



# 1

## Resources And Development

### OBJECTIVE TYPE QUESTIONS

1. Define resource.
2. Define sustainable development.
3. Which of the following is a characteristic of arid soil?
  - (a) ranges from red to brown in colour
  - (b) generally sandy in texture and saline (salty) in nature
  - (c) lacks humus and moisture
  - (d) all of these

4. In the question given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the correct option:

Assertion (A): The availability of resources is a necessary condition for the development of any region, but mere availability of resources in the absence of corresponding changes in technology and institutions may hinder development.

Reason (R): There are many regions in our country that are rich in resources but these are included in economically backward regions.

Options:

- (a) Both A and R are true and R is the correct explanation of A.
  - (b) Both A and R are true but R is not the correct explanation of A.
  - (c) A is correct but R is wrong.
  - (d) A is wrong but R is correct.
5. Land left uncultivated for more than five agricultural years is known as ..... land.
  6. Complete the following table with the correct information.

	Type of soil	Crop grown
(a)	Alluvial	?

(b)	?	Cashew Nut
(c)	?	Cotton

7. Land left without cultivation for one or less than one agricultural year is known as ..... land.
8. An equitable distribution of resources has become essential for a sustained quality of life and global peace. If the present trend of resource depletion by a few individuals and countries continues, the future of our planet is in danger. Therefore, resource planning is essential for sustainable existence of all forms of life. Sustainable existence is a component of sustainable development. Analyse the information given above and consider one of the following as the correct option:
  - (a) Equitable distribution of resources
  - (b) Resource planning
  - (c) Sustainable development
  - (d) Development of resources
9. Which country has the right to mine manganese nodules from the bed of the Indian Ocean from the area which lies beyond the Exclusive Economic Zone?
  - (a) India
  - (b) China
  - (c) Japan
  - (d) USA
10. Correct the following statement and rewrite.
 

Use of resources is determined by both physical factors like topography, climate and soil types and human factors like population density, technological capability and culture and traditions.
11. What is soil erosion?
12. Arrange the following stages of resource planning in India in correct sequence.

I. Matching the resource development plans with overall national

### development plans

II. Identification and inventory of resources across the regions of the country that involves surveying, mapping and qualitative and quantitative estimation and measurement of resources

III. Developing a planning structure with appropriate technology, skill and institutional set up for implementing resource development plans

- (a) I, II, III                      (b) I, III, II  
(c) II, III, I                      (d) II, I, III

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#### Answers :

1. Everything available in our environment that can be used to satisfy our needs and is technologically accessible (within reach or available), economically feasible (that which can be done easily at a moderate cost) and culturally acceptable can be termed as a resource.
2. Sustainable development means that development should take place without damaging the environment, and development in the present should not compromise with the needs of the future generations.
3. (d) all of these
4. (a) Both A and R are true and R is the correct explanation of A.
5. culturable waste
6. (a) Paddy, (b) Red laterite, (c) Black
7. current fallow
8. (d) Development of resources  
(Equitable distribution of resources is the first step towards developing resources, then comes resource planning, after planning of resources comes sustainable development. Only after all these aspects development of resources take place.)
9. (a) India
10. Use of **land** is determined by both physical factors like topography, climate and soil

types and human factors like population density, technological capability and culture and traditions.

11. The denudation of the soil cover (wearing away of soil) and subsequent washing down is known as soil erosion.
12. (c) II, III, I

#### SHORT ANSWER QUESTIONS

1. Read the sources given below and answer the questions that follow:

##### Source A: Conservation of Resources

Resources are vital for any developmental activity. But irrational consumption and over-utilisation of resources may lead to socio-economic and environmental problems. To overcome these problems, resource conservation at various levels is important. This had been the main concern of the leaders and thinkers in the past. For example, Gandhiji was very apt in voicing his concern about resource conservation in these words: "There is enough for everybody's need and not for any body's greed." He placed the greedy and selfish individuals and exploitative nature of modern technology as the root cause for resource depletion at the global level. He was against mass production and wanted to replace it with the production by the masses.

##### Source B: Rio de Janeiro Earth Summit, 1992

In June 1992, more than 100 heads of states met in Rio de Janeiro in Brazil, for the first International Earth Summit. The Summit was convened for addressing urgent problems of environmental protection and socio-economic development at the global level. The assembled leaders signed the Declaration on Global Climatic Change and Biological Diversity. The Rio Convention endorsed the global Forest Principles and adopted Agenda 21 for achieving Sustainable Development in the 21st century.

##### Source C: Land Resources

India has land under a variety of relief

features, namely; mountains, plateaus, plains and islands. About 43 per cent of the land area is plain, which provides facilities for agriculture and industry. Mountains account for 30 per cent of the total surface area of the country and ensure perennial flow of some rivers, provide facilities for tourism and ecological aspects. About 27 per cent of the area of the country is the plateau region. It possesses rich reserves of minerals, fossil fuels and forests.

- (a) Why is it necessary to conserve the resources? (*Source A: Conservation of Resources*)
- (b) What was the purpose of the Earth Summit held in Rio de Janeiro, Brazil in 1992? (*Source B: Rio de Janeiro Earth Summit, 1992*)
- (c) What are the main advantages of India's land under a variety of relief features? (*Source C: Land Resources*)

- Ans.** (a) Resources are important for any developmental activity. Over-utilisation and unwise use of resources creates socio-economic and environmental problems. Therefore, resource conservation is necessary at various levels.
- (b) The Earth Summit was held to address the urgent problems of environmental protection and socio-economic development at the global level.
- (c) Plains in India provide facilities for agriculture and industry, mountains ensure **perennial** flow (continuous and throughout the year) of rivers, provide facilities for tourism and ecological aspects and plateau has rich reserves of minerals, fossil fuels and forests.

**2. What steps can be taken to control soil erosion in the hilly areas?**

**Ans.** In hilly areas, soil erosion can be controlled by following the given steps:

- (a) Ploughing along the contour lines (lines that run across a hill) reduces the speed of flow of water down

the slopes. This is called **contour ploughing**.

- (b) Steps can be cut out on the slopes making terraces. Terrace cultivation controls erosion. Western and central Himalayas have well developed **terrace farming**.
- (c) Large fields can be divided into strips. Strips of grass are left to grow between the crops. This reduces the force of the wind. This method is known as **strip cropping**.

**3. What are biotic and abiotic resources? Give some examples.**

**Ans. Biotic resources:** Resources obtained from biosphere and have life are known as biotic resources. For example: human beings, flora and fauna, fisheries and livestock.

**Abiotic resources:** All those things which are made up of non-living things are known as abiotic resources. For example: rocks and minerals.

**4. Indiscriminate use of resources has led to numerous problems. Justify the statement.**

OR

**Explain what problems you will face if you make excessive utilisation of resources.**

**Ans.** Indiscriminate/excessive use of resources has led to the following problems:

- (a) **Indiscriminate use of resources** has led to depletion (exhaustion) of resources for satisfying the greed of a few individuals.
- (b) **Accumulation (collection) of resources in few hands** has divided the society into two segments: haves (rich) and have nots (poor).
- (c) **Indiscriminate exploitation of resources** has led to global ecological crises such as global warming, ozone layer depletion, environmental pollution and land degradation.

**5. Explain the factors responsible for the formation of soil.**

**Ans.** Factors responsible for the formation of soil are as follows:

- Relief (that shows height and slope of an area), parent rock or bedrock, climate, vegetation and other forms of life and time are important factors in the formation of soil.
- Various forces of nature like change in temperature, actions of running water, wind and glaciers and activities of decomposers (fungi, bacteria) are also responsible for the formation of soil.
- Chemical and organic changes which take place in the soil also contribute in its formation.

**6. Classify resources on the basis of exhaustibility and describe each.**

**Ans.** On the basis of exhaustibility, resources are classified into two categories:

(a) **Renewable resources:**

- These resources can be renewed or reproduced by physical, chemical or mechanical processes, for example, solar energy, wind energy, water, forests and wildlife.
- These resources are further divided into continuous and flow.

(b) **Non-renewable resources:**

- These resources occur over a long geological time, for example, minerals and fossil fuels.
- These resources take millions of years in their formation.
- Some resources like metals are recyclable and resources like fossil fuels are non-recyclable and get exhausted with their use.

**7. State measures to solve the problem of land degradation.**

**Ans.** Measures to solve the problem of land degradation are as follows:

In arid (dry) areas,

- Afforestation (planting trees)
- Proper management of grazing

- Control on overgrazing
- Planting of shelter belts (lines of trees or plants planted to protect an area, from bad weather) of plants
- Stabilisation of sand dunes (accumulation of sand grains by the wind) by growing thorny bushes

In industrial and suburban/residential areas,

- Proper management of waste lands
- Control of mining activities
- Proper discharge and disposal of industrial effluents (liquid waste or sewage discharged into a river or the sea) and wastes after treatment

**8. What is Agenda 21? What are its main objectives?**

**Ans.** Agenda 21 is the declaration signed by world leaders in 1992 at the United Nations Conference on Environment and Development (UNCED), which took place at Rio de Janeiro, Brazil. Its main objectives are:

- Achieving global sustainable development to prevent environmental damage, poverty, disease through global co-operation on common interests, mutual needs and shared responsibilities
- Every local government should draw its own local Agenda 21.

**9. Differentiate between khadar and bhangar soil.**

<b>Khadar</b>	<b>Bhangar</b>
(a) On the basis of age, khadar is the new alluvial soil.	(a) On the basis of age, bhangar is the old alluvial soil.
(b) It has low concentration of kankar nodules*.	(b) It has higher concentration of kankar nodules.
(c) It has fine particles and is more fertile.	(c) It is coarse (rough) and less fertile.

\* A small rounded pebbles

## LONG ANSWER QUESTIONS

1. Read the extract and answer the questions that follow:

We have shared our land with the past generations and will have to do so with the future generations too. Ninety-five per cent of our basic needs for food, shelter and clothing are obtained from land. Human activities have not only brought about degradation of land but have also aggravated the pace of natural forces to cause damage to land. Some human activities such as deforestation, over grazing, mining and quarrying too have contributed significantly in land degradation. Mining sites are abandoned after excavation work is complete leaving deep scars and traces of over-burdening. In states like Jharkhand, Chhattisgarh, Madhya Pradesh and Odisha deforestation due to mining have caused severe land degradation. In states like Gujarat, Rajasthan, Madhya Pradesh and Maharashtra overgrazing is one of the main reasons for land degradation. In the states of Punjab, Haryana, western Uttar Pradesh, over irrigation is responsible for land degradation due to water logging leading to increase in salinity and alkalinity in the soil.

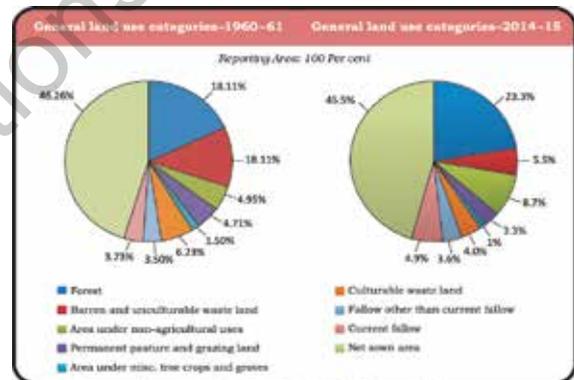
- Why is land important for us?
- Why are humans considered the main culprit for land degradation?
- What are the causes responsible for land degradation in India? Explain with examples.

- Ans. (a) Land is an important resource for us because we not only live on land but also perform our economic activities on it. It also supports natural vegetation, wildlife, human life, and transport and communication systems. Ninety-five per cent of our basic needs for food, shelter and clothing are obtained from land.
- (b) Humans are considered the main culprit for land degradation because human activities have not only

brought about degradation of land but have also aggravated (made worse) the pace of natural forces to cause damage to land. Some human activities such as deforestation, over grazing, mining and quarrying have contributed to land degradation.

- The causes responsible for land degradation in India are mining, deforestation, overgrazing and over irrigation. For example,
  - In states like Jharkhand, Chhattisgarh, Madhya Pradesh and Odisha deforestation due to mining have caused severe land degradation.
  - In states like Gujarat, Rajasthan, Madhya Pradesh and Maharashtra overgrazing is one of the main reasons for land degradation.

2. Study the pie diagrams presenting the land use data of India for the years 1960-61 and 2014-15 and answer the following questions.



Source : Directorate of Economics and Statistics, Ministry of Agriculture, 2017

- Mention the percentage of land under net sown area in 1960-61 and 2014-15 respectively.
- Why is maximum share of land under net sown area in India? Give reasons.
- State why 33% of geographical area should be under forest as mentioned in the national Forest policy of 1952.

- Ans.** (a) 1960-61 – 46.26%  
2014-15 – 45.5%
- (b) The maximum share of land in India is under net sown area due to:
- the increasing demand for food to feed the increasing population
  - achieve the food security (availability of sufficient quantity of nutritious food and ability of individuals to access it)
- (c) 33% of the geographical area should be under forest because:
- It is considered essential to maintain ecological balance.
  - Livelihoods of millions of people who live on the fringes/borders of these forests depend upon it.

**3. How have technical and economic development led to more consumption of resources?**

**Ans.** Technical and economic development have led to more consumption of resources in the following ways:

- Technological development provides advanced equipment (machinery). As a result, production increases, leading to more exploitation and consumption of resources because people use more resources to develop more equipment.
- Technological development also contributes to improved medical and health resources which again leads to huge consumption of resources.
- Technological development also leads to economic development. When economic condition improves, the demands and needs of people rise in consumption of more resources.
- Economic development provides favourable development of latest technologies. It helps to make or convert various material into useful resources. This leads to consumption of new available resources also.
- Economic development has led to increasing urbanisation (more towns

and cities) which demands more resources. As urbanisation increases and standard of living rises, people start demanding more resources.

**4. What is the importance of resource planning in a country like India?**

**OR**

**Balanced resource planning is essential at the national, state, regional and local levels. Elaborate the statement with suitable examples.**

**OR**

**Give some examples about insufficient development of resources in India.**

- Ans.** Resource planning is important in country like India because the country has huge diversity in the availability of resources (i.e., a variety of resources that are available). There are regions which are rich in some types of resources but lack in some other resources. There are some regions which are self-sufficient in the availability of resources and there are some regions which have great shortage of some important and essential resources.

For example,

- States of Jharkhand, Chhattisgarh and Madhya Pradesh are rich in minerals and coal deposits.
- Arunachal Pradesh has abundance (in large numbers) of water resources but lacks in infrastructural development (development of basic structures and facilities like buildings, roads and power supply).
- Rajasthan is very rich in solar and wind energy but lacks in water resources.
- The cold desert of Ladakh has very rich cultural heritage but it lacks in water, infrastructure and some other necessary minerals.

This requires balanced resource planning at the national, state, regional and local levels.

**5. Classify resources on the basis of status of development. Explain the main**

### features of each group.

**Ans.** On the basis of status of development, resources are classified into three categories:

(a) **Potential Resources:** Resources which are found in a region but have not been utilised are potential resources. For example, Rajasthan and Gujarat have huge potential (having capacity to develop into something) for the development of wind and solar energy, but these have not been developed properly.

(b) **Developed Resources:** Resources which are surveyed and their quality and quantity have been determined for utilisation are developed resources.

(c) **Stock:** Material in the environment which can satisfy human needs but human beings do not have the appropriate technology to use these, are included in stock. For example, water is a compound of two gases: hydrogen and oxygen. Hydrogen can be used as a resource of energy but we do not have advanced technology to use it for this purpose. Hence, it is a stock.

- **Reserves** are a part of stock, which can be used with the help of existing technology but their use has not been started.
- These are kept for meeting future requirements.
- For example, river water can be used for generating hydroelectricity but presently, it is being utilised only to a limited extent. Thus, the water in dams or forests is a reserve which can be used in future.

6. **Mention the human activities responsible for soil erosion. Explain the types of soil erosion mostly observed in India.**

**Ans.** Human activities responsible for soil erosion are:

- (a) Deforestation
- (b) Overgrazing
- (c) Construction activities
- (d) Mining
- (e) Defective methods of farming like ploughing in a wrong way i.e., up and down the slope form channels for the quick flow of water

The types of soil erosion mostly observed in India caused by natural forces like wind, glacier and water are as follows:

(a) **Gully erosion:** The running water cuts through the clayey soils and makes deep channels as gullies (ravines/gorges formed by action of water). The land becomes unfit for cultivation and is called bad land. In the Chambal basin such lands are called ravines.

(b) **Sheet erosion:** Sometimes water flows as a sheet over large areas down a slope. In such cases the top soil is washed away. This is known as sheet erosion.

(c) **Wind erosion:** Wind blows loose soil from flat or sloping land which is known as wind erosion.

7. **How are resources classified on the basis of ownership? Explain.**

**Ans.** On the basis of ownership, resources are classified into four types:

(a) **Individual Resources:** These are also owned privately by individuals. For example, houses, farms, plantation and pasture lands.

(b) **Community owned Resources:** These resources are used by all the members of the community. For example, village grazing grounds, burial grounds, village ponds, public parks, picnic spots and playgrounds.

(c) **National Resources:** Resources that come within the territory of a nation are national resources. All the minerals, water resources, forests, wildlife, land within the political boundaries and oceanic area up to 12 nautical miles (22.2 km) from the

coast known as territorial water and resources therein belong to the nation.

- (d) **International Resources:** These resources are regulated by international institutions. The oceanic resources beyond 200 nautical miles of the **\*Exclusive Economic Zone** belong to open ocean and no individual country can utilise these without the consent of international institutions.

[\*Exclusive economic zone (EEZ) is an area which is beyond a given country's territorial seas, and extends no more than 200 nautical miles (370 kilometers) out from a country's own coastlines.]

8. **What type of soil is found in the river deltas of the eastern coast? Give main features of this type of soil.**

**Ans.** Alluvial soil is found in the river deltas of the eastern coast.

Main features of alluvial soil are:

- (a) Alluvial soil is the most important and widely spread soil. In fact, the entire northern plains are made of alluvial soil.
- (b) Alluvial soil consists of various proportions of sand, silt and clay.
- (c) It is very fertile. Mostly this soil contains sufficient proportion of potash, phosphoric acid and lime.

- (d) Due to its high fertility, regions of alluvial soil are intensively cultivated and densely populated.
- (e) In drier areas, this soil is more alkaline and can be productive after proper treatment and irrigation.

9. **Describe the main features of black/ regur soil found in India.**

**Ans.** The main features of black soil found in India are as follows:

- (a) This soil is black in colour and is also known as regur soil.
- (b) It is made up of extremely fine clayey material and is well known for its capacity to hold moisture.
- (c) It is rich in soil nutrients such as calcium carbonate, magnesium, potash and lime.
- (d) It is generally poor in phosphoric contents.
- (e) This soil develops deep cracks during hot weather which helps in proper aeration of the soil (process that allows air to circulate through the soil).
- (f) This soil becomes sticky when it is wet. Therefore, it has to be tilled immediately after the first shower or during the pre-monsoon period.

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