



**F**OREST & **W**ILDLIFE

**R**ESOURCES & **D**EVELOPMENT

**W**ATER **R**ESOURCES

## FOREST & WILDLIFE

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

**Q. 1. Describe the Project Tiger launched by the Indian government.**

[CBSE, Term 1, 2016]

**Ans.** The Project Tiger Conservation programme was initiated in 1973 in Corbett National Park of Uttarakhand for the purpose of saving the tiger population from extinction in India. The objective of this project was to ensure the survival and maintenance of the tiger population of India. This is one of the success stories of wildlife conservation in the whole world. An estimate of the tiger population in India at that turn of the century places the figure upto 40,000. Subsequently, the first ever all India-Tiger census was conducted in 1972 which revealed the existence of only 1827 tigers. The project of conservations of tiger population was launched by the government of India with the help of international agencies like World Wildlife Fund etc. Nine Tiger Reserves in nine state with the total area of 13,017 km<sup>2</sup> were set aside with a tiger population of about 300.

The main achievements of this project are excellent recovery of the habitat and consequent areas from a mere 268 in

9 reserves in 1972 to 2,226 in 27 reserves in 2015. Out of the total area an area of 4,936 km<sup>2</sup> was set apart as a core zone free from all human interference. Cattle grazing in this area has been stopped and many villages have been move out.

**Q. 2. Explain how communities have conserved and protected forest and wildlife in India.**

[CBSE, Term 1, 2015]

**Ans.** Role of communities in the conservation of forest and wildlife can be explained as follows:

- (i) 'Sariska Tiger Reserve' is situated in Rajasthan, here the people of nearby villages have fought against mining activities and protecting the natural habitat of wildlife.
- (ii) In Alwar, Rajasthan, the people of five villages have declared 1200 hectare of forest as the "Bhairodev Dakav Sanctuary". They set their own rules and regulations which do not allow hunting etc.
- (iii) Chipko movement by locals in Himalayas successfully resisted the deforestation.

### Long Answer Type Questions \_\_\_\_\_ (5 marks each)

**Q. 1. What is bio-diversity? Why is bio-diversity important for human lives? Analyse.** [CBSE, Term 1, 2016]

**Ans.** The variety of flora and fauna in a given geographical area is called biodiversity of that area. Each species on this earth lives in a system of interdependencies on various biotic and abiotic factors. Human beings also depend on several biotic and abiotic factors for their survival. We may be directly taking some resources

from certain species, but we indirectly depend on many other species. Hence, biodiversity is important for human lives. Biodiversity boosts ecosystem productivity where each species, no matter how small, all have an important role to play. For example, a large number of plant species means a greater variety of crops. Greater species diversity ensures natural sustainability for all life forms. In addition, the richer the diversity of life,

the greater the opportunity for medical discoveries, economic development, and adaptive responses to such new challenges as climate change. A healthy biodiversity provides a number of natural services for everyone.

**(i)** Ecosystem services, such as

- Protection of water resources
- Soils formation and protection
- Nutrient storage and recycling
- Pollution breakdown and absorption
- Contribution of climate stability
- Maintenance of ecosystems
- Recovery from unpredictable events

**(ii)** Biological resources, such as

- Food
- Medicinal resources and pharmaceutical drugs
- Wood products
- Ornamental plants
- Breeding stocks, population reservoirs
- Future resources
- Diversity in genes, species and ecosystems

**(iii)** Social benefits, such as

- Research, education and monitoring
- Recreation and tourism
- Cultural values

# RESOURCES & DEVELOPMENT

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

Q. 1. Read the following features of a soil and name the related soil :

[CBSE OD, Set 1, 2020]

- (a) Develops in high rainfall area
- (b) Intense leaching process takes place.
- (c) Humus content is low.

Ans. Laterite soil.

Q. 2. Read the features of a soil given below and name the related soil.

[CBSE OD, Set 2, 2020]

- (i) It consists of properties of sand, silt and clay.
- (ii) It is described on the basis of age.
- (iii) It is very fertile.

Ans. Alluvial soil.

Q. 3. Read the features of a soil given below and name the related soil.

[CBSE OD, Set 3, 2020]

(i) This soil range from red to brown in colour.

(ii) Generally sandy in Texture and saline.

(iii) Soil lacks humus and moisture.

Ans. Arid soil.

Q. 4. Fill in the blanks.

[CBSE Delhi, Set 1, 2020]

Types of Resources	Examples
A ?	Biotic and Abiotic Renewable and non-renewable
B ?	

Ans. (A) On the basis of origin (B) On the basis of exhaustibility.

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

Q. 1. How is over irrigation responsible for land degradation in Punjab?

OR

How is cement industry responsible for land degradation?

[CBSE Delhi, Set 1, 2019]

Ans. Over irrigation is responsible for land degradation due to water logging which leads to increase in salinity and alkalinity in the soil.

OR

Mineral processing like grinding of limestone for cement industry generates heavy amount of dust which is released in the atmosphere. Later, it settles down in the surrounding areas which slows the process of infiltration of water into the soil. This is how land gets degraded due to cement industries.

Q. 2. Classify resources on the basis of origin.  
[CBSE, 2018]

Ans. Resources classification on the basis of origin:

(i) **Biotic resources:** All living organisms in our environment are known as biotic resources. Example: Tree, animal, insects etc.

(ii) **Abiotic resources:** All non-living things present in our environment are known as abiotic resources. Example: earth, air, water, metals, rocks etc.

Q. 3. Give any two examples of non-renewable resources.


[CBSE, Term 1, 2015]

Ans. Coal and minerals are the two examples of non-renewable resources.

Q. 4. Which factor is mainly responsible for maximum land degradation in India?

[CBSE, Term 1, 2015]

Ans. Over-grazing is one of the main reason for land degradation. States, where over-grazing has resulted in land degradation are, Gujarat, Rajasthan, Madhya Pradesh and Maharashtra.

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

**Q. 1. Describe the importance of judicious use of resources.**

**OR**

**Describe the different steps of 'resource planning.'** [CBSE Delhi, Set 1, 2020]

**Ans.** The importance of judicious use of resources are given below :

- (i) Resource planning : The planning is an important step in country like India where resources are enormously diverse for judicious use of resources. It provides economically viable and sustainable solution to the issues related to resources and serves efficiently and effectively.
- (ii) Management resources : The proper management is vital for the efficient and sustainable use of resources. The proper management of resources successfully links the human and resources resulting in its judicious use.
- (iii) Awareness : The awareness plays an important role in planning, management and use of resources. It is the responsibility of an individual to affectionately plan and manage their local resources and should manage and harness them in the sustainable and best possible way like a vacant piece of community land that can be brought under use by building parks, garden, etc.

**OR**

Resource planning is consisting of complex processes which are given below :

- (i) Identification and inventory of resources across the regions of the country. This involves surveying mapping, qualitative and quantitative estimation and measurement of the resources.
- (ii) Evolving a planning structure endowed with appropriate technology, skill and institutional set up for implementing resource development plans.

- (iii) Matching the resource development plans with overall national development plans.

**Q. 2. Describe any three main features of 'Alluvial soil' found in India.**

**OR**

**Describe any three main features of 'Black soil' found in India.**

[CBSE OD, Set 1, 2019]

**Ans.** Major characteristics of Alluvial Soil are:

- (i) Alluvial soil is considered as one of the most fertile soils amongst all soil types. Alluvial soil covers the entire northern plains in India.
- (ii) Alluvial soil contains sand, silt and clay mainly due to silt deposited by the Indo-Gangetic-Brahmaputra rivers. According to age, it is classified into Bhangar (old alluvial) and Khadar (new alluvial).
- (iii) Alluvial soil contains an ample amount of potash, phosphoric acid and lime. This soil is ideal for the growth of crops like sugarcane, wheat and rice etc.

**OR**

Major characteristics of Black soil are:

- (i) Black soil is fine textured and clayey in nature. It is suitable for growing cotton.
- (ii) Black soil has high amount of lime, iron, magnesium and generally low quantities of Phosphorus, Nitrogen and organic matter.
- (iii) It is formed from weathered lava rocks, thus is black in colour and also know as Regur Soil.
- (iv) It has a high clay content and therefore is highly retentive of water. It is extremely fertile in most of the places where it is found.

**Q. 3. How is the issue of sustainability important for development? Explain with examples.** [CBSE, 2018]



Topper's Answers

Introduction : Sustainable development means the development that takes place without damaging the environment or compromising the ability of the future generations to meet their own needs.

(a) The resources are not free gifts of nature. Their exploitation will lead to their depletion and thus halt on development. eg:- resources like Petroleum are exhaustible resource, their reckless exploitation will lead to their deficiency.

(b) Resources are vital for development. Industries, agriculture, etc all depend on resources. Economic development depends on resource availability.

(c) Millions of people earn their livelihood and sustain on resources. Resources like minerals, coal are pre-requisite for development. Water, food, etc are necessary for survival. To protect future generations.

Conclusion : Hence, we need to use the resources judiciously to sustain development.

- Ans. (i) Sustainable use of natural resources is the process by which economic, industrial and social needs are met but the resources are to be managed and exploited in such a way that the biodiversity, balance in the ecosystem, and the biological cycle like carbon, nitrogen and water cycle are not destroyed.
- (ii) Coal, oil and natural gas are chiefly used to provide electricity and to power vehicles. We should take advantage of the abundance of solar, wind, wave, tidal and thermal energy that is free, renewable and sustainable. These resources will provide more than enough green electricity which can then power all the industries, homes and transport that we need.

- (iii) Sustainability lays emphasis on environmental protection and check environmental degradation, moreover, to stop over exploitation and over use of resources.

**Q. 4. Why has the land under forests not increased much from 1960-61?**

[CBSE, Term 1, 2016]

- Ans. (i) Land resources in India are primarily divide into agricultural land, forest land, land meant for pasture and grazing land for other non-agricultural use and waste land. Waste land includes rocky, arid and desert areas. Land is also used for other non-agricultural purpose such as housing, roads and industry. According to the data for 2002-03, about 54% of the total land area is cultivable or follow, 22.5% is covered

by forests and 3.5% is used for grazing. The rest is waste land, with traces of miscellaneous cultivation. The improper use of forest land has degraded the available land area and has made conservation of forests difficult. Human activities such as deforestation, mining and quarrying have contributed to the slow growth rate of forests. Thus, land under forest has increased by only about 4% since 1960–61.

- (ii) (a) Technological development has led to industrialization which has increased the use of natural resources. (b) Technological development has converted the subsistence agriculture to commercial agriculture and this has led to the over utilization of soil. (c) The development of technology contributed to increased production of quality goods and provision of better services to the people. (d) Technological development has also improved the process of mining. (e) Economic development has led to increasing urbanization and modernization which demands more resources.

**Q. 5. How is the mining activity injurious to the health of the miners and environment? Explain.**

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

**Ans.** Mining affects the environment by exposing radioactive elements, removing topsoil, increasing the risk of contamination of the nearby ground and surface water sources, and acidification of the surrounding environment. Mining affects and disrupts the aquatic habitats, terrestrial habitats and wetlands that contains diverse ecosystems and organisms that rely on these areas for survival. A mine's large consumption and release of water, manipulation of topography and landscape, as well as the release of particulates and chemicals affects various habitats directly and indirectly.

Mining is dependent on the fossil fuels, which are non-renewable, to generate the energy needed for its operations. Dust released during the break up of materials causes lung problems and poses health risks for miners and people that live in the surrounding areas.

 **Long Answer Type Questions** \_\_\_\_\_ (5 marks each)

**Q. 1. What is meant by 'resources'? Mention the four basis to classify the resources.**

[CBSE, Term 1, 2015]

**Ans.** Everything available in our environment which can be used to satisfy our needs is called a Resource. Resources are technological accessible, economically feasible and culturally acceptable. Examples are coal, minerals, forest, land, water, fossil fuels etc.

Resources are classified as follows:

- (i) On the basis of origin
- Biotic: living resources like plants etc.
  - Abiotic: Non living resources like solar energy, land etc.
- (ii) On the basis of exhaustibility
- Renewable: Which can be recreated like solar energy etc.
  - Non Renewable: Which cannot be recreate like fossil fuels.

(iii) On the basis of ownership

- Individual (Personal): Owned by an individual person.
- Community: Owned by the whole community.
- National: Owned by a country.
- International: Accessed by all nations.

(iv) On the basis of status of development.

- Potential: Resources which are found in a region, but have not been utilized.
- Developed: Which are surveyed and quality and quantity shows the utilization.
- Reserve: Which can be used for meeting future requirements.
- Stock: Which can not be used due to the lack of appropriate technology to used these resources.

# WATER RESOURCES

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

Q. 1. How has Shillong solved the problem of acute shortage of water?

OR

How has Tamil Nadu solved the problem of acute shortage of water?

[CBSE OD, Set 1, 2019]

Ans. Shillong has been able to deal with the problem of acute shortage of water by setting up Bamboo drip irrigation systems

and Roof top rain water harvesting. This helped Shillong meet its total water requirement of each household.

OR

Tamil Nadu has been able to deal with the problem of acute shortage of water by adopting rooftop water harvesting techniques. This practice was made mandatory under the law for all houses across the state.

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

Q. 1. "The dams that were constructed to control floods have triggered floods." Analyse the statement.

[CBSE OD, Set 1, 2019]

Ans. Our first Prime Minister, Mr. Jawaharlal Nehru, called the dams "the temple of modern India". These dams, that have been constructed to support the economic development of the country, can be destructive at times.

They may cause floods because sometimes, they are constructed without proper planning and sometimes low standard construction material is used. This inferior quality of construction material increases the chances of floods. Construction of these dams can make the area, in which they are constructed, 'earthquake prone', which may lead to landslides and the water to flow out of dams. The sudden release of water from dams can also cause flood and devastation.

Q. 2. Analyse the merits of Multipurpose projects. [CBSE OD, Set 2, 2019]

Ans. Merits of multipurpose projects are given below:

- (i) Dams are built for generating hydroelectricity.
- (ii) Canals are made for irrigation purpose.
- (iii) Canals can also be used for inland navigation.

(iv) Water supply can be used for domestic and industrial purpose.

Q. 3. "Water scarcity may be an outcome of large and growing population in India." Analyse the statement.

[CBSE Delhi, Set 1, 2019]

Ans. A large population requires more water not only for domestic use but also to produce more food. Hence, to facilitate higher food grain production, water resources are being over exploited to expand irrigated areas for dry season agriculture. Irrigated agriculture is the largest consumer of water. Post independent India witnessed intensive industrialisation and urbanisation, creating vast opportunities for us. Today, large industrial houses are as common place as the industrial units of many MNCs. The ever-increasing number of industries have made matters worse by exerting pressure on existing freshwater resources. Industries, apart from being heavy users of water, also require power to run them. Much of this energy comes from hydroelectric power. Most of these have their own groundwater pumping devices to meet their water needs, which results in fragile water resources being over exploited. This has caused falling ground-water levels in several of these cities.

Q. 4. Analyse the importance of 'rainwater harvesting.' [CBSE Delhi, Set 2, 2019]



**Ans.** It is a technique of increasing the recharge of groundwater by collecting and storing rainwater by constructing structures, such as dug wells, percolation pits and check dams.

- (i) In most cases, the harvested water is usually redirected to storage tanks, cistern or reservoirs. First and foremost, the collection offers a better and efficient utilization of energy resource. It is important because potable water is usually not renewable.
- (ii) Harvesting allows the collection of large amounts of rainwater. Rainwater is usually free from harmful chemicals, which makes it ideal for irrigation purposes.
- (iii) Another important advantage is that it reduces demand for potable water. It is important especially in areas with low water levels.

Rainwater harvesting, thus, is considered as a very reliable way to conserve water.

**Q. 5. Analyse the impact of 'water scarcity.'**  
 [CBSE Delhi, Set 3, 2019]

**Ans.** Water is one of the most important requirement for agriculture and livestock. Water is needed for irrigating

the crops; thus, water scarcity immediately leads to loss of crops. The scarcity of water damages the already sown crops. Livestock is affected as the fodder (animal feed) production is also decreased manifolds due to water scarcity. The domestic farms need water for its proper maintenance. So, water scarcity is a threat to both these sectors. Water scarcity directly affects human beings and animals. Absence of potable water for drinking and other purposes causes a lot of diseases and problems to human beings. This hinders their daily routines and they are unable to discharge their daily duties.

Without access to clean water, there is no way one can avail proper sanitation facilities. Access to quality water is fundamental to better living standard and economic growth. Absence of that lowers the living standards of the country. Natural landscapes suffers the most because of water scarcity as it contributes to desertification, loss of plants and death of wildlife.

**Q. 6. How has the ever increasing number of industries in India made worse position by exerting pressure on existing fresh water resources? Explain.** [CBSE, 2018]

 Topper's Answers

**Introduction :** Industrialisation exerted a pressure on existing freshwater resources by sufficiently exploiting them.

(a) Nearly 22% of existing freshwater resou are used by industries in various stages of production without ever been recycled & reused. Aquifers and river water exploited.

(b) The used water is released onto various streams without properly treating. Chemicals, radioactive materials, lead, and mercury, etc pollute river water. Nearly one litre of wastewater pollutes 8 times fresh water.

(c) The hot water from various thermal power plants and industries are released without cooling, thus affecting aquatic life, depriving it off oxygen. This depletes the amount of freshwater that can be used.

Conclusion: Thus, industries need to adopt sustainable water resource management in order to save them.

Ans. (i) India has witnessed intensive industrialisation and urbanisation for the last few years. The ever increasing number of industries has made matter worse by exerting pressure on existing fresh water resources. Fresh water is required in thermal energy plants and steel industries on a large scale.

(ii) Industries, apart from being heavy users of water also require power to run it which in turn needs additional water.

(iii) We have to consider a situation where water is sufficiently available but these areas still suffer from water scarcity. This scarcity may be due to bad quality of water or polluted water.

Q. 7. "Irrigation has changed the cropping pattern of many regions in India." Analyse the statement. [CBSE OD, Set 3, 2019]

Ans. A well developed irrigation facility reduces the dependence of farmers on monsoons and ensures regular supply of water. Irrigation facilities also ensures installation of tube wells, pumps in the farm lands that enable the farmer to irrigate large portions of land more effectively. They also facilitate the construction of dams that help in generating electricity. Better irrigation has contributed in the increased production of maize in states like Karnataka, Uttar Pradesh, Bihar, Andhra Pradesh and multicropping has also become possible due to irrigation. Water intensive cropping is now done in places like Ganganagar and Hanumangarh region of Rajasthan where

the Indira Gandhi canal has facilitated easier and better irrigation.

Q. 8. Why is the rooftop rainwater harvesting the most common practice in Shillong inspite of the fact that Cherrapunjee and Mawsynram receiving highest rainfall in the world are situated only at a distance of 55 kms from there? Explain. [CBSE, Term 1, 2016]

Ans. The roof top rainwater harvesting is the most common practice in Shillong inspite of the fact that Cherrapunjee and Mawsynram receiving the highest rainfall in the world are situated only at a distance of 55 kms from there. Inspite of being very close to the area of highest rainfall in the world, Shillong faces acute shortage of water. Nearly every household in the city has a rooftop rainwater harvesting structure. Nearly 15-25% of the total water requirement of the household comes from rooftop water harvesting.

Q. 9. Explain any three causes of water scarcity. [CBSE, Term 1, 2015]

Ans. Shortage of water is called the scarcity of water. It is due to the less rainfall or occurs in the drought prone area.

Causes of water scarcity are:

- (i) India is the second largest populated country in the world and for more population, we need more water to produce crops or other domestic use.
- (ii) Excessive use of water in the industries for producing more hydro electricity.
- (iii) Over exploitation of water in urban areas leads to the water scarcity in India.

 Long Answer Type Questions \_\_\_\_\_ (5 marks each)

**Q. 1. What is the need for conservation of water resources? Suggest three measure to conserve water resources.**

[CBSE, Term 1, 2015]

**Ans.** Water is the basic need of the people. It is a natural resource needed by every living being on the globe. It is limited and necessary to conserve it. Reasons to conserve water can be explained as follows:

- (i) Water resources in India are limited and our population is increasing day by day so the water requirement is also increasing day by day.
- (ii) Availability of water in our country is uneven, so it is necessary to make it available to all.

(iii) Water resources are being polluted day by day, especially in the urban areas and are not suitable for drinking purpose.

(iv) It is necessary to conserve water to make it available to all for the continuation of our livelihood and to save our ecosystem as well as human beings.

Measures to Conserve Water Resources:

- (i) Save water, avoid water wastage in domestic as well as at all other levels.
- (ii) Recharge ground water by using rain water harvesting etc.
- (iii) Use drip irrigation and sprinklers methods to irrigate the fields.