Management Of Natural Resources

Question 1:

Name two fossil fuels.

Solution :

Coal and Petroleum.

Question 2:

Name the major programme started to replenish forests.

Solution :

Silviculture

Question 3:

Apart from the availability of forest products, name two other things which are affected by the destruction of forests.

Solution :

Quality of soil and sources of water.

Question 4:

Name the rivers with which the following dams are associated :

Name the rivers with which the following dams are associated :

(a) Tehri Dam

(b) Sardar Sarovar Dam

(c) Bhakra Dam

Solution :

(a) River Ganga.

(b) River Narmada.

(c) River Satluj.

Question 5:

Name two factors which can be used to find whether river water has been contaminated.

Solution :

1. The presence of coliform bacteria in rainwater.
2. Measurement of pH of rainwater.

Question 6:

Name the bacteria whose presence in water indicates the contamination with disease-causing micro-organisms.

Solution :

Coliform bacteria.

Question 7:

With which process are the following ancient structures associated ?

Kulhs, Eris, Surangams, Kattas, Pynes

Solution :

Rainwater harvesting.

Question 8:

Which fossil fuel is conserved :Which fossil fuel is conserved :

(a) when we save on electricity ?

(b) when we use bicycle for covering short distances instead of a motorbike ?

Solution :

(a) Coal.

(b) Petroleum.

Question 9:

What is the main purpose of rainwater harvesting ?

Solution :

The main purpose of rain water harvesting is to make rainwater percolate under the ground so as to recharge ground water.

Question 10:

What is the name of the process in which rainwater falling on the earth is stopped from flowing and made to percolate into the ground ?

Solution :

Rainwater harvesting.

Question 11:

Name the most common practice of recharging ground water.

Solution :

Rainwater harvesting.

Question 12:

The pH of a river water sample as measured by pH paper is found to be 6. What does it tell us about water ?

Solution :

Water is polluted with acidic wastes.

Question 13:

Name the person who is most remembered for the protection of Khejri trees in Rajasthan.

Solution :

Amrita Devi Bishnoi.

Question 14:

State whether the following statement is true or false :

Chipko Andolan was associated with the conservation of wild animals such as tigers and lions.

Solution :

False.

Question 15:

Write the full names of (a) CFL, and (b) CFC.

Solution :

(a) CFL – Compact Fluorescent lamps.

(b) CFC – Chloro-fluoro carbons.

Question 16:

Choose one term from the following which include all others :

coal, natural gas, fossil fuels, petroleum

Solution :

Fossil fuels

Question 17:

Why is the process of 'reuse' better than that of 'recycling' ?Why is the process of 'reuse' better than that of 'recycling' ?

Solution :

The process of reuse is better than recycling because more energy is used to recycle old objects but no energy is required during reuse.

Question 18:

Name a clean gaseous fuel other than LPG and natural gas.

Solution :

Biogas.

Question 19:

Fill in the following blanks with suitable words :Fill in the following blanks with suitable words :

(a) LPG is a ……fuel but biogas is not a…… fuel.

(b) Glaciers are a source of……..

(c) One of the main aim of management of forests and wildlife is to conserve the……which we haveinherited.

(d) Khadin is a traditional……harvesting system in Rajasthan.

(e) When a fuel burns in an insufficient supply of air, then some poisonous gas called …… is also produced.

Solution :

(a) Fossil; Fossil.

(b) Water.

(c) Bio diversity.

(d) Water.

(e) Carbon monoxide.

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Question 20:

What is meant by "sustainable development" ?

Solution :

Sustainable development is the development which meets the current basic human needs and

also preserves the resources for the needs of future generations.

Question 21:

What is silviculture ? What are its advantages ?

Solution :

Silviculture is a major program started to replenish depleting forests. Its advantages are:

1. It produces a large quantity of raw materials for industry (like timber and paper industry).
2. It increases the area of earth under forests (which is good for the conservation of wildlife).
3. It maintains a perfect water cycle in nature.
4. It prevents soil erosion.
5. It prevents floods.

Question 22:

Write a short note on 'Chipko Andolan' (Hug the Trees Movement).

Solution :

The 'Chipko Andolan' (Hug the Trees Movement) originated from an incident in a remote village called 'Reni' in Garhwal in the early 1970's. A logging contractor had been allowed to cut down trees in a forest close to a village. One day, when the men folk of the village were out for work, the contractor's workers came in the forest to cut down the trees. In the absence of the men, the women of the village reached the forest quickly and clasped the tree trunks with their arms, preventing the workers from cutting down the trees. The forest trees were thus saved. The Chipko Movement quickly spread across all the communities and helped in the conservation of forests.

Question 23:

Why should we conserve forests and wildlife ?

Solution :

The forests and wildlife should be conserved to prevent undue damage to the environment as it helps in maintaining ecological balance in nature and preserves the gene pool.

Question 24:

Describe briefly the 'khadin' system of rainwater harvesting practised in Rajasthan.

Solution :

The 'Khadin' system of rainwater harvesting in Rajasthan is a very long (100 m – 300 m long) earthen embankment called 'Bund' built across the lower edge of the sloping farmland. The rainwater from the catchment area flows down the slopes and stopped by the 'Bund' to form a reservoir. The rainwater which collects in the reservoir formed by the 'Bund', and in the well, seeps slowly into the land (or ground). This water – saturated land is subsequently used for growing crops.

Question 25:

What measures would you take to conserve electricity in your house ?

Solution :

The measures for conservation of electricity in our house are:

1. Switch off the lights, fans, television and other electrical appliances when not needed.
2. Use energy efficient electrical appliances to save electricity.
3. Use stairs to climb up to 3 floors of a building instead of taking a lift.

Question 26:

Although coal and petroleum are produced by the degradation of biomass, even then we need to conserve them. Why ?

Solution :

Coal and petroleum needs to be conserved as they once get exhausted will not be available to us in near future (because they are formed extremely slowly over a very long period of time).

Question 27:

Is water conservation necessary ? Give reasons.

Solution :

Yes, water conservation is very necessary because it meets the basic necessities for all forms of life like human beings, animals and plants.

Question 28:

Name the products of combustion of fossil fuels like coal and petroleum products. How do they affect us and our environment ?

Solution :

When coal and petroleum based fuels are burned, the products of combustion are: carbon dioxide, water, sulphur dioxide and nitrogen oxides. If combustion takes place in an insufficient supply of air then carbon monoxide is also produced.

These products are harmful to human beings and also pollute the environment in the following ways-

1. Sulphur dioxide attacks the lungs and causes bronchitis and other diseases. It also produces acid rain.
2. Nitrogen oxides also attacks the breathing system and causes acid rain.
3. Carbon dioxide traps sun's heat energy falling on the earth and increases the temperature which leads to global warming.
4. Carbon monoxide gas is poisonous and if it gets into our blood stream, it stops the red blood cells from carrying oxygen from lungs to the rest of the body causing suffocation and may even cause death.

Question 29:

Why should fossil fuels like coal and petroleum be used judiciously ?

Solution :

We should use fossil fuels judiciously because:

1. Fossil fuels (Coal and petroleum) left in the earth are limited which will get exhausted soon.
2. The products of combustion of fossil fuels pollute the environment.

Question 30:

What are the three R's to save the environment ? Explain with one example of each.

Solution :

The three R's to save the environment are:

1. **Reduce**: Reduce means that we use less of the natural resources by cutting down on those practices which lead to their wastage. For example – we can reduce the wastage of electricity by switching off unnecessary lights and fans.
2. **Recycle:** Recycling means that we should collect the used and discarded items of paper, plastic, glass and metals, and send them to the respective industries for making fresh paper, plastic, glass or metal objects.
3. **Reuse:** Reuse means that we should use the same things again. For example plastic jars

in which we buy various food items like Jams, pickles etc, can be used later on for storing things like salt and sugar.

Question 31:

What are the main uses of coal and petroleum products ?

Solution :

Coal is used as a fuel in homes and industries and is also used to generate electricity at Thermal Power Plants. Petroleum products such as petrol and diesel are used as fuels in transport to run scooters, cars, buses etc.

Question 32:

State any five steps to reduce the consumption of coal and petroleum products.

Solution :

The steps which can be taken to reduce the consumption of coal and petroleum products are:

1. Switch of the lights, fans, television and other electrical appliances to save electricity.
2. Use energy efficient electrical appliances to save electricity. This can be done by using CFL and Fluorescent tube lights.
3. Use stairs to climb at least up to three floors of a building instead of taking a lift to save electricity.
4. Pressure cookers should be used for cooking food to save fuels like Kerosene and LPG.
5. Solar cookers should be used to cook food whenever possible.

Question 33:

Explain why, despite good rains, we are not able to meet the demand for water of all the people in our country.

Solution :

Despite good rains, we are not able to meet the demand for water of all people because:

1. Our population is increasing rapidly.
2. Due to lack of sufficient vegetation cover on ground, only a little rain water seeps into the ground and get stored as ground water.
3. The high yielding varieties of crops require much more water for irrigation.
4. Discharge of untreated sewage and industrial waste into water bodies.

Question 34:

Give one example to show how the participation of local people can lead to the efficient management of forests.

Solution :

People participation in the management of forests can help in increasing forest produce as well as in their conservation. Participation of local people in the management of forest leads to the revival of degraded sal forest. In 1972, the West Bengal Forest Department formulated a novel scheme to revive the degraded sal forest by involving the local people. The forest officer A. K. Banerjee involved the villagers of the area around the forest in the protection of 1272 hectares of degraded Sal forest. In return for help in protecting the forest, the villagers were given employment in both silviculture and harvesting operations of the forest, 25 percent of the final harvest produce, and were allowed to collect firewood and fodder from the forest area on a nominal payment. With the active and willing participation of local people around the forest, the degraded sal forest of Arabari became thick and green within ten years.

Question 35:

Explain briefly, how rainwater harvesting is done from open spaces around the buildings in city

areas.

Solution :

The rainwater harvesting from open spaces around the buildings in a city is done by constructing percolation pits covered with concrete slabs having holes in them, and connected to a recharge well through a pipe. The rainwater falling in the open spaces around buildings goes into the percolation pit through the holes in its concrete slab cover. After filtration in percolation pit, rainwater enters the recharge well through the outlet pipe and gradually seeps into the soil.

Question 36:

(a) What is a natural resource ? Name three important natural resources.

(b) Why do we need to manage our natural resources ?

Solution :

(a) Anything in the environment which can be used by human beings is called a natural resource. The important natural resources are forest and wild life, water and coal.

(b) We need to manage our natural resources because:

1. The resources of the earth are limited and our population is increasing day by day.
2. The proper management of natural resources takes into consideration long term perspective and prevents their exploitation to the hilt for short term gains.
3. The proper management can ensure equitable distribution of natural resources so that all the people can benefit from the development of these resources.
4. The proper management will take into consideration the damage caused to the environment during the extraction or use of the natural resources and find ways and means to minimise this damage.

Question 37:

(a) State the advantages of constructing dams across the rivers.

(b) Describe some of the problems associated with the construction of dams.

Solution :

(a) The advantages of constructing dams across the rivers are:

1. Water from a dam is used for irrigation in fields through a network of canals.
2. Water from a dam is supplied to the people in towns and cities through pipelines after suitable treatment.
3. The falling water from the dam is used for generating electricity.

(b) The problems associated with the construction of dams are:

1. **Social Problems:** Due to the constriction of high rise dams, a large number of human settlements are submerged in the water of large reservoir formed by the dam and many people are rendered homeless. This creates a social problem.
2. **Environmental Problems:** The construction of high rise dams on the rivers contributes to deforestation and loss of biodiversity. This is because of a vast variety of flora and fauna (plants and animals) get submerged in the water of large reservoir formed by the dam and disturb the ecological balance.
3. **Economic Problems:** Some people say that the construction of high rise dams involves the spending of huge amount of public money without the generation of proportionate benefits.

Question 38:

(a) Name any five sources of water (other than rivers)

(b) Describe how, the water of river Ganga has been highly polluted.

Solution :

(a) The sources of water are – Lakes, Rains, Ponds, Wells and Glaciers.

(b) The river Ganga is polluted. The water of river Ganga is turned into a dirty watered rain by the discharge of untreated sewage and industrial wastes.

The pollution of river Ganga is also caused by human activities like, Bathing, washing of clothes, immersion of ashes of the dead and dumping of unburnt corpses into its water.

The industries also discharge effluents into the river water.

Question 39:

(a) Name the major industries which are based on forest produce.

(b) State the main aim of the management of forests and wildlife.

(c) Name the four main stakeholders in the management of forest resources.

Solution :

(a) The various industries which are based on forest produce are; timber industry, paper manufacturing industry, 'lac' industry and sports equipment industry.

(b) The main aim of the management of forests and wild life is to conserve the biodiversity which we have inherited.

(c) The main stakeholders in the management of forest resources are:

1. The people who live in and around the forest and are dependent to some extent on forest produce to lead their life.
2. The Forest Department of the Government which owns the forest land and controls the resources from the forest.
3. The industrialists who use various forest products for their factories, such as wood for making paper and furniture, and 'tendu' leaves for making 'bidis', etc.
4. The forest and wildlife activists who want to see the forests in their pristine form.

Question 40:

(a) What is meant by rainwater harvesting ? Name some of the ancient structures used for rainwater harvesting by the rural people.

(b) What are the various advantages of water stored in ground ?

Solution :

(a) Rainwater harvesting is the collection of rain water falling on land for recharging the ground water. The structures of rain water harvesting are: Khadin, Tanks, Kulhs, Ponds, Eris, Tals and Kattas.

(b) The various advantages of water stored in the ground are:

1. The water stored in ground does not evaporate.
2. The water stored in the ground spreads out to recharge wells and provide moisture for crops over a wide area.
3. The water stored in ground does not promote breeding of mosquitoes.
4. The water stored in ground is protected from contamination by human and animal wastes.
5. The water stored in ground is utilised for the benefit of local population.