

Chapter 16 Management of Natural Resources

Very Short Answer Type Question [1 Mark]

Q. List any two traditional systems of water harvesting. [Foreign]

Answer. Two traditional systems of water harvesting are:

1. Collection of water in ponds and
2. Construction of small earthen dams.

Q. State two reasons each of conserving (a) forest and (b) wildlife. [All India(Q)]

Answer. Two reasons each of conserving:

(a) Forest

1. It helps in retaining the sub-soil water.
2. It checks flood.

(b) Wildlife

1. To maintain ecological equilibrium.
2. To protect the nature.

Q. What are the two kinds of natural resources? [Delhi(C)]

Answer. Water and forest.

Q. Name any two forest products, each of which is the basis for some industry. [Delhi(C)]

Answer.

1. Pine wood for matchbox industry.
2. Bamboo for paper industry.

Q. State an instance where human intervention saved the forests from destruction. [Delhi(Q)]

Answer. Human intervention saved the Arabari forest range of West Bengal from destruction with active and willing participation of local community. The Sal forest of Arabari underwent a remarkable recovery.

Q. State two changes you can make in your habits to reduce the consumption of electricity or water. [All India(C)]

Answer. Two changes that can be made to reduce the consumption of electricity or water are:

1. Switch off lights and fans when not in use.
 2. Leaked taps should be repaired immediately.
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Short Answer Type Question [2 Mark]

Q. What is water harvesting? Mention any two water harvesting structures. [Delhi]

Answer. Water harvesting means capturing rainwater where it falls or capturing the run off in a local area for future use.

Two water harvesting structures are Khadins in Rajasthan and Kulhs in Himachal Pradesh.

Q. Why must we conserve our forests? List any two causes for deforestation to take place. [Delhi]

Answer. We must conserve our forests as they are of great value. The reasons for conserving forests are:

1. Forests help in protection of land and retaining sub-soil water.
 2. Forests check floods and maintain ecosystem.
- Therefore, forests must be conserved for economic and social growth.

Two causes for deforestation taking place are:

1. For industrial needs.
2. For development projects like building of roads or dams.

Q. List any four advantages of water harvesting. [All India; Foreign]

Answer. Benefits of water harvesting are:

1. It provides drinking water.
2. It provides irrigation water.
3. It is responsible for the increase in groundwater level.
4. It reduces storm water discharge, urban flood and overloading of sewage treatment plants.

Q. What is 'Chipko Movement'? Why should we conserve forests? [All India]

Answer. 'Chipko Movement' is a non-political public movement for conservation of natural habitat and wildlife by preventing excessive commercial exploitation of forests. Chipko means 'hugs' and the movement was started by the villagers of Garhwal by hugging trees to stop the contractors from cutting the trees. We should conserve forests because it helps in protection of land, retaining sub-soil water, checking floods, and thereby maintain in the ecosystem.

Q. Suggest any four changes that you would like to incorporate in the life style of students of your age to move towards a sustainable use of available resources. [All India Delhi 2008(C)]

Answer.

1. Follow the principle of three R's-reduce, recycle and reuse.
2. Plant more trees.
3. Use public transport, school bus and car pools.
4. Switch off unnecessary lights and fans, thereby save electricity.

Q. An environmentalist on visit to your school suggested the use of three R's to save the environment. Explain what he meant by three R's and how you would follow his advice at home. [All India]

Answer. Three R's to save the environment: We can reduce pressure on the environment by applying the maxim of 'Reduce, Recycle and Reuse' in our lives. Reduce means 'to use less'.

- By switching off unnecessary lights and fans to save electricity.

- By repairing leaky taps to save water.
- By not wasting food.

Recycle means to collect plastic, paper, glass and metal items and recycle these materials to make required things.

- In order to recycle, firstly segregation of waste is necessary so that materials that can be recycled are not dumped along with other wastes.

Reuse means 'to use things again and again'.

- The used envelopes can be reversed and used again instead of being thrown away.
- The plastic bottles of food items like jam or pickle can be used for storing things in the kitchen.

Q. How do advantages of exploiting natural resources with short-term aims differ from the advantages of managing our resources with a long-term perspective? [Foreign]

Answer. Exploiting resources with short-term aim is just to reap huge profit, whereas using resources with a long-term perspective is to reap the benefit in a sustainable manner so that these will last for generations to come.

Q. What is meant by wildlife? How is wildlife important for us? [Foreign]

Answer. Wildlife means all those naturally occurring animals, plants and their species which are not cultivated, domesticated and tamed. Wildlife is important for us because.

1. they provide great aesthetic value for human beings.
2. they help in maintaining ecological balance.

Q. List any two causes of our failure to sustain availability of underground water. [Foreign]

Answer. Two causes of our failure to sustain availability of underground water are:

1. **Rising population:** As the population increases, demand for water increases resulting in depletion of underground water level.
2. **Industrialization:** Industries need more and more water to manufacture products. With growing industrialization, demand for water increases which results in reduction in the availability of underground water.

Q. State any four personal choices you would like to make to reduce energy consumption without affecting the quality of life or work explaining how each one of them would help you to do so. [Foreign]

Answer.

1. By switching off unnecessary lights and fans. This will reduce consumption of coal in production of electricity.
2. By using public transport such as bus, metro, train etc. as much as possible. This will reduce consumption of petrol and diesel.
3. By repairing leaked water taps. We can save water by following this method. This will save energy that is spent during treatment and pumping of water.
4. Reusing used paper, envelopes, etc. This will save the trees from which paper is made; it will also save energy spent on making and recycling papers.

Q. Name any four categories of people who depend on the forest resources, mentioning major needs of each category. [Foreign]

Answer.

1. **Local people who live around forests:** They use forests for grazing their cattles, collecting fruits, firewood, bamboo and thatch.
2. **Industrialists:** They collect raw , materials from forests for their industries.
3. **Tourists:** They visit forests for recreation.
4. **Forest department of Government:** They control the resources of forest.

Q. List any four characteristics of a good fuel. [Delhi]

Answer.

1. Higher calorific value
2. Lesser pollution
3. Sustainable for longer period
4. Easily transportable

Q. What are non-renewable resources of energy? Give two examples of such resources. [Delhi]

Answer. Sources which are. not available again and again and are getting exhausted and are called non-renewable sources of energy, e.g. coal, petroleum.

Q. List any four disadvantages of using fossil fuels for the production of energy. [All India]

Answer. Disadvantages:

1. Fossil fuels cause pollution.
2. They also cause acid rain.
3. They disturb ecology.
4. They cannot be reused, i.e. they are non-renewable.

Q. Give two examples each of the following:

1. **Renewable sources of energy**
2. **Non-renewable sources of energy. [All India]**

Answer.

1. Geothermal energy, wind energy
2. Coal, petroleum

Q. Define:

1. **Biomass**
2. **Anaerobic degradation [Foreign]**

Answer.

1. The material contained in the bodies of plants and animals is called biomass.
2. Breakdown of organic matter by micro-organisms when oxygen is not present is known as anaerobic degradation.

Q. What is an equitable distribution of resources in a society and why is it necessary? State any two factors which work against an equitable distribution of resources. [Foreign]

Answer. Equitable distribution of resources means ensuring benefits from the development of resources to all human beings.

There should be equitable distribution of resources because every living being has an equal right on the natural resources of the earth. If anybody is using them excessively, it means somewhere else somebody is being deprived of it. Factors which work against equitable distribution of resources are:

1. Advancement and development of society.
2. Energisation and materialization.

Q. List four advantages of water stored in the ground. [Delhi]

Answer. Four advantages of storing water in the ground are:

1. It does not evaporate.
2. It is relatively protected from contamination by human and animal wastes.
3. It does not provide breeding ground for mosquitoes.
4. It provides moisture for vegetation.

Q. "Burning fossil fuels is a cause of global warming." Justify this statement. [Delhi]

Answer. Fossil fuels like coal and petroleum are formed from biomass. In addition to carbon, they contain hydrogen, nitrogen and sulphur. When fossil fuels are burnt, the products are carbon dioxide, water vapour, oxides of nitrogen and oxides of sulphur. Carbon dioxide is a greenhouse gas. Increase in the percentage of carbon dioxide increases the temperature on earth which leads to global warming.

Q. List three problems which arise due to construction of big dams. Suggest a solution for these problems. [All India]

Answer. Three problems of construction of large dams are:

1. Displacement of large number of people.
2. Huge cost of construction and low benefit compared to cost.

These problems can be sorted out by constructing smaller dams instead of a big dam.

Q. List the products of combustion of fossil fuels. What are their adverse effects on the environment? [All India]

Answer. When fossil fuels are burnt, carbon dioxide, water, oxides of nitrogen and oxides of sulphur are formed. If the combustion takes place in insufficient air, then carbon monoxide is formed instead of carbon dioxide. Of these products, the oxides of sulphur and nitrogen and carbon monoxide are poisonous gases and carbon dioxide is a greenhouse gas.

Q. State the meaning of "sustainable management". Reuse is better than recycling. How? [Foreign]

Answer. 'Sustainable management' is the management of resources in which development can be maintained for a long time without undue damage to the environment.

Recycling needs additional energy to make a usable item. Reuse does not require additional energy and hence, is better than recycle.

Q. Why are forests considered “biodiversity hot spots”? List two ways in which an individual can effectively contribute to the management of forests and wildlife. [Foreign; All India 2010]

Answer. Biodiversity is measured by the number of different life forms found in an area. In a forest, various species exist which include bacteria, fungi, ferns, plants, nematodes, insects, birds, reptiles and mammals. Forests are therefore considered as biodiversity hot spots. An individual can contribute in the management of forests and wildlife by:

1. avoiding cutting down of forests and killing of wildlife.
2. educating people about the importance of forests and wildlife in our life.

Q. How did ‘Chipko Andolan’ ultimately benefit the local people? Describe briefly. [Foreign]

Answer. Chipko Movement:

- During 1970, in Reni village of Garhwal, a contractor was allowed to cut trees in a forest near the village.
- When the contractor’s workers went to the forest to cut trees, the women of the village hugged the tree trunks to prevent the workers from cutting trees.
- Chipko means ‘hug’ and the movement began with the villagers hugging trees. It is called the ‘Chipko Andolan’.

The movement benefited the local population as it conserved the forest products. It benefited the environment as it conserved the quality of soil and sources of water thereby, maintained balance in nature.

Q. Which of the two is a better option, (i) to collect rainwater in ponds or artificial lakes, or (ii) to let it recharge groundwater by water harvesting? List two advantages of the option to justify your answer. [Foreign]

Answer. To allow rainwater to recharge groundwater by water harvesting is the better option. Its advantages are:

- (i) Groundwater does not evaporate.
- (ii) Groundwater does not provide breeding ground for mosquitoes.

Short Answer Type Question [3 Marks]

Q. Suggest three ways to maintain a balance between environment and development to survive. [Delhi]

Answer. The three ways to maintain a balance between environment and development to survive are as follows:

1. Forest resources should be used in an environment friendly and developmentally sound manner.
2. Instead of using non-renewable natural resources, use of renewable natural resources should be preferred.
3. Waste water generated by industries should be recycled.

We should use natural resources cautiously so that economic growth and ecological conservation go hand in hand.

Q. What is meant by exploitation of resources with short-term aims? List its four advantages. [Delhi(C)]

Answer. Exploitation of resources with short-term aims means consumption of resources for immediate requirement without their conservation for future.

Its four advantages are:

1. It fulfills the requirement of mass population.
2. It provides industrial growth.
3. It provides economic development.
4. It makes life comfortable.

Q. What is a dam? Write two main advantages and two ill-effects of constructing a big dam. [Delhi(C)]

Answer. Dams are massive barriers built across rivers and streams to confine and utilise the flow of water for human purposes such as irrigation and generation of electricity.

Two main advantages of constructing a big dam are:

1. Generation of electricity.
2. Irrigation.

Two ill-effects of constructing a big dam are:

1. It displaces large number of people.
2. It causes deforestation and loss of biodiversity.

Q. What is meant by sustainable management? The environmentalists are insisting upon "sustainable natural resource management". State its four advantages. [All India (C)]

Answer. Sustainable management is the management of natural resources which requires a long-term perspective so that they last for generations to come and are not to be exploited by the short-term gains.

Its four advantages are as follows:

1. Resources last for a longer duration.
2. It provides steady economic growth.
3. It helps in ecological conservation.
4. It reduces pollution.