

**SESSION : 2022-23**  
**CLASS : X**  
**RESOURCE AND DEVELOPMENT**

1-The resources which are found everywhere are known as

**Ubiquitous**

Non-renewable resources

Human made resources

None of the above

2-The following is (are) the non-renewable resources

Coal

Petroleum

Natural gas

**All of the above**

3-Balancing the need to use resources and also conserve them for the future is called

**sustainable development**

resource conservation

resource development

human resource development

4-The resources can be conserved by

reducing consumption

recycling

reusing

**All of the above**

5-Land covers only about \_\_\_\_ percent of the total area of the earth's surface

20

25

**30**

35

6-The total percent of land of world under forest is

26

31

36

41

7-The thin layer of grainy substance covering the surface of the earth is called

**soil**

sand

mineral

organic matter

8-The following is (are) not a factor(s) of soil formation

Organic matter

Time

**Soil texture**

All of the above

9-The major factor(s) of soil formation is (are)

the nature of the parent rock

climatic factors

time taken for the composition of soil formation

**All of the above**

10-The following factor(s) is (are) responsible for degradation of soil

Chemical fertilizers

Landslides

Floods

**All of the above**

11-The process in which bare ground between plants is covered with a layer of organic matter like straw, is called

**Mulching**

Contour carriers

Shelter belts

Intercropping

12-The process in which different crops are grown in alternate rows and are sown at different times to protect the soil from rain wash, is known as

Crop rotation

Intercropping

Terrace farming

## **Contour cropping**

**Q.1: Khadar is a type of**

- (a) Black Soil
- (b) Alluvial Soil**
- (c) Laterite Soil
- (d) Desert Soil

**Q.2: Resource which can be renewed again are:-**

- (a) National Resource
- (b) Potential Resource
- (c) Renewable Resources**
- (d) Stock

**Q.3: In which year was the Earth Summit held?**

- (a) 1990
- (b) 1991
- (c) 1992**
- (d) 1993

**Q.4: How much percentage of land is plain in India?**

- (a) 41 %
- (b) 45%
- (c) 43%**
- (d) 47%

**Q.5: Which Soil is known as Black Cotton soil?**

- (a) Red Soil
- (b) Arid Soil
- (c) Mountain Soil
- (d) Black Soil**

**Q.6: Soil can be Conserved by:-**

- (a) Cutting of Trees
- (b) Over Grazing
- (c) Planting of Trees**

(d) Excessive mining

**Q.7: Land degradation due to over irrigation can be seen in the states of:-**

**(a) Punjab and Haryana**

(b) Assam

(c) Orissa

(d) Mizoram

**Q.8: Which one of the following is an example of Biotic Resource:-**

(a) Rock

(b) Mountain

(c) Mineral

**(d) Flora**

**Q.9: They are Gifts of Nature which satisfy Human wants:-**

(a) A Commodity

(b) a Thing

**(c) Resources**

(d) None of Them

**Q.10: Which one of the following is an example of non- renewable resources**

(a) Solar Energy

(b) Tidal Energy

**(c) Petroleum**

(d) Hydel Energy

**Q.11: On the Basis of ownership resources can be classified into:-**

(a) Two Types

(b) Three Types

**(c) Four Types**

(d) None of Them

**Q.12: How many Economic zones are there in India?**

**(a) Five**

(b) One

(c) Two

(d) Ten

**Q.13: Soil is a:-**

- (a) Renewable Resource**
- (b) Potential Resource
- (c) Non- Resource
- (d) None of them

**Q.14: In which one of the following states is terrace cultivation practised?**

- (a) Punjab
- (b) Haryana
- (c) Uttar Pradesh
- (d) Uttaranchal**

**Q.15: Which one of the following is the main cause of land and water pollution in India in recent years?**

- (a) Industrial Effluents**
- (b) Chemical Fertilizer
- (c) Deforestation
- (d) None of them

**Q.16: Coal, iron ore, petroleum, diesel etc. are the examples of**

- (a) Biotic resources
- (b) Abiotic resources
- (c) Renewable resources
- (d) Non Renewable resources**

**Q.17: Which one of the following term is used to identify the old and new alluvial respectively?**

- (a) Khadar & Terai
- (b) Terai & Bhangar
- (c) Bhangar & Khadar**
- (d) Terai & Duars

**Q.18: Which one of the following soil is the best for cotton cultivation?**

- (a) Red soil
- (b) Black soil**
- (c) Laterite soil

(d) Alluvial soil

**Q.19: How much percentage of forest area in the country according to the National Forest Policy?**

- (a) 33%**
- (b) 37%
- (c) 27%
- (d) 31%

**Q.20: Which type of soil develops due to high temperature and evaporation?**

- (a) Arid Soil**
- (b) Forest Soil
- (c) Black Soil
- (d) Red Soil

**Q.21: Which one of the following resources can be acquired by a Nation?**

- (a) Potential resources
- (b) International resources
- (c) National resources**
- (d) Public resources

**Q.22: Which one of the following is responsible for sheet erosion?**

- (a) Underground water
- (b) Wind
- (c) Glacier
- (d) Water**

**Q.23: Which one of the following method is used to break up the force of wind?**

- (a) Shelter belt**
- (b) Strip Cropping
- (c) Contour ploughing
- (d) Terrace farming

**Q.24: Which one of the following is the main cause of land degradation in Madhya Pradesh?**

- (a) Mining**

- (b) Overgrazing
- (c) Deforestation**
- (d) Over Irrigation

**Q.25: Which one of the following statements refers to the sustainable development?**

- (a) Overall development of various resources
- (b) Development should take place without damaging the environment.**
- (c) Economic development of people.
- (d) Development that meets the desires of the members of all communities.

**ANSWER:**

- 1. (b) Alluvial Soil**
- 2. (c) Renewable Resources**
- 3. (c) 1992**
- 4. (c) 43%**
- 5. (d) Black Soil**
- 6. (c) Planting of Trees**
- 7. (a) Punjab and Haryana**
- 8. (d) Flora**
- 9. (c) Resources**
- 10. (c) Petroleum**
- 11. (c) Four Types**
- 12. (a) Five**
- 13. (a) Renewable Resource**
- 14. (d) Uttaranchal**
- 15. (a) Industrial Effluents**
- 16. (d) Non Renewable resources**
- 17. (c) Bangar & Khadar**
- 18. (b) Black soil**
- 19. (a) 33%**
- 20. (a) Arid Soil**
- 21. (c) National resources**
- 22. (d) Water**
- 23. (a) Shelter belt**
- 24. (c) Deforestation**
- 25. (b) Development should take place without damaging the environment.**

Question 1.

What do you understand by a 'Resource'? Give examples.

Answer:

Everything available in our environment which can be used to satisfy our needs, is called a resource. It should be technologically accessible, economically feasible and culturally acceptable. Only then, it can be termed as a 'Resource'. Examples are: minerals, forests, fossil fuels etc..

Question 2.

"Resources are a function of human activities." Justify this statement.

Answer:

Mere presence of resources, as free gifts of nature, does not make them resources. Human beings are essential components of resources because they transform material available in our environment into resources. The utility of resources depends on the stage of cultural development of man and the tools and technology used by him.

Question 3.

Write the classification of resources on four different bases.

Answer:

Resources can be classified in the following four ways:

(a) On the basis of Origin:

- Biotic
- Abiotic

(b) On the basis of exhaustibility:

- Renewable
- Non-renewable

(c) On the basis of ownership:

- Individual (Personal)
- Community
- National



- International

(d) On the basis of status and development:

- Potential
- Developed
- Reserve
- Stock

Question 4.

Explain the classification of resources on the basis of origin and give one example of each.

Answer:

On the basis of origin, resources can be classified as Biotic and Abiotic.

Biotic Resources are obtained from the biosphere. They have life or are living resources, e.g., human beings, fisheries, forests, etc.

Abiotic Resources include all non-living things, e.g., rocks and minerals.

Question 5.

Classify the resources on the basis of exhaustibility and give two examples of each.

Answer:

On the basis of exhaustibility, resources can be classified as: Renewable and Non-renewable.

**Renewable Resources.** The resources which can be renewed or reproduced by physical, chemical and mechanical processes are known as renewable or replenishable resources, e.g., water, wildlife, forests, solar energy, wind energy etc.

**Non-renewable Resources.** The resources which once get exhausted, cannot be remade. They take a long geological period of time, i.e., millions of years in their formation, e.g., minerals, fossil fuels etc.

Question 6.

Write two types of renewable resources and give one example of each type.

Answer:

Two types of renewable resources are as follows:

1. Continuous or Flow Resources, e.g., wind and water resources.
2. Biological Resources, e.g., natural vegetation (forests) and wildlife.

Question 7.

Write two characteristics of non-renewable resources and write their two broad categories with examples.

Answer:

Two characteristics of non-renewable resources:

1. They cannot be recycled and get exhausted with their use.
2. They take millions of years in their formation.

Two broad categories of non-renewable resources:

1. Recyclable resources, e.g., metals.
2. Non-recyclable resources, e.g., fossil fuels.

Question 8.

Give any two examples of non-renewable resources.

Answer:

Non-renewable resources are resources which once get exhausted, cannot be remade. They take a long geological period of time, i.e., millions of years, in their formation, e.g., minerals, fossil fuels, etc.

Question 9.

Explain four types of resources based on ownership and give one example of each type.

Answer:

On the basis of ownership, there are four types of resources:

1. Individual Resources. Resources, which are owned privately by individuals, e.g., farmers own pieces of land or houses. Plantation, pasture lands, water in wells are some resources owned by individuals.
2. Community Owned Resources. These resources are accessible to all the members of the community, e.g., village ponds, public parks, playgrounds in urban areas are accessible to all the residents of that area.
3. National Resources. All the resources within the political boundary of a nation including the territorial water (oceanic area upto 12 nautical miles from the coast) extending into the ocean and resources therein belong to the nation, e.g., all minerals, forests, wildlife, water resources, land etc.

4. International Resources. There are international institutions which own and regulate some resources, e.g., The oceanic resources beyond 200 km of the Exclusive Economic Zone belong to the open ocean and no individual country can utilise these without the concurrence of international institutions.

Question 10.

Distinguish between the following:

1. Potential and Developed Resources;
2. Stock and Reserves.

Answer:

1. Potential Resources. Resources which are found in a region, but have not been utilised, e.g. r Gujarat and Rajasthan have a lot of potential for the development of wind and solar energy, but so far they have not been developed fully.

Developed Resources. Resources which are surveyed and their quality and quantity have been determined for utilisation. The development of resources depends on technology and level of their feasibility, e.g., water resources used for hydel power generation or irrigation purposes.

2. Stock. Materials in the environment, which have the potential to satisfy human needs but man does not have the appropriate technology to access them are included among stock, e.g. 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. Reserves. Reserves are the subset of the stock, which can be put into use with the help of existing technical 'know-how' but their full use has been postponed for meeting the future needs, e.g., forest reserves, iron-ore reserves, water in the dams etc.

Question 11.

Name the categories under which natural resources can be grouped on the basis of state of development.

Answer:

1. Potential Resources
2. Developed Resources
3. Stock
4. Reserves.

Question 12.

How are natural resources important for man? Give five points.

Answer:

Importance of resources for man:

1. Resources are vital for human survival.
2. They are important for maintaining the quality of life as man has been using the bio-physical environment to satisfy his needs.
3. Natural resources form the backbone of the economy of a nation.
4. These are the bases for economic strength and prosperity of the people.
5. They provide material, energy and favourable conditions for development.

Question 13.

List the problems which resulted due to indiscriminate use of resources by man.

Answer:

1. It has resulted in depletion of many resources.
2. Accumulation of resources in few hands which, in turn, divided the society in two segments, i.e., haves and have-nots or rich and poor.
3. It has led to the global ecological crisis, e.g., global warming, ozone layer depletion, environmental pollution, land degradation, etc.

Question 14.

“Resource planning is essential for sustainable existence.” Discuss.

Answer:

Sustainable existence is a component of sustainable development which aims at development without damaging the environment and at the same time conserving for future generation. Therefore, resource planning is necessary for judicious, rational and equitable distribution and proper utilisation of resources. It has become essential for a sustained quality of life and global peace.

Question 15.

What do you understand by ‘sustainable economic development’?

Answer:

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

Question 16.

Why is ‘Resource Planning’ necessary? Give reasons.

Answer:

Planning is necessary for proper and judicious utilisation of resources.  
Reasons for resource planning:

1. Resource availability is not the same in all parts of the country.
2. Resources, especially non-renewable resources, need extra care as they Cannot be renewed.
3. There is acute shortage or deficiency of some resources.
4. Resource planning helps in proper utilisation of resources by reducing wastage. It takes care of future needs and may sustain the environment.

Question 17.

“India has enormous diversity in the availability of resources.” Name four varied regions to justify this statement.

Answer:

There are regions which are rich or self-sufficient in certain types of resources and there are areas that are deficient or have acute shortage of some vital resources.

For example:

1. The states of Jharkhand, Chhattisgarh and Madhya Pradesh are rich in minerals and coal deposits.
  2. Arunachal Pradesh has abundance of water resources but lacks in infrastructural development.
  3. Rajasthan is very well endowed with solar and wind energy but lacks in water resources.
  4. The cold desert area of Ladakh has very rich cultural heritage. It is deficient in water, infrastructure and some vital minerals.
- Such cases call for balanced resource planning at different levels.

Question 18.

Explain three stages of ‘resource planning.’ (2015)

Answer:

Three stages of resource planning:

1. Identification and inventory of resources across the regions of the country. This involves surveying, mapping and the qualitative and quantitative estimation and measurement of the resources.
2. Evolving a planning structure endowed with appropriate technology, skill and institutional set up for implementing resource development plAnswer:

3. Matching the resource development plans with overall national development  
plAnswer:

Question 19.

“Planning is the widely accepted strategy for judicious use of resources in a country like India”. Justify this statement with two relevant points and an example. (2013)

Answer:

India has enormous diversity in the availability of resources. Through planning, regions which have shortage of vital resources and those having adequate quantities, receive equal attention.

1. There are regions which are rich in certain types of resources but are deficient in some other resources.  
For example: Arunachal has abundance of water but lacks in infrastructural development.
2. There are some regions which can be considered self sufficient in terms of availability of resources. For example: The states of Jharkhand, Chhattisgarh and Madhya Pradesh are rich in minerals and coal deposits.
3. There are some regions which have acute shortage of some vital resources. For example: The state of Rajasthan is well endowed with solar and wind energy but lacks in water resources.

Question 20.

Write four factors which determine resource development in a region.

Answer:

Four factors involved in the development of resources are:

1. Availability of resources
2. Level of technology
3. Quality of human resources
4. Historical experiences of the people

Question 21.

What do you understand by ‘conservation of resources’? Why is it necessary to conserve our resources? Give three reasons.

Answer:

Conservation is judicious and planned use of natural resources for sustainable benefit to the present generation. It also maintains a potential to meet the needs and

aspirations of future generations.

Three reasons for conservation:

1. Our resources are limited in nature, therefore they have to be frugally used.
2. Many of the resources are non-renewable in nature, therefore extra care has to be taken.
3. Their conservation is necessary for our own sustenance and for the ongoing economic developmental processes.

Question 22.

Explain the concept of resource conservation as voiced by Gandhiji. (2012)

Or

Whom did Gandhiji make responsible for the depletion of resources at the global level?

Answer:

Gandhiji voiced his concern about resource conservation in these Words: “There is enough far everybody’s need and not for anybody’s greed.” He placed the greedy and selfish individuals as the root cause for resource depletion at the global level. He was against ‘mass production’ and wanted to replace it with ‘production by the masses’.

1. Indiscriminate use of resources by human beings has led to the depletion of resources for satisfying the greed of few individuals.
2. Irrational consumption and over-utilization of resources leads to socio-economic and environmental problems.

Question 23.

Write four institutional efforts made at global level for ‘resource conservation’.

Answer:

1. At the international level, the Club of Rome advocated resource conservation for the first time in a more systematic way in 1968.
2. In 1974, the Gandhian Philosophy was presented once again by Schumacher in his book “Small is Beautiful”.
3. Brundtland Commission Report in 1987, introduced the concept of ‘sustainable development’ and advocated it as a means for resource conservation. This was subsequently published in a book entitled “Our Common Future”.

4. In June 1992, the first 'International Earth Summit' was held in Rio de Janeiro in Brazil, in which 100 heads of States met for addressing urgent problems of environmental protection and socio-economic development at the global level.

Question 24.

Write the major features of Rio de Janeiro Earth Summit, 1992.

Answer:

1. In 1992, 100 heads of States met in Rio de Janeiro in Brazil, for the first 'International Earth Summit'.
2. The summit was convened for addressing urgent problems of:
  - o environmental protection and
  - o socio-economic development at global level.
3. The assembled leaders signed the Declaration on Global Climatic Change and the Biological Diversity.
4. The Rio convention endorsed the global Forest Principles and adopted 'Agenda 21' for achieving sustainable development in the 21<sup>st</sup> century. It is an agenda to combat environmental damage, poverty and diseases through global co-operation on common interests, mutual needs and shared responsibilities.

Question 25.

"The future generation may not have sufficient resources as compared to the present generation". Justify the statement by giving suitable examples. (2012)

Or

Why is the issue of sustainability relevant for development?

Answer:

Present sources of energy in India are coal, petroleum, natural gas, solar energy, wind energy, hydel power, electricity, wood for fire, cow dung etc. Most of these are non-renewable sources of energy which may get exhausted after some time. These are available in limited quantities. The present rate of consumption is higher than the rate at which these resources are being replenished and should be preserved for our future generations.

In fifty years' time, India may depend largely on non-conventional sources of energy which are available in abundance such as solar energy, hydel energy, wind energy etc. The total hydel power potential in India is estimated at 1,50,000 MW of which only one-sixth has been developed so far.



1. Development of a country needs to be continuous. Every country would like to have the level of development go up further.
2. Many scientists have warned that the present levels of development cannot be sustained for the future as the present rate of consumption of both renewable and non-renewable resources is very high. Rapid industrialisation has led to environment degradation.
3. Sustainability development aims at development without damaging the environment and at the same time conserving for the future.
4. Sustainability of development is essential not only for the present generation but also for future generations to ensure a good life.

## Land Resources

### Question 26.

Why is land as a resource important for us? Write four points.

Answer:

1. 95% of our basic needs of food, clothing and shelter are derived from land.
2. We live on land and use it in different ways, e.g. for agriculture, for transport and communication systems, etc.
3. We perform our economic activities on land.
4. It supports natural vegetation, wildlife and human life.

### Question 27.

Why land-use should be done in a planned manner? Write two points.

Answer:

1. Land is a fixed asset.
2. As land is used for varied purposes and activities and for human sustenance, therefore it is important to use the available land for various purposes with careful planning.

### Question 28.

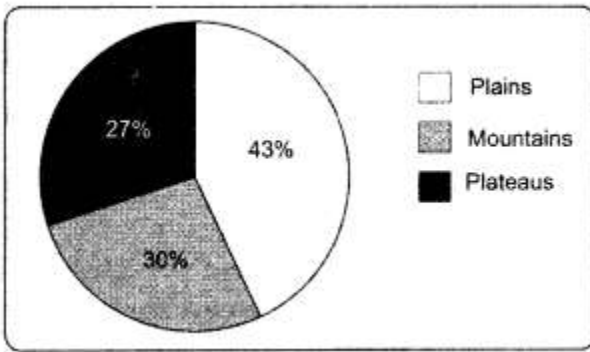
Look at the picture and name three major relief features of India and their respective share in the total area.

Answer:

Three major relief features:

1. Plains — 43%
2. Mountains — 30%

### 3. Plateaus — 27%



Question 29.

Name the relief feature occupying the largest area, along with its percentage share in the total area.

Answer:

Plains occupy the largest area having 43% share in the total area.

Question 30.

Name three main relief features of India and write the importance of each.

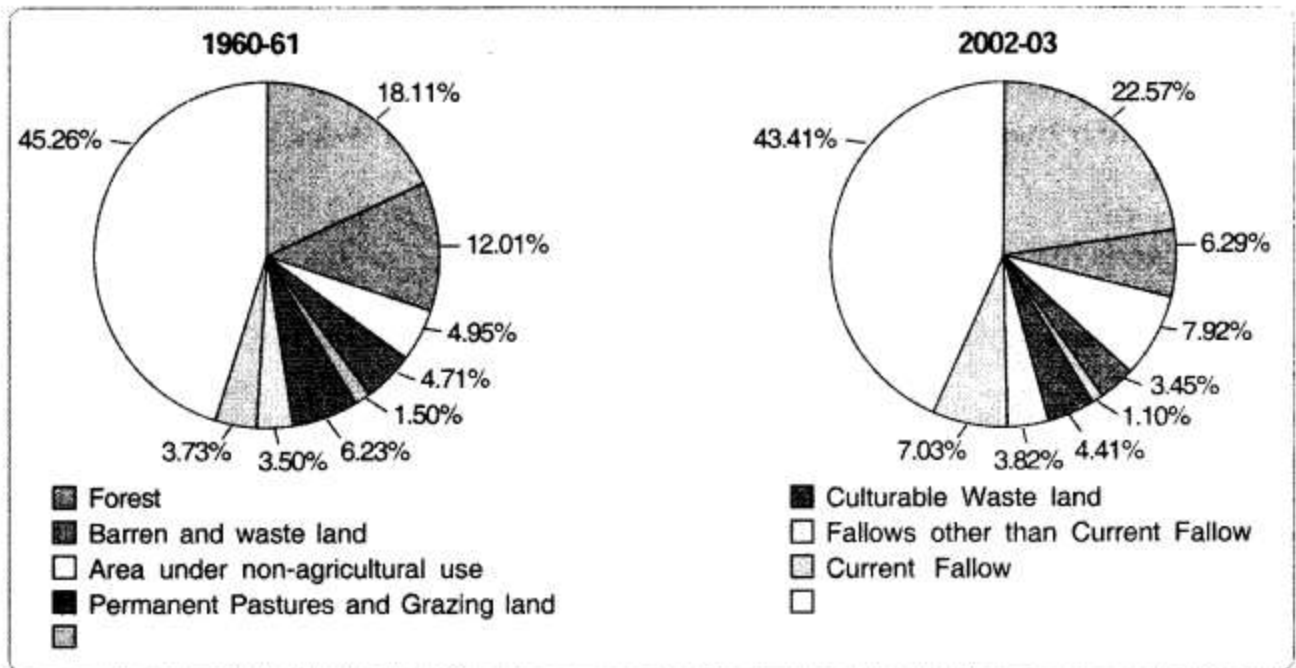
Answer:

Relief Features	Their Importance /Uses
1. Plains	(i) provide facilities for agriculture.  (ii) provide facilities for industrial development.  (iii) because of their level, nature and ease of construction, plains support huge population of the country.

2. Mountains	<p>(i) ensure perennial flow of some rivers and many rivers rise from them.</p> <p>(ii) provide facilities for tourism.</p> <p>(iii) are important from ecological point of view, e.g. have lot of forest wealth and wildlife.</p>
3. Plateaus	<p>(i) possess rich reserves of minerals.</p> <p>(ii) contain lot of fossil fuels, especially coal.</p> <p>(iii) possess rich forest cover.</p>

Question 31.

Look at the picture and explain the land-use pattern in India. Why has land under forest not increased much since 1960-61?



Answer:

The major land-use categories and their percentage share is:

1. Net sown area, where regular agriculture is done — 43.41%.
2. Forests, 22.57% of the total land is covered by forests.
3. Barren and waste land — 6.29%.
4. Area under non-agricultural use — 7.92%.
5. Permanent pastures and grazing land — 3.45%.
6. Area under miscellaneous tree crops and groves — 1.1%.
7. Culturable waste land — 4.41 %
8. Fallows other than current fallows — 3.82%
9. Current fallow – 7.03%

The land under forests has increased marginally by about 4.46%. From 18.11% in 1960-61, it is still only 22.57% which is far lower than the desired 33% as outlined by the National Forest Policy (1952).

Reasons for marginal increase in forest area:

1. increasing population
2. technological developments
3. expansion of agriculture
4. development of transport and communication facilities

5. overgrazing
6. felling of trees

All these exert great pressure on land thus causing further depletion of forests.

Question 32.

Distinguish between each of the following:

- (a) Current fallow and other than current fallow land
- (b) Waste-land and culturable waste-land
- (c) Net sown area and gross cropped area.

Answer:

(a) Current fallow land. Land left without cultivation for one or less than one agricultural year.

Other than current fallow land. Land left uncultivated for the past one to five agricultural years.

(b) Waste land. It includes rocky, arid and desert areas which are lying waste at the moment. Culturable waste land. Arable land which is left uncultivated for more than five agricultural years.

(c) Net Sown Area. It is the total area under cultivation.

Gross Cropped Area. Area sown more than once in an agricultural year plus net sown area.

Question 33.

What do you understand by 'reported area'? What is the reported area of India and why? Give two major reasons.

Answer:

The percentage of total area for which land-use statistics (data) are available, is termed as 'reported area'. India's reported area is 93%.

Reasons:

- Because the land-use reporting for most of the north-eastern states, except Assam, has not been done.
- Some areas of Jammu and Kashmir occupied by Pakistan and China have not been surveyed.

Question 34.

Write three physical and three human factors which determine the use of land.

Answer:

Physical Factors:

- Topography
- Climate
- Soil types

Human Factors:

- Population density
- Technological capability
- Culture and traditions

Question 35.

Why are the other than current fallow-lands cultivated once or twice in about two to three years? Give two reasons.

Answer:

Two reasons are:

1. These lands may be of poor quality.
2. The cost of cultivation of such lands is very high.

Question 36.

“The pattern of net sown area varies greatly from one state to another.”

Or

Name two states having high net sown area and two states having low net sown area. Give two reasons for each.

Answer:

Punjab and Haryana are two states, which have more than 80% of their total area as N.S.A. (Net Sown Area) because:

1. They are agriculturally rich States because of favourable climatic conditions for the growth of crops and levelled fertile nature of land.
2. Irrigation facilities are well-developed here.

States with low N.S.A. i.e., less than 10% are Arunachal Pradesh and Mizoram because:

1. The nature of land is hilly and forested, therefore availability of arable land is less.
2. Economic backwardness and climatic conditions also do not encourage large scale agricultural activities.

Question 37.

According to National Forest Policy, how much of the country's area should be under forest cover and why? Give two considerations for this norm. Have we been able to meet this norm?

Answer:

According to National Forest Policy, 33% of the country's total area should be under forest cover.

Reasons:

1. It is considered essential for the maintenance of ecological balance.
2. The livelihood of millions of people who live on the fringe of these forests depends on these forests.

We have 22.57% area under forests which is far lower than the desired 33% of geographical area, as outlined by National Forest Policy.

Question 38.

What is land degradation? What is the area of degraded land in India? Name four types of waste-lands and their percentage share respectively.

Answer:

Damage to the land, bringing down its quality is called land degradation.

Continuous use of land over a long period of time without taking appropriate measures to conserve and manage it, results in land degradation. India has 130 million hectares of degraded land.

Four categories of waste-lands:

1. Water eroded area .. 56%
2. Forest degraded area .. 28%
3. Wind eroded area .. 10%
4. Saline and Alkaline land .. 6%

Question 39.

Write six human activities which have caused land degradation.

Answer:

1. Deforestation
2. Overgrazing
3. Mining activities — mining sites are abandoned after excavation leaving deep scars and traces of over-burdening.

4. Mineral processing produces large quantities of dust in the atmosphere, which on settling down on land, retards the process of infiltration of water into the soil.
5. Over-irrigation leads to waterlogging which increases salinity and alkalinity in the soil.
6. Industrial effluents — such wastes cause land and water pollution.

Question 40.

Which factor is mainly responsible for maximum land degradation in India? (2015)

Answer:

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

Question 41.

Distinguish between biotic and abiotic resources by stating four points.

Answer:

Difference between biotic and abiotic resources

Biotic resources	Abiotic resources
(i) The resources which are obtained from biosphere are biotic resources.	(i) All those things which are composed of nonliving things are called abiotic resources.
(ii) They have life.	(ii) They do not have life.
(iii) These include flora and fauna,	(iii) These include rocks, metals, land,



fisheries, livestock, human beings, etc.	air, mountains, rivers, etc.
(iv) Minerals such as coal and petroleum are included in this category because they were formed from decayed organic matter.	(iv) Minerals such as gold, iron, copper, silver, etc. come in this category.

Question 42.

Name three states each in which land degradation is caused due to

1. over-irrigation
2. over-grazing
3. deforestation due to mining activities

Answer:

1. Three states where over-irrigation has resulted in land degradation are Punjab, Haryana and Western Uttar Pradesh.
2. Due to over-grazing. Gujarat, Rajasthan, Madhya Pradesh and Maharashtra.
3. Deforestation due to mining activities has led to land degradation in Jharkhand, Chhattisgarh, Madhya Pradesh.

Question 43.

Write some measures/ways to solve problems of land degradation. (2014)

Answer:

Measures to conserve land:

1. Afforestation.
2. Proper management of grazing to control over-grazing.
3. Planting of shelter belts of plants.
4. Stabilisation of sand dunes by growing thorny bushes.

5. Control of mining activities.
6. Proper discharge and disposal of industrial effluents and wastes after treatment.
7. Proper management of waste-lands
8. Avoid over-irrigation, especially in dry areas.
9. Avoid overuse of fertilisers and pesticides.

## Soil As A Resource

### Question 44.

What is soil? How is it an important resource for us?

Answer:

Soil is the uppermost layer of the earth's crust which is loose, fragmented and fine. It is rich in both organic (humus) and inorganic materials and supports plant growth.

Soil is a living system. It takes millions of years to form soil upto a few cm in depth.

It is an important resource because:

- It is the medium of plant growth.
- It supports different types of living organisms on earth.

### Question 45.

Write the main factors responsible for soil formation.

Answer:

Soil is a living system. It takes millions of years to form soil up to a few centimeters in depth.

Factors responsible for soil formation are:

1. Parent rock or bed rock on which the soils are formed, disintegrate and decompose under the process of weathering and erosion.
2. Climate: It determines the rate of weathering.
3. Relief, vegetation, other forms of life and time are other important factors in the formation of soils.
4. Various forces of nature such as change in temperature, actions of running water, wind and glaciers, activities of decomposers etc. also contribute to the formation of soil.
5. Chemical and organic changes which take place in soil, also play a role in its formation.

Question 46.

Write four factors which are responsible for varied types of soils in India.

Answer:

Factors:

1. Varied relief features
2. Varied land forms
3. Varied climatic realms
4. Varied vegetation types.

Question 47.

On what basis are soils classified into different types?

Answer:

Basis of classification of soils:

1. Colour
2. Thickness
3. Texture
4. Age
5. Chemical and physical properties
6. Factors responsible for soil formation.

Question 48.

Name six types of soils found in India. Which is the most widely spread soil?

Name one major region where it is found.

Answer:

1. Alluvial soil
2. Red and yellow soil
3. Black soil
4. Laterite soil
5. Arid soil
6. Forest and mountainous soils

Alluvial soil is the most widely spread soil.

The entire northern plains are made of alluvial soil.

Question 49.

Write three regional/local names of areas where you find coarse alluvial soil and

name one deltaic area which has fine alluvial soil.

Answer:

Coarse alluvial soil is more common in piedmont plains such as Duars, Chos and Terai.

Fine alluvial soil is found in the eastern coastal plains in the deltas of Mahanadi, Godavari, Krishna and Kaveri rivers.

Question 50.

Classify alluvial soils on the basis of their age. Write two characteristics of each.

Answer:

According to their age, alluvial soils are of two types: Bangar and Khadar.

Bangar	Khadar
(i) It is old alluvial soil.	(i) It is new alluvial soil.
(ii) It has higher concentration of 'kankar' nodules.	(ii) It has more fine particles.
(iii) It is coarser and is found in the old river terraces.	(iii) It is more fertile than 'Bangar' and is found in flood plains.

Question 51.

Write the main characteristics of alluvial soils.

Answer:

1. Alluvial soils as a whole are very fertile. They consist of various proportions of sand, silt and clay.

2. They contain adequate proportion of potash, lime and phosphoric acid. They are ideal for the growth of sugarcane, paddy, wheat and other cereal and pulse crops.
3. Due to its high fertility, regions of alluvial soils are intensively cultivated and are densely populated.
4. Soils in the drier areas are more alkaline and can be productive after proper treatment and irrigation.

Question 52.

Give the distribution of alluvial soils in brief.

Answer:

The entire northern plains are made up of alluvial soils.

- These have been deposited by three important Himalayan river systems
- the Indus, Ganga and Brahmaputra.
- These soils also extend into Rajasthan and Gujarat through a narrow corridor.
- These are also found in the eastern coastal plains in the deltas of the Mahanadi, Godavari, Krishna and Kaveri rivers.

Question 53.

Write two factors which are responsible for the formation of black soils. Name four States where they are found. Name the crop mainly grown in it.

Answer:

Two factors are:

1. The climatic conditions
2. The parent rock material.

Four states in which black soils are found are: Maharashtra, Gujarat, Madhya Pradesh and Chhattisgarh. Black soil is ideal for growing cotton and is also called black cotton soil.

Question 54.

Write six characteristics of regur soils (black soils). (2015)

Answer:

1. They are made up of extremely fine, i.e. clayey material.
2. They have capacity to hold moisture that makes them ideal for growing cotton.

3. They are rich in soil nutrients such as calcium carbonate, magnesium, potash and lime.
4. These soils are generally poor in phosphoric contents.
5. They develop deep cracks during dry hot weather, which helps in the proper aeration of soil.
6. These soils are sticky when wet and difficult to work unless tilled immediately after the first shower.

Question 55.

Give the distribution of black/regur Soil. (2015)

Answer:

This soil is typical of the Deccan Trap region.

- It is spread over north west Deccan plateau and is made up of lava flows.
- This soil covers the plateaus of Maharashtra, Saurashtra, Malwa, Madhya Pradesh and Chhattisgarh and extends along the Godavari and Krishna Valleys.

Question 56.

In what broad category do the soils of Maharashtra fall? (2014)

Answer:

Black soil region also known as regur soils.

Question 57.

What is regur soil? Write its two features. Mention any two regions where regur soil is found.

Answer:

Regur soil is soil which is made up of extremely fine, i.e., clayey material.

Features:

1. They have capacity to hold moisture that makes them ideal for growing cotton.
2. They are rich in soil nutrients such as calcium carbonate, magnesium, potash and lime.
3. These soils are generally poor in phosphoric contents.
4. They develop deep cracks during dry hot weather, which helps in the proper aeration of soil.
5. These soils are sticky when wet and difficult to work unless tilled immediately after the first shower.

Regions where regur soil is found:

1. This soil is typical of the Deccan Trap region.
2. It is spread over north west Deccan plateau and is made up of lava flows.
3. This soil covers the plateaus of Maharashtra, Saurashtra, Malwa, Madhya Pradesh and Chhattisgarh and extends along the Godavari and Krishna Valleys.

Question 58.

Write the distribution of red and yellow soils. Give reasons for their colour.

Or

How does red soil develop and in which part of India? What makes it look red and yellow?

Answer:

In Eastern and Southern parts of Deccan plateau, red soils have developed on crystalline igneous rocks in areas of low rainfall. They are also found in parts of Orissa, Chhattisgarh, Southern parts of the middle Ganga Plains and along the piedmont zone of Western Ghats.

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.

Question 59.

Write four characteristics of laterite soils. Why are they called laterite?

Answer:

1. They are highly leached soils.
2. They develop in areas of heavy rainfall and high temperature.
3. They have low 'humus' content, because most of the micro-organisms particularly decomposers like bacteria get destroyed due to high temperature.
4. These soils can be cultivated with adequate doses of manure and fertilisers. The word laterite has been derived from the Latin word 'late/' which means brick. Since their colour is red and resembles brick colour, these soils are called laterite soils.

Question 60.

Write six states which have laterite soils and name the important crops which grow well in these soils.

Answer:

Six states in which laterite soils are found: Karnataka, Kerala, Tamil Nadu, Madhya Pradesh and the hilly areas of Orissa and Assam.  
Crops which grow well in these soils are: tea, coffee and cashew-nuts.

Question 61.

Write the main characteristics of arid soils. (2014)

Answer:

1. Arid soils range from red to brown in colour.
2. They have a sandy texture.
3. They are saline in nature. In areas where salt content is high, common salt is obtained by evaporation.
4. Arid soil lacks humus and is moisture deficient.
5. The lower horizons of the soil have kankars because of high calcium content which restrict infiltration of water.
6. Proper irrigation helps make these soils cultivable, e.g., Western Rajasthan.

Question 62.

Write the main features of forest soils. What are the different types of soils found in the hilly forested areas?

Answer:

Forest soils are mainly found in the hilly and mountainous areas where sufficient rain forests are available. The soil texture varies according to the mountain environment where they are formed. At least four types of soils can be seen in the hilly forested areas:

1. They are loamy and silty in valley sides.
2. They are coarse grained in upper slopes.
3. They are highly denuded, acidic with low humus content in the snow covered areas.
4. They are very fine and fertile in lower parts of the valley and on river terraces.

Question 63.

What is soil erosion? Write the main causes of soil erosion.

Answer:

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



The process of soil formation and erosion goes on simultaneously and generally there is a balance between the two. This balance is sometimes disturbed, leading to soil erosion. The main activities like deforestation, over-grazing, construction and mining and also natural agents like wind, running water and glacier are the main causes of soil erosion.

Question 64.

Explain three types of soil erosion mostly observed in India. Mention human activities that are responsible for soil erosion. (2012)

Answer:

1. Gully erosion

The running water cuts through the clayey soils and makes deep channels, called gullies. They make the land unfit for cultivation. Such lands are called 'Badlands'.

2. Sheet erosion

Sometimes water flows as a sheet over large areas down a slope. In this case top layer of the soil is washed away.

3. Wind erosion

Wind blows off loose and dry soil from flat and sloping land causing erosion.

Question 65.

Write the land area degraded by gully erosion and name five states where gully erosion is very pronounced.

Answer:

Approximately 40 lakh hectares of land area has degraded due to gully erosion. Five states where gully erosion is quite pronounced are: Uttar Pradesh, Madhya Pradesh, Bihar, Rajasthan and Gujarat.

Question 66.

Write four methods of soil conservation.

Answer:

Methods of soil conservation:

1. Contour ploughing By ploughing along the contour lines, water will not run down the slopes.
2. Terrace cultivation Steps can be cut on the slopes to make terraces. This restricts erosion.

3. Strip cropping Large fields can be divided into strips. Strips of grass are left to grow between the crops. This breaks the force of the wind.
4. Planting of shelter belts The planting of trees in rows to create shelter also breaks the force of the wind and restricts soil erosion.  
Shelter belts have helped in the stabilisation of sand dunes and deserts.

5. **Question-1**

Write a short note on classification of resources.

**Solution:**

The resources can be classified in the following ways –

- (a) On the basis of origin – biotic and abiotic
  - (b) On the basis of exhaustibility – renewable and non-renewable
  - (c) On the basis of ownership – individual, community, national and international
  - (d) On the basis of status of development – potential, developed stock and reserves.
6. You can also download [NCERT Maths Class 10](#) to help you to revise complete syllabus and score more marks in your examinations.
7. **Question-2**
- Give the difference between renewable resources and non-renewable resources with examples.

**Solution:**

The resources which can be renewed or reproduced by physical, chemical or mechanical processes are known as renewable or replenishable resources. While Non-renewable resources are resources that take millions of years in their formation.

**Question-3**

Give the two factors that determine soil fertility.

**Solution:**

- 1) Soil fertility depends on its composition. Sandy soil is not suitable for agriculture as they do not retain water which the plant roots need for survival. The ideal soils contain a mixture of sand and clay.
- 2) The humus content determines soil fertility. Organic farm yard manures improve the humus content.

**Question-4**

What is the classification of alluvial soil on the basis of their age ? Mention their characteristics.

**Solution:**

Apart from the size of their grains or components, soils are also classified on the basis of their age. According to their age, alluvial soils can be classified as old alluvial ( Bangar ) and new alluvial ( Khadar ). The bangar soil has

higher concentration of kanker nodules than the Khadar. It has more fine particles and is more fertile than the bangar .

#### **Question-5**

Give a short note on reserves.

#### **Solution:**

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. River water can be used for generating hydroelectric power but presently, it is being utilized only to a limited extent. Thus, the water in the dams, forests etc. is a reserve which can be used in the future.

#### **Question-6**

Major problem faced due to the indiscriminate use of resources by Man-Discuss.

#### **Solution:**

Human beings used the resources indiscriminately and this has led to the following problems.

- 1) Depletion of resources for satisfying the greed of few individuals.
  - 2) 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.
- Indiscriminate exploitation of resources has led to global ecological crises.

#### **Question-7**

Write a paragraph on resource planning.

#### **Solution:**

Resource planning is a complex process, which involves:

- (i) Identification and inventory of resources across the regions of the country. This involves surveying, mapping and 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.

#### **Question-8**

What was the views of Gandhiji on resource conservation?

#### **Solution:**

Gandhiji voiced his concern about resource conservation in the following 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.

#### **Question-9**

Name the five types of land resource.

#### **Solution:**

Land resources are made up of:

1. Forests
2. Land not available for cultivation:
  - (a) Barren and waste land
  - (b) Land put to non-agricultural uses, e.g. buildings, roads, factories, etc.
3. Other uncultivated land (excluding fallow land):
  - (a) Permanent pastures and grazing land,
  - (b) Land under miscellaneous tree crops groves (not included in net sown area),
  - (c) Cultivable wasteland (left uncultivated for more than 5 agricultural years).
4. Fallow lands
  - (a) Current fallow (left without cultivation for one or less than one agricultural year),
  - (b) Other than current fallow- (left uncultivated for the past 1 to 5 agricultural years).
5. Net sown area-Area sown more than once in an agricultural year plus net sown area is known as gross cropped area .

#### **Question-10**

What are the factors that determine the use of land?

#### **Solution:**

The use of land is determined both by physical factors such as topography, climate, and soil types as well as human factors such as population density, technological capability and culture and traditions etc.

#### **Question-11**

What has significantly contributed to land degradation?

#### **Solution:**

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 Orissa 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. 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. In recent years, industrial effluents as waste have become a major source of land and water pollution in many parts of the country.

#### **Question-12**

How can the problem of deforestation be solved?

#### **Solution:**

There are many ways to solve the problems of land degradation.

1. Afforestation and proper management of grazing can help to some extent.
2. Planting of shelter belts of plants, control on over grazing, stabilization of sand dunes by growing thorny bushes
3. In industrial and suburban areas, proper management of waste lands, control of mining activities, proper discharge and disposal of industrial effluents and wastes after treatment.

#### **Question-13**

Soil is the most important renewable natural resource. Explain.

#### **Solution:**

It is the medium of plant growth and supports different types of living organisms on the earth. The soil is a living system. It takes millions of years to form soil upto a few cm in depth. Relief, parent rock or bed 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. Soil also consists of organic (humus) and inorganic materials.

#### **Question-14**

Give a brief note on the productivity of alluvial soil.

#### **Solution:**

Alluvial soils as a whole are very fertile. Mostly these soils contain adequate proportion of potash, phosphoric acid and lime which are ideal for the growth of sugarcane, paddy, wheat and other cereal and pulse crops. Due to its high fertility, regions of alluvial soils are intensively cultivated and densely populated. Soils in the drier areas are more alkaline and can be productive after proper treatment and irrigation.

#### **Question-15**

Is black soil easy to work, in hot climate? Explain.

**Solution:**

The black soils are made up of extremely fine i.e. clayey material. They are well known for their capacity to hold moisture. In addition, they are rich in soil nutrients, such as calcium carbonate, magnesium, potash and lime. These soils are generally poor in phosphoric contents. They develop deep cracks during hot weather, which helps in the proper aeration of the soil. These soils are sticky when wet and difficult to work on unless tilled immediately after the first shower or during the pre-monsoon period.

**Question-16**

Give a brief note on arid soil.

**Solution:**

Arid soils range from red to brown in colour. They are generally 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. Due to the dry climate, high temperature, evaporation is faster and the soil lacks humus and moisture. The lower horizons of the soil are occupied by Kankar because of the increasing calcium content downwards. The Kankar layer formations in the bottom horizons restrict the infiltration of water. After proper irrigation these soils become cultivable as has been in the case of western Rajasthan.

**Question-17**

Mention any two methods for reducing fallow land.

**Solution:**

The two methods for reducing fallow Land are :

1. Use fertilizers
2. Crop rotation or multiple cropping.

**Question-18**

What are the two disturbing features of land – use pattern?

**Solution:**

The two distributing features of land-use pattern are:

1. Forests
2. Barren wastelands.

**Question-19**

Give two characteristics of alluvial soil.

**Solution:**

Two main characteristics of alluvial soil are:

1. Alluvial soil is the most widespread soil in India.
2. It is made by deposits brought down by the rivers year after year and are very fertile,  
They are very suitable for cultivation.

**Question-20**

What was the root cause for resources depletion at the global level, according to Gandhiji ?

**Solution:**

- (i) Greedy and selfish nature of the individual.
- (ii) Exploitation nature of modern technology.

**Question-21**

What are the problems faced due to mismanagement of resources?

**Solution:**

- (i) Over utilization of resources leads to their depletion.
- (ii) Over utilization of the resources leads to environment degradation.

**Question-22**

What is conservation of resources?

**Solution:**

It is defined as the management of the resources by humans. It aims at satisfying the needs of the present generations as well as the aspirations of the future generations.

**Question-23**

What is resource planning?

**Solution:**

It is a widely accepted strategy for the judicious use of resources, eg Dalhousie has vast forest resources but lacks in infrastructural facilities. Hence planning is required in developing the resources.

**Question-24**

Give the importance of human beings as an essential component of resource?

**Solution:**

Man transforms material available in our environment into resources uses them. Thus Man is considered as an important component of the Resource. eg. Wood is a material when it is utilized it become a piece of furniture, which is a resource.

**Question-25**

Define Resource.

**Solution:**

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

**Question-26**

Where is black soil found ?

- (A) Jammu and Kashmir
- (B) Rajasthan

- (C) Gujarat
- (D) Jharkhand

**Solution:**

(C) Gujarat.

**Question-27**

Where is gully erosion is commonly found?

- (A) Kutch basin
- (B) Saurashtra basin
- (C) Chambal basin
- (D) Southern Plateau

**Solution:**

(C) Chambal basin.

**Question-28**

In which of the following states, is the net sown area under irrigation lowest?

- (a) Haryana, Punjab
- (b) Bengal, Bihar, Assam
- (C) Himachal, Assam, Maharashtra, Karnataka
- (D) Jammu and Kashmir, Rajasthan, Gujarat

**Solution:**

(C) Himachal, Assam, Maharashtra, Karnataka.

**Question-29**

Where is laterite soil found?

- (A) Jammu and Kashmir
- (B) Rajasthan
- (C) Kerala
- (D) Jharkhand

**Solution:**

(B) Rajasthan.

**Question-30**

Where is land is degraded caused due to excessive cultivation?

- (A) Madhya Pradesh
- (B) Rajasthan
- (C) Punjab
- (D) Gujarat

**Solution:**

(C) Punjab.

**Question-31**

Which is not a factor, in process of transformation of resources in the given environment?



- (A) Technology
- (B) Institutions
- (C) Wild life
- (D) Human Society

**Solution:**

(C) Wild life.

**Question-32**

- (A) Assam, Mizoram, Arunachal Pradesh and Himachal Pradesh
- (B) Jharkhand, Chattisgarh, Bihar
- (C) Goa, Karnataka, Kerala
- (D) Tamil Nadu, Andhra Pradesh and Orissa

**Solution:**

(A) Assam, Mizoram, Arunachal Pradesh and Himachal Pradesh.

**Question-33**

Choose the correct percentage of land division in India.

- (A) Plains – 28%, Mountains – 16%, Plateaus – 60%
- (B) Plains – 40%, Mountains – 33%, Plateaus – 27%
- (C) Plains – 43%, Mountains – 30%, Plateaus – 27%
- (D) Plains – 45%, Mountains – 28%, Plateaus – 27%

**Solution:**

(C) Plains – 43%, Mountains – 30%, Plateaus – 27%.

**Question-34**

Which one is a renewable resource ?

- (A) Iron-ore
- (B) Petroleum products
- (C) Coal
- (D) Solar energy

**Solution:**

(D) Solar energy.

**Question-35**

Which place is related to the Earth Summit of 1992?

- (A) Dhaka in Bangladesh
- (B) New Delhi in India
- (C) Tehran in Iran
- (D) Rio de Janeiro in Brazil

**Solution:**

(D) Rio de Janeiro in Brazil.

**Question-36**

Which one is an example of private ownership of a resource?

- (A) Community Hall

- (B) Police Station
- (C) Farm Land
- (D) Post Office

**Solution:**

(C) Farm land.

**Question-37**

What is India's national territorial water limit extension?

- (A) 10 nautical mile
- (B) 12 nautical mile
- (C) 11 nautical mile
- (D) 15 nautical mile

**Solution:**

(B) 12 nautical mile.

**Question-38**

Which is example for potential resource?

- (A) Thermal energy in Jharkhand
- (B) Hydel power in Himalayan region
- (C) Electricity in Northern Grid of India
- (D) Nuclear energy in Maharashtra region

**Solution:**

(B) Hydel power in Himalayan region.

**Question-39**

- (C) Maharashtra, Karnataka, Kerala
- (D) Bihar, Bengal, Assam

**Solution:**

(B) Haryana, Punjab, Bihar .

**Question-40**

In which place is land degradation excess due to land mining?

- (A) Punjab
- (B) Haryana
- (C) Uttar Pradesh
- (D) Jharkhand

**Solution:**

(D) Jharkhand.

**Question-41**

Which factor cannot be classified, as one of the factors of soil formation?

- (A) Parent rock
- (B) Running water
- (C) Humus
- (D) Industrialisation

**Solution:**

(D) Industrialisation.

**Question-42**

Which type of resources is iron-ore?

- (A) Renewable
- (B) Flow
- (C) Biotic
- (D) Non-renewable

**Solution:**

(D) Non-renewable.

**Question-43**

What caused land degradation in Punjab?

- (A) Intensive cultivation
- (B) Over irrigation
- (C) Deforestation
- (D) Overgrazing

**Solution:**

(A) Intensive cultivation.

**Question-44**

Where is terrace cultivation practiced?

- (A) Punjab
- (B) Haryana
- (C) Plains of Uttar Pradesh
- (D) Uttaranchal

**Solution:**

(D) Uttaranchal.

**Question-45**

Where is Sukhomaijri located ?

- (A) Uttaranchal
- (B) Uttar Pradesh
- (C) Haryana
- (D) Andhra Pradesh

**Solution:**

(C) Haryana.

**Question-46**

Where has shelter belts stabilised sand dunes?

- (A) Gujarat
- (B) Haryana
- (C) Rajasthan
- (D) Punjab

**Solution:**

(C) Rajasthan.

**Question-47**

India has a wide variety of relief features, which are the most important resources. Justify the statement.

**Solution:**

India has a wide variety of relief features which includes mountains plains plateaus.

(i) plain land area is about 43% of the land area which provide facilities for agriculture industry.

(ii) Mountains account for 30% of the land area which provides facilities for tourism ecological aspects .It also ensures perennial flow of some rivers.

(iii) About 27% of the plateau region is considered as a storehouse for minerals.

**Question-48**

Give the differences between resource rich countries and resource poor countries.

**Solution:**

Resource Rich Countries

1.Resource rich countries are basically those which are rich in natural resources such as forest, water etc.

2.Eg:India has rich resource base but due to lack of technology most of it is potential

Resources Poor Countries

1.Resource poor countries are those, which have a poor resource base.

2.Eg. Japan with no resource base but they are rich in technological skills talents.

**Question-49**

What are the various stages of resources planning?

**Solution:**

(i) Identification and inventory of resources across the regions of the country which involves surveying mapping measurement of resources.

(ii) Evolving a planning structure with appropriate technology skills and institutions to set for implementing the resources development plans.

(iii) Matching the resources development plans with the overall nation development plans.

**Question-50**

What are the uses of resource planning ?

**Solution:**

(i) It reduces resource exploitation.

- (ii) It keeps the environment pollution free.
- (iii) Resources are limited, and thus it is required to conserve them for the future use.
- (iv) It is essential for rapid economic development.

#### **Question-51**

What is sustainable economic development?

#### **Solution:**

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

#### **Question-52**

List the importance of natural resources.

#### **Solution:**

- (i) They are the main source of our agricultural activities.
- (ii) They provide the raw material for the industries.
- (iii) All our commercial activities directly or indirectly depend upon them.
- (iv) They are useful in maintaining the ecological balance.

#### **Question-53**

Give the resources on the basis of exhaustibility.

#### **Solution:**

The classification of resources on the basis of exhaustibility is:

- (i) Renewable Resources – The resources that can be renewed or reproduced by physical, chemical mechanical processes.
- (ii) Non – Renewable Resources – They occur over a very long geological time taking millions of years in their formation get exhausted with their use. For eg. minerals.

#### **Question-54**

Classify resources on the basis of origin.

#### **Solution:**

On the basis of origin resources are classified as:

- (i) Biotic – They are obtained from Biosphere and have life such as flora fauna.
- (ii) Abiotic – All those things which are composed of non-living things such as rocks metals etc.

#### **Question-55**

What is the inter-relationship between nature, technology institutions?

#### **Solution:**

Human beings interact with nature to fulfill his needs using the resources that are available. He also by transforms the natural stuff into resources through technology also create institutions to accelerate their economic

development.

#### **Question-56**

What are the methods adopted to solve the problems of land degradation ?

#### **Solution:**

1. Afforestation.
2. Proper management grazing land.
3. Planting of shelter belts in desert areas.
4. Control of overgrazing.
5. Stabilization of sand dunes by growing thorny bushes.
6. Proper management of waste lands.
7. Control on mining activities.
8. Proper discharge disposal of effluents waste after treatment can reduce land degradation.

#### **Question-57**

Give a few activities which results in land – degradation.

#### **Solution:**

1. Deforestation in states like M.P. Orissa.
2. Overgrazing in the states of Punjab Haryana have cause land-degradation.
3. Mining quarrying have contributed a lot in land degradation as mining sites are abundant after excavation work is complete leaving deep scars.
4. Over irrigation in areas such as Punjab Haryana also leads to land degradation due to water logging leading to increase in salinity alkalinity in soil.
5. Mineral processing like grinding of lime stone for cement industry generates huge quantity of dust in atmosphere after this dust settles down on land which stops percolation of water in soil.
6. Industrial effluents as wastes are a major source of land water pollution.

#### **Question-58**

List the resources on the basis of the status of development.

#### **Solution:**

The classification of resources on the basis of status of development is as follows:

- (i) Potential Resources – Resources that are found in the region but have not been utilized. For eg: Western part of India has enormous potential for solar and wind energy which have not been properly utilized.
- (ii) Developed Resources – Resources which are surveyed their quantity is determined for utilization, its development depends on technology level of their feasibility.
- (iii) Stock Resources – Material in the environment which has the potential to satisfy human needs but due to lack of technology human are not able to

utilize them. Eg – water is a compound of hydrogen oxygen they are the rich source of energy but due to lack of technology, we cannot use them.

(iv) Reserves – They are the subset of stock which can be put into use with the help of existing technological skills but their use has to not been started.

#### **Question-59**

Classify resources on the basis of ownership.

#### **Solution:**

Classification is as follows :

- (i) Individual Resource – The resources that are owned privately by individuals such as a house is owned by an individual.
- (ii) Community Owned Resources – The resources that are accessible to all the member of the society, eg. Public park.
- (iii) National Resource – All the resources that belong to a nation such as forests, wildlife.
- (iv) International Resource – There are international institutions which regulate some resources. For eg – the oceanic resources beyond 200kms. of exclusive economic zone belongs to open ocean no individual country can utilize these without the interference of international institutions.

#### **Question-60**

How are gullies formed?

#### **Solution:**

Gullies are ravines formed by rain water in areas devoid of green cover.

#### **Question-61**

What does resource planning stand for?

#### **Solution:**

Resource planning is the technique used for ensuring best use of the existing resources.

#### **Question-62**

Identify three factors responsible for soil formation.

#### **Solution:**

Relief, climate and nature of parent rock are responsible for soil formation.

#### **Question-63**

What is meant by waste land?

#### **Solution:**

Waste land includes rocky, arid and desert areas.

#### **Question-64**

Write about resource planning. What were Gandhiji's views on resource conservation?

#### **Solution:**

Resource planning is a complex process, which involves:

- (i) Identification and inventory of resources across the regions of the country. This involves surveying, mapping and 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.

Gandhiji voiced his concern about resource conservation in the following 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.

#### **Question-65**

What has significantly contributed to land degradation?

#### **Solution:**

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 Orissa 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. 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. In recent years, industrial effluents as waste have become a major source of land and water pollution in many parts of the country.

#### **Question-66**

Soil is the most important renewable natural resource. Explain.

#### **Solution:**

It is the medium of plant growth and supports different types of living organisms on the earth. The soil is a living system. It takes millions of years to form soil upto a few cm in depth. Relief, parent rock or bed 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. Soil also consists of organic (humus) and inorganic materials.

**Question-67**

Is black soil easy to work, in hot climate? Explain.

**Solution:**

The black soils are made up of extremely fine i.e. clayey material. They are well known for their capacity to hold moisture. In addition, they are rich in soil nutrients, such as calcium carbonate, magnesium, potash and lime. These soils are generally poor in phosphoric contents. They develop deep cracks during hot weather, which helps in the proper aeration of the soil. These soils are sticky when wet and difficult to work on unless tilled immediately after the first shower or during the pre-monsoon period

# Resource and Development

## 1 Mark Questions

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1. Who wrote the book 'Small is Beautiful'?

Ans. E.F.Schumacher

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2. Which type of soil is found in the river deltas of the Eastern Coast?

Ans. Alluvial Soil

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3. Write the two types of renewable resources.

Ans. Continuous and Biological resources

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4. From which Five Year Plan has India made concerted efforts for achieving the goals of resource planning?

Ans. First Five Year Plan

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5. Give any two factors which determine the land use pattern of a nation.

Ans. . Topography and Population

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6. How much degraded land is present in India?

Ans. 130 million hectare

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7. By which name is the bad land known in Chambal basin?

Ans. Ravines

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8. Name the institution which is empowered by the government of India to acquire land?

Ans. Urban Development Authorities

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9. What is strip cropping?

Ans. . Large fields 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.

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10. Name the way which helps the sand dune to stabilization.

Ans. Shelter Belts have contributed significantly to the establishment of sand dunes.

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11. Name the areas where terrace farming is practiced in India?

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Ans. Western and central Himalayas of India

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12. Why are the lower horizons of the soil occupied by Kankar?

Ans. Because of the increasing calcium contents downwards

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13. Name the soil which is suitable for the cropping of cashew nuts.

Ans. . Red Laterite Soil

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14. Name the nutrient in which black soils is poor?

Ans. Phosphoric contents

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15. Name any two nutrients which are found in black soils?

Ans. Calcium carbonate and magnesium

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16. Mention the reason due to which red soils looks red?

Ans. These soils develop a reddish colour due to diffusion of iron in crystalline and metamorphic rocks.

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17. Name the soils which are well known for their capacity to hold moisture.

Ans. . Black soils

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18. Which region of India is known as Basalt region?

Ans. The Deccan trap region spread over northwest Deccan plateau.

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19. In which state overgrazing is the main reason of land degradation in India?

Ans. Gujarat

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20. Where was first international earth summit held?

Ans. . Rio de Janeiro in Brazil

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21. Coal, iron ore, petroleum, diesel etc. are the examples of

a) Biotic resources b) Abiotic resources

c) Renewable resources d) Non Renewable resources

Ans. d) Non Renewable resources

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22. Which one of the following term is used to identify the old and new alluvial respectively ?

a) Khadas & Tarai b) Tarai & Bangar

c) Bangar & Khadar d) Tarai & Dvars

Ans. c) Bangar & Khadar

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23. Which one of the following soil is the best for cotton cultivation ?

- a) Red soil b) Black soil  
c) Laterite soil d) Alluvial soil

Ans. b) Black soil

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24. How much percentage of forest area in the country according to the National Forest Policy.

- a) 33% b) 37%  
c) 27% d) 31%

Ans. a) 33%

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25. Which type of soil develops due to high temperature and evaporation ?

- a) Arid Soil b) Forest Soil  
c) Black Soil d) Red Soil

Ans. a) Arid Soil

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26. Which one of the following resources can be acquired by the Nation ?

- a) Potential resources b) International resources  
c) National resources d) Public resources

Ans. c) National resources

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27. Which one of the following is responsible for sheet erosion ?

- a) Underground water b) Wind  
c) Glacier d) Water

Ans. d) Water

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28. Which one of the following method is used to break up the force of wind?

- a) Shelter belt b) Strip Cropping  
c) Contour ploughing d) Terrace farming

Ans. a) Shelter belt

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29. Which one of the following is the main cause of land degradation in Madhya Pradesh ?

- a) Mining b) Overgrazing  
c) Deforestation d) Over Irrigation

Ans. c) Deforestation

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30. Which one of the following statements refers to the sustainable development ?

- a) Overall development of various resources

- b) Development should take place without damaging the environment.
  - c) Economic development of people.
  - d) Development that meets the desires of the members of all communities.
- Ans. b) Development should take place without damaging the environment.
- 

31. What steps can be taken to control soil erosion in hilly areas ?

- Ans. 1) Terracing on hilly area  
2) Buildings Dams on hilly areas  
3) Afforestation
- 

32. When and why was the Rio-de-Janero Earth summit held ?

Ans. 1992 Rio-de-Janero (Brazil)

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33. Write two characteristics each of Khadar and Bangar ?

Ans. Khadar (New Alluvium)

- 1) New Alluvium a new soil
- 2) Very fertile soil less Kankar nodules

Bangar (Old Alluvium)

- 1) Old Alluvium or Old soil
  - 2) Not to fertile, often contains Kankar nodules
- 

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

Ans. Alluvial Soil

- 1) Most important soil
  - 2) Such a soil is the result of deposits of river.
  - 3) Very fertile soil.
- 

35. What do you, mean by land use pattern ? Name the factors that determine the use of land.

Ans. Utilization of land for various purposes such as cultivation grazing of animals mining construction of roads etc.

Factors

- 1) Topography
- 2) Climate
- 3) Human Factor
- 4) Accessibility

### 3 Mark Questions

1. What was the main contribution of the Brundtland Commission Report, 1987?

Ans. a. The seminal contribution with respect to resource conservation at the global level was made by the Brundtland Commission Report, 1987.

b. This report introduced the concept of 'Sustainable Development' and advocated it as a means for resource conservation, which was substantially published in a book, entitled Our Common Future.

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2. Define resources? Name some resources?

Ans. a. 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.

b. Land, Soil, Tree and air are some examples of resources.

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3. Explain the interdependent relationship between nature, technology and institutions.

Ans. a. The process of transformation of things available in our environment involves an interdependent relationship between nature, technology and institutions.

b. Human beings interact with nature through technology and create institutions to accelerate their economic development.

c. Resources are the functions of activities.

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4. "Resources are a function of human activities". Elaborate the statement with suitable arguments.

Ans. a. Natural resources are the free gifts of nature but many manmade resources are used by the humanity.

b. Resources are functions of human activities. Human beings themselves are essential components of resources.

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

---

5. Classify resources on the basis of origin. Give examples.

Ans. a. Biotic resources: These are obtained from biosphere and have life such as human beings, flora and fauna, fisheries, livestock etc.

b. Abiotic resources: All those things which are composed of non-living things are called abiotic resources. For example, rocks and metals.

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6. Classify resources on the basis of exhaustibility. Write examples.

Ans. a. Renewable resources: The resources which can be renewed or reproduced by physical, chemical or mechanical processes are known as renewable resources: For example, solar and wind energy, water, forests and wildlife, etc.

b. Non Renewable resources: These occur over a very long geological time. Minerals and fossil fuels are examples of such resources. These resources take millions of years in their formation. Some of the resources like metals are recyclable and some like fossil fuels cannot be recycled and get exhausted with their use.

---

7. List the problems caused due to the indiscriminate use of resources by human being?

Ans. a. Depletion of resources for satisfying the greed of few individuals.

b. Accumulation of resources in few hands, which, in turn, divide the society into two, segments i.e. 'haves' and 'have nots' or rich and poor.

c. Indiscriminate exploitation of resources has led to global ecological crises such as, global warming, ozone layer depletion, environmental pollution and land degradation.

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8. What was agenda 21?

Ans. a. It is the declaration signed by world leaders in 1992 at the United Nations conference on Environment and Development (UNCED).

b. It focuses on attaining Global Sustainable Development.

c. Its main aim is to fight the environmental damage, poverty, diseases through global cooperation on common interest, mutual needs and shared responsibilities.

d. An important and distinct aim of the agenda is that every local government should draw its own local Agenda 21.

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9. Write a short note on Rio de Janeiro Earth Summit, 1992.

Ans. a. Rio de Janeiro was the meeting ground for the first International Earth Summit.

b. More than 100 heads of state met at this famous conference which was convened in June 1992 to address the urgent problems of environmental protection and socio-economic development at the global level.

c. A declaration on Global Climatic change and the Biological Diversity was signed by the assembled leaders.

d. They adopted Agenda 21 and endorsed the global forest Principles to achieve Sustainable Development in the 21st century.

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10. What is resource planning? Why is resource planning essential?

Ans. a. Resource planning: Resource planning is the widely accepted strategy for judicious use of resources.

b. Resource planning is essential for sustainable existence of all forms of life.

c. Sustainable existence is a component of sustainable development.

---

11. Define sustainable development? What are their importances?

Ans. a. Sustainable Development: Sustainable development means development should take place without damaging the environment, and development in the present should not compromise with the needs of the future generations.

b. It is essential for sustained quality of life.

c. If the present trend of resource depletion by a few individuals and countries continues, the future of our planet is in danger. So sustainable development is very important to save our planet and our self.

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12. Explain the three steps that involved in the complex process of resource planning?

Ans. a. Identification and inventory of resources across the regions of the country. This involves surveying, mapping and qualitative and quantitative estimation and measurement of the resources.

b. Evolving a planning structure endowed with appropriate technology, skill and institutional set up for implementing resource development plans.

Matching the resource development plans with overall national development plans

---

13. How far it is correct to say that the availability of resources is a necessary condition for the development of any region? Explain.

Ans. 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. There are many regions in our country that are rich in resources but these are included in economically backward regions. On the contrary there are some regions which have a poor resource base but they are economically developed.

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14. Explain the relationship between the process of colonization and rich resources of colonies.

Ans. a. The History of colonization reveals that rich resources in colonies were the main attractions of the foreign traders.

b. It was primarily the higher level of technological development of colonizing countries that helped them to exploit resources of other regions and established their supremacy over colonies.



c. There for resources can contribute to development only when they are accompanied by appropriate technological development and institutional changes.

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15. What are the different factors that determine land use?

Ans. a. Both physical and human factors determine the land use pattern of any area.

b. Physical factors include topography, climate, and soil types.

c. Human factors include population density, technological capability and cultural traditions.

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16. What type of relief covers most of India's land? Explain.

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

b. About 43 per cent of land area is plain, which provides facilities for agriculture and industry.

c. Mountains account for 30 per cent of the total surface area of the country and ensure perennial flow of rivers, provides facilities of tourism and ecological aspects.

D. About 27 per cent of the area of the country is plateau region. It possesses rich reserves of minerals, fossil fuels and forests.

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17. What is the reason behind the availability of Land use data for only 93 percent of the total geography area of India?

Ans. a. Total geographical area of India is 3.28 million sq km land use data, however is available only for 93 per cent of the total geographical area.

b. Because the land use reporting for most of the nor-east states except Assam has not been done fully.

c. Moreover, some areas of Jammu and Kashmir occupied by Pakistan and China have also not been surveyed.

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18. Why does the net sown area vary from one state to another?

Ans. a. There are wide variations in the pattern of net sown area from one state to another state.

b. If we compare Haryana and Punjab with Arunachal Pradesh, Mizoram, Manipur and Andaman and Nicobar Islands there is a great disparity.

c. In Punjab and Haryana the net sown area is 80% of the total area but in other mentioned states it is less than 10% of the total area.

d. The reasons for this differences are many, e.g., climate, soil, relief, irrigation facilities.

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19. Distinguish between Khadar and Bhangar.

Ans. Khadar Bhangar

1. The khadar soils are found in the low areas of valley. 1. The Bhangar soils are found in the higher reaches.
  2. These soils are finer in texture. 2. These are coarser in texture.
  3. These soils are more fertile. 3. These soils are less fertile.
  4. These soils are known as New alluvial. 4. These soils are known as old alluvial.
- 

20. How is land a natural resource of utmost importance? Explain with suitable arguments.

Ans. a. All economic activities are performed on land.

b. It supports natural vegetation and wildlife.

c. It is used for transportation and communication system.

d. Most of the minerals are formed in land.

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21. What is soil erosion? Explain the major types of soil erosion?

Ans. a. Soil Erosion: Soil erosion is the removal of soil by the forces of nature like wind and water is called soil erosion. This can also be described as denudation of soil cover and subsequent washing down. Following are its two types:

b. Wind Erosion: Wind blows loose soil off flat or slopping land. This is known as wind erosion.

c. Water Erosion: When running water is responsible for the removal of the top most layer of the earth that is known as water erosion.

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22. Explain the two types of water erosion.

Ans. a. Sheet Erosion: When the top layer of the soil is removed over a large area by the running water is called as sheet erosion. In such cases the top soil is washed away.

b. Gully erosion: 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. In Chambal basin such lands are called ravines.

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23. Which type of soil is found in the river deltas of the eastern coast? Give three main features of this type of soil.

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

a. The alluvial soil consists of various proportions of sand, silt and clay.

b. According to their age alluvial soil can be classified as old alluvial and new alluvial to well connected developers.

c. Due to its high fertility, region of alluvial soils are intensively cultivated and densely populated.

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24. How far it is correct to say that it is possible to reverse land degradation?

Explain the statement while giving the example of village Sukhomajri?

Ans. a. The village of Sukhomajti and the district of Jhabua have shown that it is possible to reverse land degradation. Tree density in Sukhomajari increased from 13 percent hectare in 17976 to 1,272 per hectare in 1992.

b. Regeneration of the environment leads to economic well being as a result of greater resource availability improved agriculture and animal care, and consequently, increased incomes. Average annual household income in Sukhomajri ranged from 10000-15000 between 1979 and 1984.

c. People's management is essential for ecological restoration. With people being made the decision-makers by Madhya Pradesh government, 2.9 million hectares or about 1 per cent of India's land area, are being greened across the state through watershed management.

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25. Elucidate the views of Gandhiji regarding the conservation of resources.

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

b. He said, "There is enough for everybody's need and not for anybody's greed.

c. He placed the greedy and selfish individuals and exploitative nature of modern technology as the root cause for resource depletion at the global level.

D. He was against mass production and wanted to replace it with the production by the masses.

---

26. Why is resource planning essential?

Ans. a. As the resources are limited, so their planning is quite necessary so that we can use them properly and at the same time save them for our coming generations.

b. For the balanced development of the country, the planning of the resources becomes very essential.

c. A resource planning is also necessary to save their exploitation or unlawful exploitation by the unscrupulous elements of the society.

---

27. Explain any three human activities which are mainly responsible for land degradation in India.

Ans. a. Some human activities such as deforestation, overgrazing, mining and quarrying too have contributed significantly in land degradation.

b. Mining sites are abandoned after excavation work is complete leaving deep scars and traces of over-burdening.

c. Deforestation due to mining has caused severe land degradation.

D. Over irrigation is responsible for land degradation due to water logging leading to increase in salinity and alkalinity in the soil.

---

28. Suggest some ways to solve the problems of land degradation.

Ans. a. Afforestation and proper management of grazing can help to some extent to solve the problem of land degradation.

b. Planting of shelter belts of plants, control on over grazing, stabilization of sand dunes by growing thorny bushes is some of the methods to check land degradation.

c. Proper management of waste lands, control of mining activities, proper discharge and disposal of industrial effluents and wastes after treatment can reduce land and water degradation in industrial and suburban areas.

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29. How do rocks play an important role in the formation of soil?

Ans. a. Parent rock and bed rock are main factors in the formation of soil.

b. Climatic conditions with the parent rock material are the important factors for the formation of black soil. The Deccan trap region is made up of lava flows.

c. Red soil develops on crystalline igneous rocks in areas of low rainfall.

---

30. What is meant by two types of natural resources? Give one example of each.

Ans. a. All gifts of nature which are useful in making the life of human beings comfortable and worth living are known as natural resources.

b. Their two main types are biotic and abiotic resources.

c. Forests and animals are biotic resources while land water and soil are abiotic natural resources.

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31. Long Answer type questions

Classify resources on the basis of ownership into four categories. Mention the main feature of each.

Ans. (1) Individual resources: Owned privately by individual. Example houses pasture etc.

(2) Community Owned resources : accessible to all the members of the Community.

Example : Play ground park etc.

(3) National resources : within the political boundaries of the country.

Example : Minerals, forests etc.

(4) International resources : The oceanic resources beyond 200 Km. of the Exclusive Economic Zone belong to international institutions.

---

32. What is resource planning ? Write any three utility of resources.

Ans. Resource Planning : Resource Planning is a technique of skill of proper utilization of resources.

1. They are beneficial to human being

2. Different types of things are made by them.
  3. Resources are limited. Do not waste the great gifts of the nature.
- 

33. Distinguish between the Renewable and Non- Renewable Resources.

Ans. Renewable Resources

- 1) These Resources are those which once mined and used can be regenerated.
- 2) These Resources which may be obtained continuously.

Example : Land, water plants etc.

Non Renewable Resources.

- 1) These Resources are those which once mined and used cannot be regenerated.
- 2) All mineral Resources are limited.

Example : Coal, Mineral-oil etc.

---

34. Describe briefly the distribution of soils found in India.

Ans. (1) Alluvial Soil

(2) Black Soil

(3) Red and Yellow Soil

(4) Laterite Soil

(5) Mountain Soil

(6) Desert Soil (Explain it)

---

35. What is regur soil ? Write its two features. Mention any two regions where regur soil is found.

Ans. Regur soil – Black Soil Features

1) made up extremely fine

2) have good capacity to hold moisture.

3) develop deep cracks during hot weather.

4) rich in calcium carbonate, potash and lime Regions

1) Maharashtra – Malva Plateau

2) Madhya Pradesh and Chhatisgarh Plateau

## 5 Mark Questions

1. Classify resources on the basis of ownership with example.

Ans. a. Individual resources: These are owned privately by individuals. Many farmers own land which allotted to them by government against the payment of revenue. People own plots, houses and other property.

b. Community owned Resources: There are resources which are accessible to all the members of the community. Village commons, public parks, burial ground, playgrounds in urban areas are de facto accessible to all the people living there.

c. National resources: All the resources belong to the nation. The country has legal power to acquire even private property for public good. We have seen roads, canals, railways being constructed on fields owned by some individuals. Urban Development Authorities get empowered by the government to acquire land.

d. International Resources: There are international institutions which regulate some resources. The oceanic resources beyond 200 km of the exclusive Economic Zone belong to open ocean and no individual country can utilize these without the concurrence of international institutions.

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2. Classify resources on the basis of state of development with example.

Ans. a. Potential Resources: Resources which are found in a region, but have not been utilized due to the lack of capital. 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.

b. Developed resources: Resources which are surveyed and their quality and quantity have been determined for utilization. The development of resources depends on technology and level of their feasibility.

c. Stock: material in the environment which have the potential to satisfy human needs but human being do not have the 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 technology to use them for this purpose. Hence it can be considered as stock.

d. Reserves: Reserves are the subset of stock, which can be put into use with the help of existing technology but their use has not been started. These can be used for meeting future requirements.

---

3. Why is resource planning important in the context of a country like India?

Ans. a. India has enormous diversity in the availability of resources.

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

- c. There are some regions which can be considered self sufficient in terms of availability of resources and there are some regions which have acute shortage of some vital resources.
  - d. For example the states of Jharkhand, Chhattisgarh and Madhya Pradesh are rich in Minerals and coal deposits. Arunachal Pradesh abundance of water resources but lack of infrastructural development.
  - e. The state of Rajasthan is very well endowed with solar and wind energy but lacks in water resources.
  - f. The cold desert of Ladakh is entirely isolated from the rest of the country.
- 

4. How has technical and economic development led to more consumption of resources?

- Ans. a. Human beings interacted with nature through technological and create institutions to accelerate their economic development.
- b. As more technological development occurs there is increased need for inputs and utilization of resources.
- c. Technical and technological development is closely linked to economic development.
- d. For example more factories providing employment to more people are a necessity. For the factory land and labour is used. For this mining of minerals and metals increases.
- 

5. Explain the land use pattern in India?

- Ans. a. The net sown area in India has decreased from 45.26% to 43.41%. This means that more and more agricultural land is being shifted to other activities.
- b. The pattern of the net sown area varies gently from one state to another. In Punjab and Haryana the net sown area is 80% of the total area but Arunachal Pradesh, Mizoram, Manipur and Andaman and Nicobar Islands, it is less than 10% of the total area.
- c. The area under forests has been increased from 18.11% in 1960-61 to 22.57% in 2000-2003 and to 23% in 2005-06 yet it is far below than the scientific norms.
- d. The land under permanent pastures is very low, i.e., only 3.45%.
- e. Area under fallow land has also decreased which shows, that subsistence agriculture is being replaced by commercial agriculture.
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6. Explain any five proper farming techniques which can be used for soil conservation.

- Ans. a. Strip Cropping: To counter the effect of wind the practice of strip cropping is followed to stop wind erosion. Large fields are divided in strips. Grass in strips is left to grow between the crops.

- b. Contour Ploughing: Ploughing along the contour lines does not let water run down the slopes. This technique involved ploughing along contours, so that the furrows follow lines linking points of the same height. Such furrows halt the downward flow of water and reduce erosion.
  - c. Terrace Farming: Since ancient times farmers have built terraces or steps up a hillside creating several levels of farms. Hill slopes are cut into a number of terraces having horizontal top and steep slopes on the back and front.
  - d. Crop rotation: If the same crop is sown in the same field, year after year, this consumes particular nutrients from the soil making it infertile. Crop rotation can check the type of erosion.
  - e. Shelter Belts: Planting trees to create shelter also works in a similar way. Rows of such trees are called shelter belts. These shelter belts have contributed significantly to the stabilization of sand dunes and in establishing the desert in western India.
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7. How is red soil formed? Mention its features.

- Ans. a. Formation: most of the red soils have come into existence due to weathering of ancient crystalline igneous rocks.
- b. Soils are loamy in deep depressions and in upland. They consist of loose gravels and highly coarse materials.
  - c. These soils develop a reddish colour due to diffusion of iron in crystalline and metamorphic rocks.
  - d. It looks yellow when it occurs in a hydrated form.
  - e. This soil is found in the areas of low rainfall in the eastern and southern parts of the Deccan plateau.
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8. Which is most widely spread and important soil of India? State the characteristics of this type of soil?

- Ans. Alluvial soil is most widely spread and important soil of India. In fact the entire northern plains are made of alluvial soils.
- a. These soils have been deposited by three important Himalayan river systems-the Indus, the Ganga and the Brahmaputra.
  - b. The alluvial soil consists of various proportions of sand, silt and clay.
  - c. According to their age alluvial soil can be classified as old alluvial and new alluvial.
  - d. Alluvial soils as a whole are very fertile. Mostly these soils contain adequate proportion of potash, phosphoric acid and lime which are ideal for the growth of sugarcane, paddy, wheat and other cereal and pulse crops.
  - e. Due to its high fertility, region of alluvial soils are intensively cultivated and densely populated.



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9. Which type of soil is ideal for growth of cotton? What are the main characteristics of this type of soil? Name some areas where they found.

Ans. Black soil is ideal for the growth of cotton soil. Following are its characteristics:

- a. Black soils are also known as 'regur' soil or black cotton soils.
- b. Such a soil is ideal for growing cotton and hence the name.
- c. They have extremely good moisture retention capacity but become sticky when wet.
- d. These soils are difficult work upon unless tilled during pre-monsoon periods or just after the first shower.
- e. Black soils are rich in soil nutrients such as calcium carbonate, magnesium, potash and lime but poor in phosphoric contents.
- f. This soil is found in Deccan trap areas. This includes Maharashtra, Western Madhya Pradesh, Gujarat, and Chhattisgarh, some parts of Karnataka, Andhra Pradesh and Tamil Nadu.

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10. What is soil? Analyze the four main factors which help in the formation of soil.

Ans. Soil: 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. The soil is a living system. It takes million of years to form soil up to a few cm in depth.

- a. Relief, parent rock or bed rock, climate, vegetation and other forms of life and time are important factors in the formation of soil.
- b. Various forces of nature such as change in temperature, actions of running water, wind and glaciers, activities of decomposition etc, contribute to the formation of soil.
- c. Chemical and organic changes which take place in the soil are equally important.
- d. Soils also consist of organic (humus) or inorganic materials.

