting and killing of animals.

4. How does deforestation lead to desertification?

Deforestation is a major cause which leads to the change in soil properties. Physical properties of the soil get affected by plantation and vegetation. Trees also prevent soil erosion; fewer trees result in more soil erosion. Removal of top fertile layer of soil exposes the lower, hard and rocky layers. This soil has less humus and is less fertile. So, it is not good for plantation. Gradually the fertile land gets converted into deserts, it is called desertification. This way deforestation leads to desertification.

II. Long Answer Type Questions

1. What do you mean by deforestation? Explain the

(i) **Man-made cause of deforestation**

(ii) **Natural causes of deforestation.**

The cutting of trees or forest lands being cleared for other purposes like urbanisation and industrialisation is called deforestation.

I. Man-made cause of deforestation:

- (i) Forest land is used for urbanisation
- (ii) As the population grows, the industries also grow
- (iii) Wood from forests is used for making furniture, doors and windows.
- (iv) Wood of forest is also used as fuel

II. Natural causes of deforestation:

- (i) Forest fires
- (ii) Severe droughts

2. Explain the main consequences of deforestation.

There are following consequences of deforestation.

- (i) Deforestation destroys the habitats of many organisms.
- (ii) It causes various natural calamities like floods and droughts etc.
- (iii) It reduces rainfall.
- (iv) It causes global warming.
- (v) It increases the amount of carbon dioxide and pollutes environment.
- (vi) Oxygen and water level are decreased.
- (vii) It causes soil erosion and desertification.
- (viii) It creates imbalance between oxygen and carbon dioxide gases.

3. Make a list of threatened animals. Write their causes of becoming endangered.

(i) **Blue Whale** : Its oil and the blubber are used for making medicines, so it is endangered.

(ii) **African Elephants**: They are endangered because they are hunted for their ivory.

(iii) **Sea Turtles** : The turtles are used to make many things. Their shells are used to make jewellery, combs and sun glasses.

(iv) **Bengal Tiger** : Tiger is killed for its skin and bones.



(v) **Black Rhino** : It is mainly killed for its horn, which is used for making handles of daggers. The main cause of threat is the destruction of its habitats.

4. How does deforestation lead desertification?

Deforestation is a major cause which leads to the change in soil properties. Physical properties of the soil get affected by plantation and vegetation. Trees also prevent soil erosion. Fewer trees result in more soil erosion. Removal of top fertile layer of soil exposes the lower, hard and rocky layers. This soil has less humus and is less fertile. So it is not good for plantation. Gradually the fertile land gets converted into deserts. It is called desertification. In this way deforestation leads desertification.

III. Long Answer Type Questions

1. Why should we save paper?

We should save paper to:

- Prevent deforestation as deforestation leads to global warming. It disturbs the natural water cycle.
- Save energy and water needed for manufacturing the paper.
- Reduce pollution as chemicals used to manufacture the paper also cause pollution.

I. High Order Thinking Skills (HOTS)

1. A group of cats are found in a forest that interbreed freely. What is the term used for them?

A species is a group of same kind of organisms which can interbreed to produce fertile offspring.

2. A name is given to those species that have died out completely, what is it?

The name given to those species that have died out completely is extinct species.

3. A giant animal that is known to be existing long back in the Jurassic period became extinct. Can you name it?

Dinosaurs.



4. Sometimes animals enter into human habitation killing people and causing damage to materials. Why do the animals behave like this?

As human populations expand into wild animals' habitats, their territory is displaced. Reduction in the availability of food sources leads the animal to seek alternate sources, thus, drawing them towards human habitation. Habitat degradation, forest fragmentation and change in agricultural pattern are the major reasons for wild animals entering human habitation.

5. How is recycling and saving of papers related to deforestation?

Trees are used in making papers. About 17 fully grown trees are used to make one tonne of paper. So wastage of paper is also a cause of deforestation. Therefore, we should recycle and save the papers. If we save papers, we can save many trees in a year. In this way, recycling and saving of papers is directly related to avoid the deforestation.

6. Deforestation reduces rainfall as well as leads to floods. Justify this contradictory situation.

Deforestation reduces rainfall because less ground water is put into the atmosphere through transpiration as water vapour. **Deforestation leads to floods** because :

- (i) Percolation of rainwater into the soil is reduced.
- (ii) Soil eroded by rainwater deposits on the river bed and decreases its water carrying capacity.

7. What is poaching? How does poaching affect environment and humans?

When an animal is killed illegally, it is called poaching. It usually occurs when an animal possesses something that is considered valuable.

Effect of Poaching on environment : The whole ecosystem is affected due to harm caused on animal population. Everything from the animals to the plants and even the people in a specific place is negatively affected. We need various species of flora and fauna in our environmental ecosystem so that it is balanced and healthy. Our own survival depends on it.

Effect of Poaching on humans : Two serious problems are faced by humans, first is spread of food-borne illnesses e.g., Ebola and anthrax and second major affect is depletion of natural resources.

Next Generation School

II. High Order Thinking Skills (HOTS)

1. Why do animals become extinct?

- Several species become extinct due to natural causes like change in climate of a particular region.
- The plants or animals on which the species lived could have died out because of the change in the weather.
- Human activities such as hunting or the destruction of the places where animals live

2. Explain methods of conservation of biodiversity.

Some of the methods for conservation of biodiversity are .

- Reforestation : This is the planting of trees on large scale.
- Protection of forests from forest fire.
- Protection of trees and plants from pests and insects.
- Minimum use of wood/timber as a firewood alternatives of these should be used .
- Excessive grazing in a near forests should be stopped. The government should make strict rules and laws for protection of forests. We all have a role to play in conservation of forests.
- To protect the flora and fauna, protected areas like biosphere reserves , national parks, sanctuaries have been earmarked.
- conserve paper and avoid usage of materials made from skins and furs of animals.
- Strict rules and regulations have been made by the government banning the hunting of endangered species.

3. Explain consequences of deforestation.

Large scale deforestation has resulted in many problems for mankind.

- Increase in carbon dioxide, temperature and pollution levels on the earth, resulting in global warming.
- Decrease in the oxygen level.
- Cutting down of trees on large scale has resulted in depletion of water vapour in the atmosphere which has in turn affected cloud formation. Thus, resulting in less rainfall. This can even cause droughts.
- The decrease in rainfall is leading to desertification. As trees and plants die. Fewer trees result in more soil erosion. The top fertile soil is carried away, exposing the lower ,



hard and rocky layers which are less fertile. Over a period of time. Fertile land gets converted into deserts, this called desertification.

- Deforestation decreases the infiltration rate of water into the ground.
- Animation becomes homeless.

Value Based Questions

1. During an educational trip to a renowned forest, Amit saw a highway being constructed which passes through the middle of the forest. He was unhappy seeing that and contacted the wildlife department to stop the work.

(i) If the highway is constructed what would be the effect?

(ii) Forests are useful to mankind. Comment

(iii) Give the values of Amit shown here.

(i) The continuity of the forest is distributed animals get confined to smaller area. This leads to fragmentation of species and disturbance to the ecological balance. The noise of the vehicles will disrupt the silence of the forest, forcing the animals to move out into human habitations.

(ii) Forests are useful to mankind due to following reasons :

(a) Provide us fresh air and a wide variety of flora and fauna.

(b) Sources of various products such as paper, fibre, medicines etc.

(c) Keep the environment healthy and beautiful.

(iii) Amit has love for nature and environment. He is intelligent, calm and focussed.

2. Number of vultures is decreasing remarkably now-a-days which is a matter of concern.

Vultures belong to which category of animals? What is their role in nature to maintain ecological balance?

Number of vultures is decreasing remarkably now-a-days mainly because of deforestation which disturbs the wildlife. Vultures play an important role in the food chain. They feed on dead organisms and act to clean the environment. Hence, they act as decomposers in the ecological balance.

3. Radha is student of class X of a Govt. School and she is a member of 'Eco club' of her school. What suggestions would you like to give to Radha to improve the environment in her school?

Now-a-days in schools environment education is also provided to students. They form 'Eco clubs' to create awareness about the environment. As Radha is a member of the 'Eco club', she will be suggested to make beautiful dustbin (as use me) to collect garbage, organise small discussions and entertainment programmes regarding 'Save environment'.

Skill Based Questions

1. I identify the following map and name two sanctuaries and a national park.



(i) The map shows the Pachmarhi Biosphere Reserve.

Two sanctuaries are;

- a. Bori
- b. Pachmarhi

(ii) The National Park is Satpura National Park.

2. Observe the following pictures and name the animals. Write the names of the places where they are preserved.



(I)



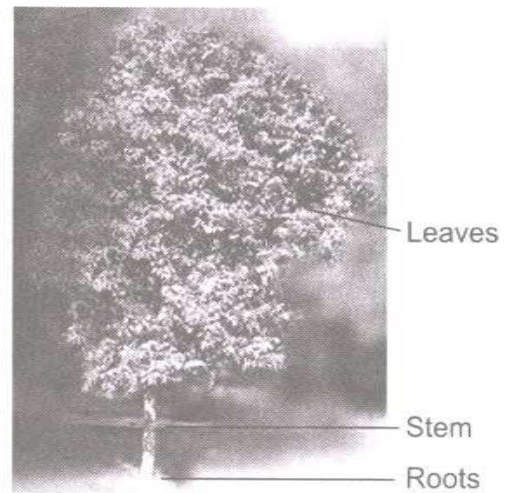
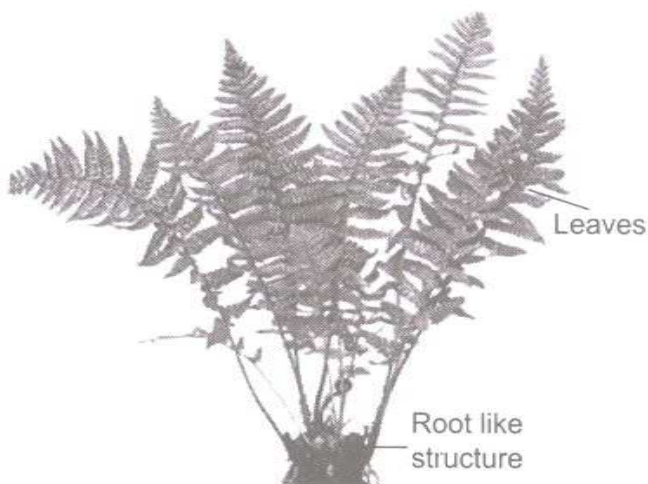
(II)



(III)

Barasingha, Wild Buffalo and Tiger. These animals are preserved in the Satpura National Park.

3. Draw a diagram of Fern and the Jamun Plants.



4. Draw a diagram of

(i) Wild dog

(ii) Cheetal

(iii) Wolf



(i)



(ii)



(iii)