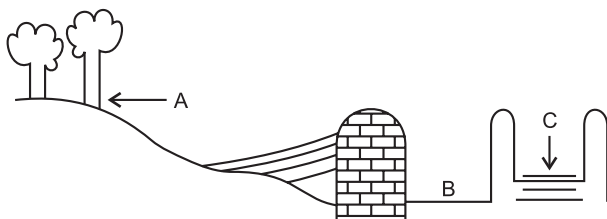


# Management of Natural Resources

## Objective Section \_\_\_\_\_ (1 mark each)

- Q. 1. A diagram of traditional water harvesting system is given below:  
The statement which defines the system and its parts is [CBSE OD, Set 1, 2020]



- (a) This is an ideal setting of the Khadin system and A = Catchment area; B = Saline area & C = Shallow dugwell  
(b) This is an ideal setting of the Shallow dugwell system and A = Catchment area; B = Saline area and C = Khadin  
(c) This is an ideal setting of Catchment area and A = Khadin, B = Saline area and C = Shallow dugwell  
(d) This is showing Saline area and A = Catchment area; B = Khadin and C = Shallow dugwell
- Ans. (a) This is an ideal setting of the Khadin system and A = Catchment area, B = Saline area and C = Shallow dugwell.
- Q. 2. The major ill effect of monoculture practice in forests is on the [CBSE OD, Set 1, 2020]

- (a) biodiversity which faces large destruction  
(b) local people whose basic needs can no longer be met from such forests  
(c) industries  
(d) forest department

Ans. (a) biodiversity which faces large destruction.

- Q. 3. Which one of the following is responsible for the sustenance of underground water? [CBSE Delhi, Set 1, 2020]

- (a) Loss of vegetation cover.  
(b) Diversion for high water demanding crops.  
(c) Pollution from urban wastes.  
(d) Afforestation.

Ans. (d) Afforestation

- Q. 4. Incomplete combustion of coal and petroleum:

- (A) increases air pollution  
(B) increases efficiency of machines.  
(C) reduces global warming.  
(D) produce poisonous gases.

The correct option is:

- (a) (A) and (B)                      (b) (A) and (D)  
(c) (B) and (C)                      (d) (C) and (D)

Ans. (b) (A) and (D)

## Very Short Answer Type Questions \_\_\_\_\_ (1 mark each)

- Q. 1. Name two industries based on forest produce. [CBSE OD, Set 1, 2019]

Ans. Timber industries and paper manufacturing industries are based on forest produce.

- Q. 2. Write two advantages associated with water harvesting at the community level. [CBSE OD, Set 2, 2019]

- Ans. (i) Exploitation of water resources will be reduced.  
(ii) It helps to recharge natural wells and the ground water level.

- Q. 3. Although coal and petroleum are produced by the degradation of biomass, yet we need to conserve these resources. Why? [CBSE OD, Set 3, 2019]

**Ans.** We need to conserve coal and petroleum because they are formed in millions of years and are non-renewable also and

their rate of consumption is very high. So these are limited and cannot last for longer time.

## Short Answer Type Questions-I \_\_\_\_\_ (2 marks each)

**Q. 1. State two advantages of conserving (i) forests, and (ii) wildlife. [CBSE OD, Term 2, Set 1, 2017]**

**Ans. (i) Advantages of conserving forest:**  
(a) It supports life, purifies air.  
(b) Holds the soils and thus prevents the soil erosion.  
**(ii) Advantage of conserving wildlife:**  
(a) Balances ecology and biodiversity.  
(b) Provides important things to sustain life.

**Q. 2. Explain two main advantages associated with water harvesting at the community level. [CBSE OD, Term 2, Set 1, 2017]**

**Ans.** Two advantages associated with water harvesting at community level are:  
(i) Water harvesting is an ideal solution to water problems in areas having inadequate water resources.  
(ii) It improves the quality of water and helps in raising the ground water level.

**Q. 3. Why is an equitable distribution of resources essential in a society? List two forces which are against such distribution. [CBSE OD, Term 2, Set 2, 2017]**

**Ans.** Equitable distribution of resources is when every individual gets an equal right to access all the available resources and is benefited directly or indirectly. It also avoids the division of society to an extent.  
**The main forces which work against equitable distribution:**  
(i) Lack of natural resources.  
(ii) Excessive consumption by the rich.  
(iii) Profit motive of people exploiting resources.  
(iv) Corruption. **(Any two)**

**Q. 4. Why must we conserve our forests? List two factors responsible for causing deforestation. [CBSE OD, Term 2, Set 2, 2017]**

**Ans.** We must conserve forests because we derive countless benefits such as food, timber etc. from them and they are important component of our ecosystem.

**Factors that contribute to deforestation are as follows:**

- (i) Large scale development projects have contributed to the loss of forests.
- (ii) Forests are cleared on a large scale to meet the growing needs of industrialisation, especially fuel wood and for other forest products and minerals.
- (iii) Mining has also contributed to deforestation.
- (iv) With the increase in population and growing demand for commercial crops and the need for more and more land for agriculture, has lead to deforestation.
- (v) Growing urbanisation, trees are cut to establish cities, to lay down infrastructure.

**Q. 5. You being an environmentalist are interested in contributing towards the conservation of natural resources. List four activities that you can do on your own. [CBSE OD, Term 2, Set 3, 2017]**

**Ans.** We can bring following activities in practice to conserve the natural resources:  
(i) We can reuse and recycle the paper products, so that cutting of trees could be reduced.  
(ii) We can reduce the consumption of water by avoiding its wastage in our day to day activities.  
(iii) We can also adopt water harvesting like rain water harvesting.  
(iv) We can reduce the consumption of fossil fuels by using public transport, carpool and switching off vehicles at signals.

**Q. 6. Why are coal and petroleum categorised as natural resources? Give a reason as to why they should be used judiciously. [CBSE OD, Term 2, Set 3, 2017]**



**Ans.** Natural resources are those living and non-living sources available in our environment which are exploited to meet the human requirements. Since coal and petroleum are actually the fossils of the dead plants and animals respectively, hence considered as natural resources.

Both coal and petroleum are used as important sources of energy since long time. Both these fossil fuels were formed millions of years ago from the degradation of biomass. Since these fossil fuels are non-renewable in nature and they have limited reserves, therefore they must be used judiciously, otherwise they will get exhausted very soon.

**Q. 7. What is sustainable management? Why is reuse considered better in comparison to recycle?**

[CBSE Delhi, Term 2, Set 1, 2017]

**Ans.** Sustainable management is a resource management technique which aims to conserve the resource, use them efficiently and avoid their misuse for individual purpose such that they are conserved for the future.

**Reuse is better than recycle because of following reasons:**

- (i) Recycling needs some processes to use the same material again.
- (ii) Reuse saves energy by using same material again without any changes.
- (iii) Reuse prevents environmental pollution by not creating any waste.
- (iv) Reuse saves cost as material is used again without any process.

**Q. 8. Management of forest and wildlife resources is a very challenging task. Why? Give any two reasons.**

[CBSE Delhi, Term 2, Set 1, 2017]

**Ans.** Management of the forest and wildlife resources is considered as a challenging task because:

- (i) There are many stakeholders of forest. They are those people who are directly or indirectly involved in forest. Management of forest and wildlife has to take into account the interests of all these stakeholders which becomes a challenging task.

- (ii) Industries would consider the forest as merely a source of raw material for its factories and huge interest groups lobby the government for access to these raw materials at artificially low rates which further poses a challenge to manage the forest and wildlife resources.

**Q. 9. Explain how would the involvement of local people be useful for successful management of forests.**

[CBSE Delhi, Term 2, Set 2, 2017]

**Ans.** The involvement of local people will be useful for the successful management of forests in the following ways:

- (i) They should be aware of the fact that decrease in forest cover would disturb the ecological balance. If they show their objection against any such illegal activity that would destroy the forests, it can lead to a massive effect that will help in management of forests more effectively.
- (ii) Phenomena's like forest fires must be reported immediately so that necessary action can be taken soon and more area can be protected.

**Q. 10. How do advantages of exploiting natural resources with short term gains in mind differs from the advantages of managing our resources with a long term perspective?**

[CBSE Delhi, Term 2, Set 3, 2017]

**Ans.** Exploitation of natural resources with short-term gains aims at providing all the benefits to the current generation for their growth and development without any consideration for the future. To obtain these gains, a large number of exhaustible resources are being used extensively which has detrimental effects on our environment. In case of long term perspective, the resources are utilised in a more judicious manner so that they are also conserved for future generations. It ensures uniform distribution among the people. Also, the resources are utilised in a more eco-friendly manner which is advantageous for environment.

**Q. 11. What is meant by wildlife? How is it important for us?**

[CBSE Delhi, Term 2, Set 3, 2017]



**Ans.** Wildlife refers to all the naturally occurring plants, animals, birds and other life forms which are found in the forests and are not domesticated.

**Importance of wildlife:**

- (i) It is essential to maintain the ecological balance of the nature.
- (ii) It provides a great biological diversity in an area.
- (iii) It serves as a source of various valuable products, such as drugs, honey lac, decorative leather, etc.

**Q. 12. What was "Chipko Andolan"? How did this Andolan ultimately benefit the local people and the environment?**

[CBSE OD, Term 2, Set 1, 2016]

**Ans.** Chipko movement means "hug the tree", it is one of the movements in India to conserve biodiversity. It was started by Sunderlal Bahuguna. This movement originated in Reni Village of Garhwal. To stop the contractor from cutting down of trees, women of the village clasped to the trunk of the tree.

**Its benefits were:**

- (i) Existing forest cover was protected, reducing landslides and soil erosion. It actually protected environment and maintained ecological balance.
- (ii) Forest wealth could be utilized for food, fodder, fuel, fertilizers and fibres.

**Q. 13. "Burning of fossil fuels results in global warming." Give reasons to justify this statement.**

[CBSE OD, Term 2, Set 1, 2016]

**Ans.** Burning of fossil fuels produces green house gases like CO, CO<sub>2</sub> etc. High concentration of these gases in the atmosphere causes insulation, creates green house effect and causes global warming.

**Q. 14. Forests are "biodiversity hot spots." Justify this statement.**

[CBSE OD, Term 2, Set 2, 2016]

**Ans.** The measure of bio-diversity of an area is the number of species found there. Since, in a forest we can find a range of different life forms of plants and animals, thus the forests are the biodiversity hot spots.

**Q. 15. What is water harvesting? How can this technique help in the conservation of water?** [CBSE OD, Term 2, Set 2, 2016]

**Ans.** Water harvesting is a technique of capturing rain water when it falls and taking measures to keep the water clean. This water is stored underground that remains unpolluted, it recharges wells and provides moisture for vegetation over a wide area.

**Q. 16. List four stakeholders which may be helpful in the conservation of forests.**

[CBSE OD, Term 2, Set 3, 2016]

**Ans. The four stakeholders are:**

- (i) Local people, living in villages near the forest.
- (ii) Industrialists who use forest produce as raw materials.
- (iii) Wild life and nature enthusiasts.
- (iv) Forest department of the government.

**Q. 17. The construction of large dams leads to social and environmental problems. List two problems of each category.**

[CBSE OD, Term 2, Set 3, 2016]

**Ans. Social problems are:**

- (i) Many people are rendered homeless.
- (ii) Displacement of large number of tribals without due compensation.
- (iii) Migration into the cities for settlements.

**Environmental problems are:**

- (i) Deforestation and loss of biodiversity.
- (ii) Soil erosion and ecological imbalance.

**Q. 18. List four advantages of properly managed watershed management.**

[CBSE Delhi, Term 2, Set 1, 2016]

**Ans.** Advantage of watershed management are:

- (i) Mitigates drought and floods.
- (ii) Increases the life of the dams and reservoirs downstreams.
- (iii) Increases the biomass production and thereby the income of the watershed community.
- (iv) Helps in maintaining ecological balance by scientific conservation of soil and water.

**Q. 19. Explain giving example where active involvement of local people leads to efficient management of forest.**

[CBSE Delhi, Term 2, Set 1, 2016]

**Ans.** Chipko Andolan is one of the example where active involvement of local people leads to management of forest. In this movement villagers especially women wrapped their arms around the trees to prevent the workers from destroying the forest.

**Q. 20.** "Reuse is better than recycling of materials." Give reason to justify this statement.

[CBSE Delhi, Term 2, Set 3, 2016]

**Ans.** Reuse refers to the use of the same material again and again.

- (i) In reuse of materials no energy is consumed and the resources are saved.
- (ii) In recycling certain used materials are converted into other useful material.
- (iii) In recycling of materials, energy is consumed and the resources may be wasted.

Thus, it can be said that reuse is better than recycling.

**Q. 21.** List two main causes of the pollution of water of the river Ganga. State how pollution and contamination of river water prove harmful for the health of the people of neighbouring areas.

[CBSE OD, Term 2, Set 1, 2015]

**Ans.** (i) **Main cause of pollution of water of the river Ganga:**

- (a) Disposal of industrial effluents
  - (b) Human activities like bathing, washing etc.
  - (c) Disposal of unreacted sewage.
- (ii) **Harmful effects on health:**
- (a) Spreading of water borne diseases
  - (b) Consumption of contaminated fishes.

**Q. 22.** What is biodiversity? What will happen if biodiversity of an area is not preserved? Mention one effect of it.

[CBSE OD, Term 2, Set 1, 2015]

**Ans.** Biodiversity refers to number and range of variety of species of life forms in an area. If the biodiversity of an area is not preserved then loss of diversity may lead to a loss of ecological stability.

**Q. 23.** We often observe domestic waste decomposing in the bylanes of our homes. List

**four ways to make the residents aware that the improper disposal of wastes is harmful to the environment and also for their own health.**

[CBSE OD, Term 2, Set 2, 2015]

**Ans.** Four ways to make people aware that the improper disposal of waste is harmful.

- (i) It allows mosquito to breed and spread diseases.
- (ii) On decomposition, it releases harmful green house gases.
- (iii) It will degrade the soil fertility.
- (iv) Pollutes the water affecting the underground water.

**Q. 24.** List any two advantages associated with water stored in the ground.

[CBSE OD, Set 2, 2015]

**Ans.** The advantage of water stored in the ground are:

- (i) It does not evaporate.
- (ii) It provides moisture to the vegetation over a wide area.

**Q. 25.** Why is sustainable management of natural resources necessary? Out of the two-reuse and recycle - which, in your opinion, is better to practice? Give reason. [CBSE OD, Term 2, Set 3, 2015]

**Ans.** Sustainable management of natural resources is to manage the resources for future generation and current basic need of the population. Reuse is a better practice because it can be done at household level with no expense of energy, no pollution, ecofriendly.

**Q. 26.** Why are forests considered "biodiversity hot spots"? List two ways in which an individual can contribute effectively to the management of forests and wildlife.

[CBSE Delhi, Term 2, Set 1, 2015]

**Ans.** (i) Forests are considered as biodiversity hot spots because large number of life forms are found there.

(ii) **Two ways:**

- (a) Not allowing cutting of trees.
- (b) To make people aware about the importance of forests and wildlife.

**Q. 27. What is meant by “sustainable management”? Why is reuse considered better than recycling?**

[CBSE Delhi, Term 2, Set 1, 2015]

**Ans.** A type of management which encourages utilisation of resources that meet current basic human needs while preserving the resources for the needs of future generation. Reuse is better as it does not consumes energy.

**Q. 28. (a) Why do we need to manage our resources carefully?**

**(b) Why management of natural resources requires a long term perspective?**

[CBSE Delhi, Term 2, Set 2, 2015]

**Ans. (a)** Since the resources are limited and with the increase in population demand for resources is increasing tremendously.

**(b)** Long term prospective is required to meet the needs of the present as well as for the generations to come.

**Q. 29. List four measures that can be taken to conserve forests.**

[CBSE Delhi, Term 2, Set 2, 2015]

**Ans.** Four measures:

- (i) Planting trees at the deforested areas.
- (ii) Ban on the indiscriminate felling of trees.
- (iii) Use of wood for fuel should be avoided.
- (iv) Overgrazing in forests should be discouraged.

**Q. 30. List two advantages associated with water harvesting at the community level.** [CBSE Delhi, Term 2, Set 3, 2015]

**Ans.** Two advantages of water harvesting at the community level are:

- (i) Recharges ground water
- (ii) Mitigates floods and rivers.

**Q. 31. Everyone of us can do something to reduce our personal consumption of various natural resources. List four such activities based on 3-R approach.**

[CBSE Delhi, Term 2, Set 3, 2015]

- Ans.**
- (i) Reduce excessive use of natural resources like water, fossil fuels, etc.
  - (ii) Reuse of some resources instead of wasting them.
  - (iii) Recycle materials like paper to reduce the pressure on existing natural resources.
  - (iv) Changes in life styles, personal attitudes and practices.



## Short Answer Type Questions-II \_\_\_\_\_ (3 marks each)

**Q. 1. (a) State with reason the consequence of decrease in number of carnivores in an ecosystem.**

**(b) In a food chain, state the trophic level at which the concentration of harmful chemicals is maximum. Why is it so?** [CBSE OD, Set 3, 2020]

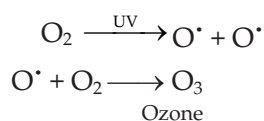
**Ans. (a)** If the population of carnivores decreases in ecosystem, population of herbivores will increase beyond control, they will rapidly consume large amounts of plants and fungi, growing until there is not enough food to sustain them. Autotrophs will disappear from earth due to overgrazing done by herbivores. Both the factors may disturb food chains thus affecting the ecosystem.

**(b)** The use of several pesticides and other chemicals to protect our crops from diseases and pests is frequently used by the humans. These chemicals are either washed down into the soil or into the water bodies. From the soil, these are absorbed by the plants along with water and minerals, and from the water bodies these are taken up by aquatic plants and animals. This is one of the ways in which they enter the food chain. As these chemicals are not degradable, these get accumulated progressively at each trophic level. As human beings occupy the top level in any food chain, the maximum concentration of these chemicals get accumulated in our bodies. This phenomenon

is known as biological magnification. This causes great risk to the health of the humans and leads to lot of diseases and disorders.

**Q. 2. How is ozone layer formed? State its importance to all life forms on earth? Why the amount of ozone in the atmosphere dropped sharply in the 1980s? [CBSE OD, Set 3, 2020]**

**Ans.** Ozone at the higher levels of the atmosphere is a product of Ultraviolet Radiations(UV) radiation acting on oxygen ( $O_2$ ) molecule. The higher energy UV radiations split apart some molecular oxygen ( $O_2$ ) into free oxygen (O) atoms. These atoms then combine with the molecular oxygen to form ozone.



At the higher levels of the atmosphere, ozone performs an essential function. It shields the surface of the earth from ultraviolet (UV) radiation from the Sun. These radiations are highly damaging to organisms, for example, it is known to cause skin cancer in human beings.

The amount of ozone in the atmosphere began to drop sharply in the 1980s. This decrease has been linked to synthetic chemicals like chlorofluorocarbons (CFCs) which are used as refrigerants and in fire extinguishers. Thus, the use of CFCs is the direct cause of the decrease of the ozone layer which leads to ozone depletion and in turn causes harms to humans and leads to an increase in the global earth temperature known as Global Warming.

**Q. 3. What is water harvesting? List two main advantages associated with water harvesting at the community level. Write two causes for the failure of sustained availability of groundwater.**

[CBSE Delhi, Set 1, 2019]

**Ans.** Water harvesting means capturing rain where it falls or capturing the run off in village or town. It can be done by capturing run off from roof tops and local catchments.

**Advantages:**

- (i) Harvesting water allows better utilization of an energy resource or when there is an immediate need.
- (ii) This water is suitable for irrigation and for recharging the ground water level.

Causes for failure of sustained ground water availability are:

- (i) Increase in agricultural activities leads to depletion of ground water.
- (ii) Increase in population and industries are also responsible for the same.

**Q. 4. Why should there be equitable distribution of resources? List three forces that would be working against an equitable distribution of our resources.**

[CBSE Delhi, Set 2, 2019]

**Ans.** There should be equitable distribution of the resources so that all the people irrespective of being rich or poor have access and make use of the resources. Equitable resource distribution also leads to sustainable development.

Three factors that work against equitable distribution of resources are:

- (i) Over exploitation of resources by industrialists for short-term gains.
- (ii) Improper management which has led to access of natural raw material to certain group of people which are either influential.
- (iii) Wastage by the people who have indifferent attitude towards environment, use the resources with short term aim hence leading to depletion of resources.

**Q. 5. List three advantages each of:**

- (i) exploiting resources with short term aims, and
- (ii) using a long term perspective in managing our natural resources.

[CBSE Delhi, Set 3, 2019]

**Ans.** Three advantages of exploiting resources with short term aims:

- (i) Immediate benefit to few people.
- (ii) Progress in science and technology for development in a country.
- (iii) Urbanisation and industrialisation of an area.

**Three advantages of using a long time perspective:**

- (i) Resources will be made available for sustainable development.
- (ii) Provides valuable contribution to the socio-economic – development.
- (iii) Quality of environment will be conserved.

Q. 6. Mention the environmental consequences of the increasing demand for energy. List four steps you would suggest to reduce the consumption of energy.

[CBSE, 2019]

 Topper's Answers

15. ① Since the industrial revolution, and the development of living standards of people, the demand for energy has also increased.

② This energy is mainly met by fossil fuels like coal and petroleum.

③ They have the following effects on environment :

- i) Increased pollution of air, water, soil due to presence of oxides of carbon, nitrogen, sulphur.
- ii) Coal contains carbon which leads to emission of carbon dioxide increasing green house effect.
- iii) This leads to global warming.
- iv) They also cause acid rain that corrodes marble on our heritage and affects plants life.

To Reduce their consumption :

- 1) we must use alternatives like CNG which are cleaner fuels.
- 2) We must develop healthy habits like using public transport instead of private.
- 3) we must harness non-conventional sources of energy.
- 4) we must make people aware of their limited quantity and use them judiciously.



Q. 7. What is a dam? Why do we seek to build large dams? While building large dams, which three main problems should

particularly be addressed to maintain peace among local people? Mention them.

[CBSE, 2018]

 Topper's Answers

Answer: 15

→ Dam is a structure made to obstruct the flow of river for creating an impoundment or diverting the flow of water for one's own use irrigation, etc.

→ Dams are built for storage of water for electric generation, recreation, protection from drought or flood etc.

⚠️ Problems to be addressed to maintain peace among people :-

- (i) They must be provided with full rehabilitation facilities. The susteres of Tawa Dam are still fighting for facilities promised to them in 1970.
- (ii) They must be given required sum of money for once again creating <sup>necessary</sup> conditions for them. They should also be provided with equal land area that has been taken from them to construct a dam with all developmental approach.
- (iii) Benefits of dam must be guaranteed to them and not only to rich urban areas & industries.
- (iv) Afforestation to reduce the damages due to large forests being cut & a shelter for wildlife which has been displaced.

**Ans.** A dam is a barrier constructed to hold back water and raise its level forming a reservoir used to generate electricity or as a water supply.

Large dams are built in order to generate electricity from water supply.

While making large dams, social problems should be addressed. Proper rehabilitation should be provided to people.

Judicious use of people's money should be done to ensure economic prosperity. Environmental problems, excessive

cutting of trees, biological diversity loss should be checked.

**Q. 8. (a) Water is an elixir of life, a very important natural resource. Your science teacher wants you to prepare a plan for a formative assessment activity, "How to save water, the vital natural resource." Write any two ways that you will suggest to bring awareness in your neighbourhood, on how to save water.**

**(b) Name and explain any one way by which the underground water table does not go down further.**

[CBSE OD, Term 2, Set 1, 2017]

**Ans. (a)** Water is one of the most precious natural resources that has varied importance in our lives. It is an essential component of the human body, and is used almost everywhere in our day to day activities such as cooking, washing, farming etc. It is an indispensable part of our lives, without which the life on earth is not possible. However, the amount of fresh water available for sustaining life is very less, so it is very important to save water by the following ways:

**(i)** Turning off the taps during brushing, washing clothes/utensils

etc., and use of buckets instead of showers for bathing.

**(ii)** Reusing of water by storing water after washing fruits and vegetables for watering plants and cleaning cars.

**(b)** Underground water table can be recharged through rainwater harvesting. Rainwater harvesting is a process by which rain water is collected and stored for the purpose of recharging the ground water or for future use like for irrigation and agriculture. In India, rainwater harvesting is an old tradition which is followed till now in many parts of India. For example, bawris are traditional architectural rainwater harvesters that were built for collecting water in the state of Rajasthan.

There are two ways of rainwater harvesting:

**(i)** Surface run off harvesting: In urban areas, rain water that flows away from the surface can be collected and used for various purposes.

**(ii)** Rooftop rainwater harvesting: The rainwater on the roofs of the buildings is collected through canals that drains the water into ground reservoirs. This stored water is later utilised.