

Very Short Answer Questions

Q. 1. Define the term 'Resource'.

Ans. Everything available in our environment, which can be used to satisfy our needs, provided, it is technologically accessible, economically feasible and culturally acceptable can be termed as 'Resource'.

Q. 2. What is the role of human beings in the development of a resource?

Ans. Human beings transform material available in our environment into resources and use them.

Q. 3. What are renewable resources?

Ans. The resources which can be renewed or reproduced by physical, chemical or mechanical processes are known as renewable or replenishable resources. Example—water, forests, wildlife, etc.

Q. 4. What are non-renewable resources?

Ans. These resources cannot be renewed or replenished. They take millions of years in their formation. Example—coal, mineral oil, iron ore, bauxite, etc.

Q. 5. Define Individual Resources.

Ans. These resources are owned privately by individuals. Example—Plantation, pasture lands, ponds, water in wells, etc. are resources owned by individuals.

Q. 6. Which resources are community owned resources?

Ans. These are resources which are accessible to all the members of the community. Example—Public parks, picnic spots, cinema halls, playgrounds, etc.

Q. 7. What are National Resources.

Ans. Technically, all the resources available in a nation are categorised as National Resources. Example—Minerals, wild life, forests, water resources, land of a nation, roads, railways.

Q. 8. Which resources are termed as 'International Resources'?

Ans. There are international institutions which regulate some resources. These resources can be utilised by any country of the world. Example—The oceanic resources beyond 200 nautical miles of the Exclusive Economic Zone belong to open ocean and no individual country can utilise without the unanimity of international institutions.

Q. 9. What are Potential Resources?

Ans. Resources which are found in a region but have not been utilised. Example—Wind and solar energy can be generated in parts of Gujarat and Rajasthan (they are potential).

Q. 10. Define Developed Resources.

Ans. Resources which are surveyed, their quality and quantity is determined and they are developed for use. Example—Coal, mineral oil.

Q. 11. What do you understand by the term 'stock'?

Ans. Stock is the materials in the environment, which have the potential to satisfy human needs but human beings do not have the appropriate technology to access these. Example: Water can be made with two gases—hydrogen and oxygen, but we do not have required technology to use it.

Q. 12. What are 'Reserves'?

Ans. Reserves are the subset of the stock, which can be put into use with the help of existing technical 'know how' but their use has not been started. These can be used for meeting future requirements. Example—water in the dams, forests, etc is a reserve which can be used in the future.

Q. 13. What do you mean by sustainable development?

Ans. Sustainable economic development means development should take place without damaging the environment and development in the present should not compromise with the needs of the future generation.

Q. 14. When and where was the first International Earth Summit held?

Ans. The first International Earth Summit, held at Rio de Janeiro in Brazil in June 1992, where 100 heads of states met.

Q. 15. What was Agenda 21 of Earth Summit of Rio de Janeiro?

Ans. The agenda was to combat environmental damage, poverty, disease through global cooperation on common interests, mutual needs and shared responsibilities.

Q. 16. Why is there a need of planning resources in India?

Ans. We need to have resource planning in India since India has enormous diversity in the availability of resources. There are regions which are rich in certain types of resources but are deficient in some other resources. This calls for balanced resource planning at national, state and regional levels.

Q. 17. What are the three processes involved in Resource Planning?

Ans. (i) Identification and inventory of resources across the regions of the country.

(ii) Evolving a planning structure with appropriate technology.

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

Q. 18. How are resources associated with colonialism?

Ans. (i) The history of colonisation reveals that rich resources in colonies were the main attractions for the foreign invaders.

(ii) It was primarily the higher level of technological development of the imperial powers, that helped them exploit the resources of the colonies.

Q. 19. Why is resource conservation important?

Ans. 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.

Q. 20. What is the importance of land as a natural resource?

Ans. Land supports natural vegetation, wild life, human life, economic activities, transport and communication systems. Thus, land is a natural resource of utmost importance.

Q. 21. What are the main relief features of India?

Ans. India has land under a variety of relief features:

(i) Plains cover 43% of the land area.

(ii) Mountains account for 30% area and

(iii) Plateau regions cover about 27% of the area.

Q. 22. Which factors determine the use of land?

Ans. (i) Physical factors—topography, climate, soil types.

(ii) Human factors—Population density, technological capability and culture and tradition, etc.

Q. 23. What is Net Sown Area?

Ans. It is the actual area under cultivation. This area is cultivated once or twice in about two to three years.

Q. 24. What is gross cropped area?

Ans. It is the actual area under cultivation along with the fallow land, which is left uncultivated for fertility.

Q. 25. What is waste land?

Ans. Waste land includes rocky, arid and desert areas and land put to other nonagricultural uses including settlements, roads, railways, industries, etc.

Q. 26. How does land degradation occur?

Ans. Continuous use of land over a long period of time without taking appropriate measures to conserve and manage it, results in land degradation.

Q. 27. What is the percentage of land degradation in India?

Ans. In India, 28% of forest belongs to degraded area, 56% is water eroded area, 10% is wind eroded area and the rest is affected by saline and alkaline deposits.

Q. 28. In which states is land degraded due to mining?

Ans. In states like Jharkhand, Chhattisgarh, Madhya Pradesh and Odisha, deforestation due to mining have caused severe land degradation.

Q. 29. In which states is over irrigation responsible for land degradation?

Ans. In the states of Punjab, Haryana and Western Uttar Pradesh, over irrigation is responsible for land degradation due to water-logging leading to increase in salinity and alkalinity in the soil.

Q. 30. How is mineral processing responsible for land degradation?

Ans. The mineral processing like grinding of limestone for cement industry and calcite and soapstone for ceramic industry generate huge quantity of dust in the atmosphere. It retards the process of infiltration of water into the soil after it settles down on the land.

Q. 31. Why is soil considered as a important resource?

Ans. Soil is the most important renewable natural resource. It is the medium of plant growth and supports different types of living organisms on the earth.

Q. 32. Which factors help in the formation of soil?

Ans. Relief, parent rock or bed rock, climate, vegetation and other forms of life and time are important factors in the formation of soil.

Q. 33. Which forces of nature help in the formation of soil?

Ans. Various forces of nature such as change in temperature, actions of running water, wind and glaciers, activities of decomposes, etc. contribute to the formation of soil.

Q. 34. Which soils are formed at the foothills?

Ans. In the upper reaches of the river valley i.e., near the place of the break of slope, the soils are coarse. Such soils are more common in piedmont plains such as Duars, Chos and Terai.

Q. 35. What is 'Bangar'?

Ans. Bangar is a old alluvial soil. It has high concentration of kanker nodules in it.

Q. 36. What is 'khadar'?

Ans. Khadar is a new alluvial soil. It has more fine particles and is more fertile than the bangar.

Q. 37. Why is alluvial soil called 'fertile soil'?

Ans. Mostly alluvial soil contains adequate proportion of potash, phosphoric acid and lime which are ideal for the growth of sugarcane, paddy, wheat and other cereal and pulse crops.

Q. 38. Which soils are called 'black soils'?

Ans. Soils which are black in colour are called black soils or Regur soils. Since they are ideal for growing cotton, they are also known as black cotton soils.

Q. 39. In which regions are black soils found?

Ans. Black soils cover the plateaus of Maharashtra, Saurashtra, Malwa, Madhya Pradesh and Chhattisgarh.

Q. 40. What are the chief characteristics of black soil?

Ans. Black soils are made up of extremely fine, i.e., clayey material. They are well known for their capacity to hold moisture.

Q. 41. What is the main drawback of black soil?

Ans. This soil is sticky when wet and difficult to work on unless tilled immediately after the first shower or during the pre-monsoon period. This soil is also poor in phosphoric contents.

Q. 42. How are red soils formed?

Ans. Red soils develop on crystalline igneous rocks in areas of low rainfall in the eastern and southern parts of the Deccan plateau.

Q. 43. How do these red soils look red or yellow in colour?

Ans. These soils develop a reddish colour due to diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form.

Q. 44. How are laterite soils formed?

Ans. The laterite soils are developed in areas with high temperature and heavy rainfall. This is the result of intense leaching due to heavy rain.

Q. 45. Why is humus content in laterite soil low?

Ans. Humus content of the soil is low because most of the microorganisms, particularly the decomposers, like bacteria get destroyed due to high temperature.

Q. 46. In which regions are laterite soils formed?

Ans. These soils are mainly found in Karnataka, Kerala, Tamil Nadu, Madhya Pradesh and the hilly areas of Odisha and Assam.

Q. 47. What are the drawbacks of arid soils?

Ans. Due to dry climate, high temperature, evaporation is faster and the soil lacks humus and moisture. The kanker layer formations in the bottom horizons restrict the infiltration of water.

Q. 48. Give one characteristic of forest soils.

Ans. In the snow covered areas of Himalayas, these soils experience denudation and are acidic with low humus content.

Q. 49. What is soil erosion?

Ans. The denudation of the soil cover and subsequent washing down is described as soil erosion.

Q. 50. How is soil eroded?

Ans. Soil is eroded due to human activities like deforestation, overgrazing and construction and mining, etc. Natural forces like wind, glacier and water also lead to soil erosion.

Q. 51. What are gullies?

Ans. The running water cuts through the clayey soils and makes deep channels as gullies. The land becomes unfit for cultivation and is known as bad land.

Q. 52. What is sheet erosion?

Ans. Sometimes water flows as a sheet over large areas down a slope. In such cases the top soil is wasted away. This is known as sheet erosion.

Q. 53. How does soil erosion take place due to defective methods of farming?

Ans. Ploughing in a wrong way, i.e., up and down the slope form channels for the quick flow of water leading to soil erosion.

Q. 54. What is contour ploughing?

Ans. Ploughing along the contour lines can decelerate the flow of water down the slopes. This is called contour ploughing.

Q. 55. How does Terrace farming help in checking soil erosion?

Ans. Steps can be cut out on the slopes making terraces. Terrace cultivation restricts erosion.

Q. 56. What is strip cropping?

Ans. Large fields can be divided into strips. Strips of grass are left to grow between the crops. This breaks up the force of the wind. This method is known as strip cropping.

Q. 57. Why are shelter belts grown?

Ans. Planting lines of trees to create shelter also work in a similar way. Rows of such trees are called shelter belts. These shelter belts have contributed significantly to the stabilisation of sand dunes and in stabilising the desert in western India.

Short Answer Questions

Q. 1. Describe the process of resource planning in India.

Ans. Resource planning is a complex process. It involves the following process:

(i) Identification and inventory of resources across the regions of the country: It involves surveying, mapping, qualitative and quantitative estimation and measurement of the resources.

(ii) Evolving a planning structure: In it, we make appropriate use of technology, skill and institutional set up for implementing resource development plans.

(iii) Matching the resource development plans: It matches the development of resources with overall national development plans.

Q. 2. What is the importance of land?

Ans. We live on land, we perform our economic activities on land and we use it in different ways:

(i) Land is a natural resource and of utmost importance.

(ii) It supports natural vegetation, wildlife, human life, economic activities, and transport and communication systems.

(iii) It is an asset of a finite magnitude. It is important to use the available land for different purposes with careful planning.

Q. 3. For what purposes are land resources used?

Ans. Land resources are used for the following purposes:

(i) Forests

(ii) Land not available for cultivation: Barren and waste land; land used for buildings, roads, etc.

(iii) Other uncultivated land: Permanent pastures and grazing lands.

(iv) Fallow land: Left fallow for regaining the fertility of the soil.

(v) Net sown area: Where actual cultivation takes place.

Q. 4. What is the importance of soil as a resource?

Ans. (i) Soil is the most important renewable natural resource.

(ii) It is the medium of plant growth and supports different types of living organisms on the Earth.

(iii) Soil helps in providing food to this Earth.

Q. 5. Distinguish between Khadar and Bangar.

Ans.

Khadar	Bangar
(i) It is new alluvial soil. (ii) It is more fertile. (iii) It is found near the banks of rivers. (iv) It has fine particles.	(i) It is an old alluvial soil. (ii) It is less fertile. (iii) It is found farther away from the river. (iv) It has kanker nodules in it.

Q. 6. Give some important features of the black soil.

Ans. (i) Black soils are made up of extremely fine; clayey material.

(ii) They are well-known for their capacity to hold moisture.

(iii) They are rich in soil nutrients such as calcium carbonate, magnesium, potash and lime.

(iv) They develop deep cracks during hot weather, which helps in the proper aeration of the soil.

Q. 7. Name the states in which laterite soils are found and give any two characteristics of this soil.

Ans. Laterite soils are found in Karnataka, Kerala, Tamil Nadu, Madhya Pradesh and in the hilly areas of Odisha and Assam.

Chief characteristics:

(i) Humus content of the soil is low because most of the microorganisms, particularly the decomposers like bacteria, get destroyed due to high temperature.

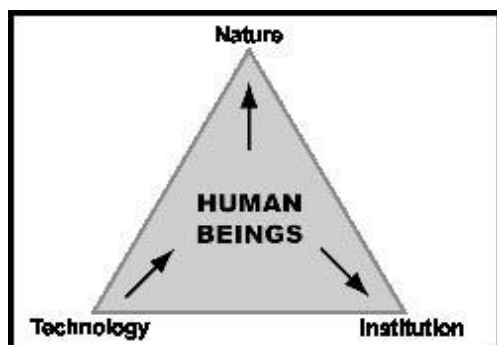
(ii) Laterite soils are suitable for cultivation with adequate doses of manures and fertilisers.

Q. 8. Explain the interdependent relationship between nature, technology and institutions. Also make a diagram to represent the same.

Ans. (i) Human beings interact with nature.

(ii) They use technology to transform material available in the environment into resources.

(iii) They create institutions to accelerate their resource development.



Q. 9. Why was the Rio de Janeiro Earth Summit, 1992 held?

Ans. (i) In June 1992, more than 100 heads of states met in Rio de Janeiro, Brazil for the first International Earth Summit.

(ii) It was held for addressing urgent problems of environmental protection and socio-economic development at the global level.

(iii) This convention adopted Agenda 21, for achieving sustainable development in the 21st century.

Q. 10. What were the aims of Agenda 21 to achieve global sustainable development?

Ans. (i) It aimed at achieving global sustainable development.

(ii) The agenda was to combat environmental damage, poverty and diseases.

(iii) It can be achieved through global cooperation on common interests, mutual needs and shared responsibilities.

Q. 11. Why are arid soils found to be non-productive?

Ans. (i) These soils are generally sandy in texture and saline in nature.

(ii) In some areas, the salt content is very high and common salt is obtained by evaporating the water.

(iii) Due to the dry climate, high temperature, evaporation is faster and the soil lacks humus and moisture.

(iv) The lower horizons of the soil are occupied by kanker, which restricts the infiltration of water.

Q. 12. What is soil erosion? State how it can be prevented in deserts.

Ans. Soil erosion is denudation of the soil cover and subsequent washing down.

Planting lines of trees to create shelter prevents soil erosion. Rows of such trees are called shelter belts. These shelter belts have contributed significantly to the stabilisation of sand dunes and in stabilising the desert in western India.

Q. 13. Why do we need to conserve resources?

Ans. 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.

Q. 14. Which factors affect the land use pattern of India?

Ans. (i) The land use pattern is determined by certain physical factors of the country such as topography, climate and soil types. The availability of geographical area determines its uses by the country. In India, we have various forms of land like plains, plateaus, mountains, etc., which are kept in mind before planning the land use pattern.

(ii) There are certain human factors also affecting the land use pattern. They include population density of the country, technological capability and, culture and traditions of the country, etc. The economic development of the country depends on the technological development of the country thus leading to the planning of land use pattern.

Q. 15. How laterite soils are formed? Give any one negative and one positive aspect of the soil.

Ans. The laterite soils develop in areas with high temperature and heavy rainfall. This is the result of intense leaching due to heavy rains.

(i) Positive Aspect: After adopting appropriate soil conservation techniques particularly in the hilly areas of Karnataka, Kerala and Tamil Nadu, this soil is very useful for growing tea and coffee.

(ii) Negative Aspect: Humus content of the soil is low because most of the micro-organisms, particularly the decomposers like bacteria, get destroyed due to high temperature.

Long Answer Questions

Q. 1. What efforts were made for resource planning in the First Five Year Plan?

Ans. (i) The availability of resources is a necessary condition for the development of any region. But technological knowledge is an important prerequisite for it.

(ii) There are many regions in our country that are rich in resources but are economically backward; whereas there are some regions which have a poor resource base but are economically developed.

(iii) Resources can contribute to development only when they are accompanied by appropriate technological development.

(iv) In India, development or resource development does not only mean the availability of resources but also the technology, quality of human resources and the historical experiences of the people.

Q. 2. What are the causes of land degradation? What are the ways to solve this problem?

Ans. Causes of land degradation:

(i) Mining sites are abandoned after the excavation work is done, leaving deep scars of overburdening. In states like Odisha, Jharkhand, Madhya Pradesh, Chhattisgarh, deforestation due to mining has caused severe land degradation.

(ii) Overgrazing in states like Gujarat, Rajasthan, Madhya Pradesh, and Maharashtra is one of the main reasons behind land degradation.

(iii) Over irrigation and waterlogging lead to increase in salinity and alkalinity in the states of Punjab, Haryana and western Uttar Pradesh, thereby leading to land degradation.

(iv) Mineral processing like grinding of limestone for cement industry and calcite and soapstone for ceramic industry generate huge quantities of dust in the atmosphere. It stops the infiltration of water in the soil.

(v) Industrial effluents as wastes have become a major source of land and water pollution in many parts of the country.

Ways to check land degradation:

(i) Afforestation and proper management of grazing can help to check land degradation.

(ii) Planting of shelter belts help in checking the sand causing land degradation near the deserts.

(iii) Overgrazing can be checked and avoided.

(iv) Stabilisation of sand dunes by growing thorny bushes can also check land degradation.

(v) Proper management of waste land can be taken up.

(vi) Control on mining activities, so that mining does not affect the land and by refilling the scars.

(vii) Proper discharge and disposal of industrial effluents and wastes after treatment can reduce land and water degradation in industrial areas.

Q. 3. What is soil erosion? What are the main causes of soil erosion?

Ans. Denudation of the soil cover and subsequent washing down is known as soil erosion.

Causes of soil erosion:

(i) Due to human activities like deforestation, overgrazing, construction and mining, etc.

(ii) Natural forces like wind, glacier and water leads to soil erosion.

(iii) The running water cuts through clayey soils and makes deep channels as 'gullies'. The land becomes unfit for cultivation, this process is called gully erosion and the land is called bad land or ravines in the Chambal basin.

(iv) Sometimes, water flows as a sheet over large areas down a slope. It leads to the washing away of the top soil. This process is called sheet erosion.

(v) Wind blows loose soil off flat or sloping land, and is called wind erosion.

(vi) Soil erosion is also caused due to defective methods of farming.

Q. 4. What are the various methods of soil conservation?

Ans. Methods of soil conservation:

(i) **Contour ploughing:** Ploughing along the contour lines can check the flow of water down the slopes. It is called contour ploughing. It can be practised on the hills.

(ii) **Terrace cultivation:** Steps can be cut out on the slopes making terraces. It restricts soil erosion. It is practiced in western and central Himalayas.

(iii) **Strip cropping:** Large fields can be divided into strips. Strips of grass are left to grow between the crops. This breaks up the force of wind. This method is called strip cropping.

(iv) **Planting of shelter belts:** Planting lines of trees to create shelter also checks the soil erosion. Rows of such trees are called Shelter Belts. These shelter belts have contributed significantly to the stabilisation of sand dunes and in stabilising the desert in western India.

Q. 5. Define the term 'Resource'. Do you think that resources are free gifts of nature? Support your argument.

Ans. Everything available in our environment which can be used to satisfy our needs, provided it is technologically accessible and economically feasible and culturally acceptable can be termed as 'Resource'.

Resources are not free gifts of nature.

These are a function of human activities. Human beings themselves are essential components of resources.

They transform material available in our environment into resources and use them.

Q. 6. Classify resources on the basis of ownership with examples

Ans. (i) Individual Resources: These are owned privately by individuals. Many farmers own land which is allotted to them by government against the payment of revenue. Urban people own houses, plots and other property. So plantation, pasture land, ponds, etc. are some of the examples of resource ownership by individuals.

(ii) Community-owned Resources: These are resources which are accessible to all the members of the community. For example, grazing grounds, burial grounds, village ponds, etc. and public parks, picnic spots, playground, etc. are accessible to all people. Thus they are community owned resources.

(iii) National Resources: All the resources within the nation are called national resources. All the minerals, water resources, forests, wildlife, land within the political boundaries and oceanic area upto 12 nautical miles from the coast and resources within the nation, belong to the nation.

(iv) International Resources: There are international institutions which regulate some resources. The oceanic resources beyond 200 kms of the Exclusive Economic Zone belong to open ocean and no individual country can utilise these without the permission of international institutions.

Q. 7. Classify resources on the basis of development with examples.

Ans. Classification of resources on the basis of development is as follows:

(i) Potential Resources: Resources which are found in a region, but have not been utilised are called potential resources. For example, the western parts of India particularly Rajasthan and Gujarat have enormous potential for the development of wind and solar energy, but so far these have not been developed properly.

(ii) Stock: Materials in the environment which have the potential to satisfy human needs but human beings do not have appropriate technology to access these, are included among stock. For example, water is a compound of two inflammable gases; hydrogen and oxygen, which can be used as a rich source of energy. But we do not have the

required technical know-how to use them for this purpose. Hence, it can be considered as stock.

(iii) Developed Resources: Resources which are surveyed and their quality and quantity have been determined for utilisation are called developed resources. The development of resources depends on technology and level of their feasibility.

(iv) Reserve: They can be put into use with the help of existing technical 'know-how' but their use has not been started. These can be used for meeting future requirements. For example, river water can be used for generating hydroelectric power but presently, it is being utilised only to a limited extent. Thus, the water in the dams, forests, etc. is a reserve which can be used in the future.

Q. 8. Why is land considered as an important resource? Explain with four facts in reference with Indian land resource.

Ans. India has land under a variety of features, namely; mountains, plateaus, plains and islands.

About 43 per cent of the land area in India 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.

Q. 9. What is land degradation? What do you know about India's degraded land?

Ans. Continuous use of land over a long period of time without taking appropriate measures to conserve and manage it, has resulted in land degradation.

India's degraded land:

At present there is about 130 million hectares of degraded land in India. Approximately, 28 per cent of it belongs to the category of forest degraded area. 56 per cent of it is water eroded area. The rest is affected by saline and alkaline deposits. Some human activities such as deforestation, overgrazing, mining and quarrying too have contributed significantly to land degradation.

Q. 10. By what name is black soil also known as? In which regions are black soils formed and why?

Ans. These soils are black in colour and are also known as regur soils. Since black soil is ideal for growing cotton, it is also known as black cotton soil.

It is believed that climatic conditions along with the parent rock material are the important factors for the formation of black soil. The type of soil is typical of the Deccan Trap (Basalt) region spread over northwest Deccan plateau and is made up of lava

flows. They cover the plateaus of Maharashtra, Saurashtra, Malwa, Madhya Pradesh, Chhattisgarh and extend in the South east direction along the Godavari and the Krishna Valleys.

Q. 11. How are red and yellow soils formed? Why do they look red?

Ans. Red soils develop on crystalline igneous rocks in areas of low rainfall in the eastern and southern parts of the Deccan Plateau.

These soils develop a reddish colour due to diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form.

Q. 12. Give any four characteristics of arid soils of India.

Ans. Arid soils range from red to brown in colour.

(i) They are sandy in texture and saline in nature. In some areas, the salt content is very high and common salt is obtained by evaporating the water.

(ii) Due to dry climate, high temperature, evaporation is faster and the soil lacks humus and moisture.

(iii) The lower layers of the soil are occupied by Kankar because of the increasing calcium content downwards.

(iv) After proper irrigation, these soils become cultivable as has been in the case of western Rajasthan.

Q. 13. Why do we need to conserve resources?

Ans. (i) The availability of resources is a necessary condition for the development of any region.

(ii) Resources are vital for any developmental activity.

(iii) But irrational consumption and over utilisation of resources may lead to socio-economic and environmental problems.

(iv) To overcome these problems, resource conservation at various levels is important.

(v) If the present trend of resource depletion by a few individuals and countries continue, the future of our planet is in danger.

Therefore, we need to conserve resources for sustainable existence of all forms of life.

Q. 14. How can the land be saved from degradation?

Ans. (i) After deforestation, afforestation can be done.

(ii) Proper management of grazing can be done.

(iii) Shelter belts can be planted to save the land from degradation.

(iv) Stabilisation of sand dunes by growing thorny bushes are some of the methods to check land degradation.

(v) Proper discharge and disposal of industrial effluents and wastes after treatment can reduce land and water degradation in industrial and suburban areas.

Hots (Higher Order Thinking Skills)

Q. 1. Explain the classification of resources on the basis of exhaustibility with the help of examples.

Ans.

Renewable	Non-renewable
(i) They can be renewed or reproduced.	(i) They occur over a very long geological period of time.
(ii) They can be used over the years again and again.	(ii) They get exhausted once used and cannot be used again.
(iii) They are abundantly available.	(iii) They are available in limited quantity.
E.g., Solar and wind, energy, water, forests and wildlife, etc.	E.g., Fossil fuels, and other minerals.

Q. 2. Examine the three major problems created as a result of indiscriminate utilization of natural resources.

Ans. Resources are vital for human survival as well as for maintaining the quality of life. Its indiscriminate use has led to the following problems:

(i) Depletion of resources for satisfying the greed of few individuals.

(ii) Accumulation of resources in few hands, which in turn divided the society into two segments, i.e., haves and have-nots or rich and poor.

(iii) Indiscriminate exploitation of resources has led to global ecological crisis such as global warming, ozone layer depletion, environmental pollution and land degradation.

Q. 3. “India is rich in certain types of resources but deficient in some other resources.” Do you agree with the statement? Support your answer with examples.

Ans. Resource planning is necessary in a country like India, which has enormous diversity in the availability of resources.

Need:

There are regions which are rich in certain types of resources but are deficient in some other resources.

There are some regions which are self-sufficient and there are some regions which have acute shortage of some vital resources.

Examples:

The states of Jharkhand, Chhattisgarh and Madhya Pradesh are rich in minerals and coal deposits.

Arunachal Pradesh has abundant water resources but lacks infrastructural development.

The state of Rajasthan has enough solar energy and wind energy but lacks water resources.

The cold desert of Ladakh has a very rich cultural heritage but is deficient in water, infrastructure and some vital minerals.

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

Q. 4. “The Earth has enough resources to meet the need of all but not enough to satisfy the greed of even one person.” How is this statement relevant to the discussion of development? Discuss.

Ans. Gandhiji was very apt in voicing his concern about resource conservation.

He said there is enough for everybody’s need and not for anybody’s greed.

He regarded the greedy and selfish individuals and the 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.

Q. 5. “Planning is widely accepted strategy for judicious use of resources in a country like India.” Justify this statement with two relevant points and an example.

Ans. (i) An equitable distribution of resources has become essential for a sustained quality of life and global peace.

(ii) If the present trend of resource depletion by a few individuals and countries continues, the future of our planet is in danger.

(iii) Therefore, resource planning is essential for sustainable existence of all forms of life. Sustainable existence is a component of sustainable development.

Examples: Some of the resources like coal, petroleum are available in limited quantity and for a limited period of time. These resources are depleting fast. So, we need to plan the judicious use of Resources.

Q 6. Why is soil considered as a living system? Mention any two factors that are responsible for soil formation.

Ans. The soil is a living system, it takes millions of years to form soil upto a few cms in depth. Relief, parent rock, climate, vegetation and other forms of life and time are important factors in the formation of soil. Various forces of nature such as change in temperature, actions of running water, wind and glaciers, activities of decomposers, etc. contribute to the formation of soil. Chemical and organic changes which take place in the soil are equally important.

Q. 7. Mention any two human activities which are responsible for the process of soil erosion. Explain the two types of soil erosion mostly observed in India.

Ans. Denudation of the soil cover and subsequent washing down is known as soil erosion.

Causes of soil erosion:

- (i) Due to human activities like deforestation, overgrazing, construction and mining, etc.
- (ii) Natural forces like wind, glacier and water leads to soil erosion.
- (iii) The running water cuts through clayey soils and makes deep channels as gullies. The land becomes unfit for cultivation, this process is called gully erosion and the land is called bad land or ravines in the Chambal basin.

Two types of soil erosion are:

Gullies: The running water cuts through the soil and make deep gullies. There are scopes formed on the land, which become unfit for the use.

Sheet Erosion: When water flows down the slope and top soil is wasted away, this process is called sheet erosion.

Q. 8. Do you think that resources are free gifts of nature as is assumed by many? Explain your argument.

Ans. Resources are not free gifts of nature as:

- (i) Resources are a function of human activities.
- (ii) Human beings themselves are essential components of resources.
- (iii) They transform material available in our environment into resources and use them.