

UNIQUE STUDY POINT

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Class: X	Subject: Social Science	Session: 2025-26
Chapter: 01 - Resources and Development	Time: 1½ Hours	Max. Marks: 40

General Instructions:

1. All questions are compulsory.
2. This question paper contains 20 questions divided into five sections A, B, C, D and E.
3. Section A contains 10 MCQs of 1 mark each.
4. Section B contains 4 questions of 2 marks each.
5. Section C contains 3 questions of 3 marks each.
6. Section D contains 1 question of 5 marks.
7. Section E contains 2 Case Study Based questions of 4 marks each.

SECTION A - Multiple Choice Questions (1 mark each)

- Q1.** Which organization advocated resource conservation for the first time in 1968?
- (a) United Nations
 - (b) Club of Rome
 - (c) World Bank
 - (d) UNESCO
- Q2.** The Brundtland Commission Report was published in which year?
- (a) 1974
 - (b) 1987
 - (c) 1992
 - (d) 2002
- Q3.** What percentage of India's total geographical area is covered by mountains?
- (a) 27%
 - (b) 30%
 - (c) 43%
 - (d) 54%
- Q4.** Which state is well endowed with solar and wind energy but lacks in water resources?
- (a) Arunachal Pradesh
 - (b) Rajasthan
 - (c) Kerala
 - (d) Assam
- Q5.** In which region are alluvial soils NOT typically found?
- (a) Northern plains

- (b) Deltas of eastern coast
- (c) Deccan plateau
- (d) Narrow corridor through Rajasthan and Gujarat

Q6. Which soil develops a reddish color due to diffusion of iron in rocks?

- (a) Black soil
- (b) Alluvial soil
- (c) Red and yellow soil
- (d) Laterite soil

Q7. What is the desired percentage of geographical area under forest as per the National Forest Policy (1952)?

- (a) 23%
- (b) 27%
- (c) 30%
- (d) 33%

Q8. The term 'gullies' refers to:

- (a) Terrace farming
- (b) Deep channels formed by running water in clayey soil
- (c) Sand dunes
- (d) Forest land

Q9. Which crop is primarily grown in black soil?

- (a) Rice
- (b) Wheat
- (c) Cotton
- (d) Tea

Q10. The book "Small is Beautiful" was written by:

- (a) Mahatma Gandhi
- (b) Schumacher
- (c) Brundtland
- (d) Rachel Carson

SECTION B - Short Answer Questions (2 marks each)

Q11. What is meant by 'net sown area' and 'gross cropped area'? Explain briefly.

Q12. Why is resource planning essential for sustainable existence? Give two reasons.

Q13. Name four factors that are important in soil formation.

Q14. What is contour ploughing? How does it help in soil conservation?

SECTION C - Short Answer Questions (3 marks each)

Q15. Why is there enormous diversity in the availability of resources in India? Explain with examples of three different regions.

Q16. Describe the main characteristics of laterite soil. Which crops are suitable for cultivation in laterite soil after soil conservation?

Q17. Explain the three different types of soil erosion caused by water. How does each type affect the land?

SECTION D - Long Answer Question (5 marks)

Q18. Describe the various methods of soil conservation in detail. Explain how each method helps in preventing soil erosion and maintaining soil fertility. Include examples from different regions of India.

SECTION E - Case Study Based Questions (4 marks each)

Q19. Read the following case study and answer the questions that follow:

"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."

- (i) Why is availability of resources alone not sufficient for development? (1)
- (ii) Give one example each of a resource-rich but economically backward region and a resource-poor but economically developed region. (2)
- (iii) What lesson does the history of colonization teach us about resources and development? (1)

Q20. Read the following case study and answer the questions that follow:

"Red soil develops on crystalline igneous rocks in areas of low rainfall in the eastern and southern parts of the Deccan plateau. These soils develop a reddish colour due to diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form. The fine-grained red and yellow soils are normally fertile, whereas coarse-grained soils found in dry upland areas are poor in fertility."

- (i) Where does red soil primarily develop? (1)
- (ii) Why does red soil appear red or yellow? (1)
- (iii) What is the relationship between soil texture and fertility in red and yellow soils? (2)

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SECTION A - Answers to MCQs

Q1. (b) Club of Rome

At the international level, the Club of Rome advocated resource conservation for the first time in a more systematic way in 1968.

Q2. (b) 1987

The Brundtland Commission Report was published in 1987. This report introduced the concept of 'Sustainable Development' and advocated it as a means for resource conservation, which was subsequently published in a book entitled "Our Common Future".

Q3. (b) 30%

Mountains account for 30 per cent of the total surface area of the country and ensure perennial flow of some rivers.

Q4. (b) Rajasthan

The state of Rajasthan is very well endowed with solar and wind energy but lacks in water resources.

Q5. (c) Deccan plateau

Alluvial soils are found in the northern plains, eastern coastal plains (deltas), and narrow corridor through Rajasthan and Gujarat, but NOT in the Deccan plateau which has black, red and laterite soils.

Q6. (c) Red and yellow soil

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

Q7. (d) 33%

Forest area in the country is far lower than the desired 33 per cent of geographical area, as it was outlined in the National Forest Policy (1952). It was considered essential for maintenance of the ecological balance.

Q8. (b) Deep channels formed by running water in clayey soil

The running water cuts through the clayey soils and makes deep channels called gullies. The land becomes unfit for cultivation and is known as bad land. In the Chambal basin such lands are called ravines.

Q9. (c) Cotton

Black soil is ideal for growing cotton and is also known as black cotton soil. The soil's moisture-retaining capacity and nutrient content make it perfect for cotton cultivation.

Q10. (b) Schumacher

In 1974, Gandhian philosophy was presented by Schumacher in his book "Small is Beautiful" which emphasized resource conservation and criticized mass production.

SECTION B - Answers to Short Answer Questions

Q11. Net sown area and gross cropped area

Net Sown Area: The physical extent of land on which crops are sown and harvested is known as net sown area. It

represents the actual land used for cultivation in a year.

Gross Cropped Area: Area sown more than once in an agricultural year plus net sown area is known as gross cropped area. This includes the land where multiple crops are grown in the same year through multiple cropping.

Example: If 100 hectares of land is cultivated once and 50 hectares is cultivated twice in a year, Net Sown Area = 150 hectares, but Gross Cropped Area = $100 + 50 + 50 = 200$ hectares.

Q12. Importance of resource planning for sustainable existence

1. Prevents resource depletion: Resource planning ensures judicious use of resources so that they are not depleted by excessive exploitation. If the present trend of resource depletion continues, the future of our planet is in danger.

2. Maintains quality of life and peace: An equitable distribution of resources through proper planning has become essential for a sustained quality of life and global peace. It prevents accumulation of resources in few hands and ensures availability for future generations.

Q13. Factors important in soil formation

Four important factors in soil formation are:

1. Relief: The topography and elevation of the area

2. Parent rock or bed rock: The underlying rock material from which soil forms

3. Climate: Temperature and rainfall patterns affecting weathering

4. Vegetation and other forms of life: Plants, animals, and decomposers that contribute organic matter

(Note: Time is also an important factor as soil formation takes millions of years)

Q14. Contour ploughing and its benefits

Definition: Contour ploughing is the practice of ploughing along the contour lines of a slope rather than up and down the slope.

How it helps in soil conservation:

- It decelerates (slows down) the flow of water down the slopes
- Prevents the formation of channels through which water can quickly flow
- Reduces soil erosion by preventing the washing away of topsoil
- Allows more water to infiltrate into the soil, improving moisture retention

SECTION C - Answers to Short Answer Questions

Q15. Diversity in resource availability in India

India has enormous diversity in the availability of resources due to varied physical features, climate, and geological conditions. This diversity creates different resource endowments in different regions:

Example 1 - Jharkhand, Chhattisgarh, Madhya Pradesh: These states are rich in minerals and coal deposits due to their geological formation. They have valuable mineral resources but may lack in other aspects like water or infrastructure.

Example 2 - Arunachal Pradesh: This state has abundance of water resources due to high rainfall and mountainous terrain with numerous rivers. However, it lacks in infrastructural development and mineral resources.

Example 3 - Rajasthan: This state is very well endowed with solar and wind energy due to its climate and open

terrain. However, it lacks adequate water resources due to low rainfall and arid climate.

This diversity calls for balanced resource planning at the national, state, regional and local levels to ensure equitable development across all regions.

Q16. Characteristics of laterite soil and suitable crops

Characteristics of Laterite Soil:

- 1. Formation:** Develops under tropical and subtropical climate with alternate wet and dry season. Result of intense leaching due to heavy rain.
- 2. Depth and acidity:** Mostly deep to very deep soils. Acidic in nature (pH less than 6.0), generally deficient in plant nutrients.
- 3. Distribution:** Found mostly in southern states, Western Ghats region of Maharashtra, Odisha, some parts of West Bengal and North-east regions.
- 4. Humus content:** Where these soils support deciduous and evergreen forests, it is humus rich. Under sparse vegetation and semi-arid environment, it is generally humus poor.
- 5. Erosion prone:** Prone to erosion and degradation due to their position on the landscape.

Suitable crops after conservation: After adopting appropriate soil conservation techniques, particularly in hilly areas of Karnataka, Kerala and Tamil Nadu, this soil is very useful for growing tea and coffee. Red laterite soils are more suitable for crops like cashew nut.

Q17. Three types of soil erosion caused by water

1. Gully Erosion:

- Running water cuts through the clayey soils and makes deep channels called gullies
- The land becomes unfit for cultivation and is known as bad land
- In the Chambal basin such lands are called ravines
- This creates deep scars on the landscape and makes the land completely unproductive

2. Sheet Erosion:

- Water flows as a sheet over large areas down a slope
- In such cases, the top soil is washed away uniformly
- This gradually reduces soil depth and fertility
- It affects large areas and may go unnoticed initially but causes significant loss over time

3. Rill Erosion (implied):

- Forms small channels on slopes due to water flow
- These channels are smaller than gullies but can develop into gullies if not controlled
- Removes topsoil in concentrated flow paths
- Can be prevented by proper ploughing methods like contour ploughing

SECTION D - Answer to Long Answer Question

Q18. Methods of soil conservation in detail

Introduction: Soil erosion is a major problem that makes land unfit for cultivation. Various conservation methods have been developed to prevent soil erosion and maintain soil fertility. Different methods are suitable for different

types of terrain and conditions.

1. Contour Ploughing:

- Method: Ploughing along the contour lines rather than up and down the slope
- How it works: Decelerates the flow of water down the slopes and prevents formation of channels for quick water flow
- Benefits: Reduces soil erosion, improves water infiltration, maintains soil structure
- Where used: Effective on gentle to moderate slopes across India

2. Terrace Cultivation:

- Method: Steps are cut out on slopes making terraces or steps
- How it works: Restricts erosion by breaking the slope into smaller flat sections, reducing water velocity
- Benefits: Makes steep slopes cultivable, prevents rapid water runoff, increases agricultural area
- Examples: Western and Central Himalayas have well-developed terrace farming. Common in Uttarakhand, Himachal Pradesh, and North-Eastern states

3. Strip Cropping:

- Method: Large fields are divided into strips, with strips of grass left to grow between crops
- How it works: The grass strips break up the force of wind and water, acting as barriers
- Benefits: Prevents both wind and water erosion, maintains soil structure, adds organic matter
- Where used: Particularly effective in plains and gently sloping areas

4. Shelter Belts:

- Method: Planting rows or lines of trees to create shelter
- How it works: Trees act as windbreaks, reducing wind velocity and protecting soil from wind erosion
- Benefits: Prevents wind erosion, stabilizes sand dunes, creates microclimate, provides additional produce (fruits, timber)
- Examples: These shelter belts have contributed significantly to stabilization of sand dunes and in stabilizing the desert in western India, particularly in Rajasthan

5. Afforestation and Proper Grazing Management:

- Method: Planting trees on large scale and controlling grazing activities
- How it works: Tree roots bind soil particles together; controlled grazing prevents over-grazing
- Benefits: Prevents soil erosion, maintains soil fertility, increases moisture retention, improves biodiversity
- Application: Important in areas affected by deforestation and over-grazing like parts of Gujarat, Rajasthan, MP

6. Proper Management of Waste Lands:

- Method: Reclamation and development of barren and waste lands
- How it works: Through soil treatment, water management, and appropriate plant species
- Benefits: Increases productive land area, prevents further degradation

7. Control of Mining Activities and Industrial Waste:

- Method: Proper regulation of mining, proper discharge and disposal of industrial effluents after treatment

- How it works: Prevents land and water degradation from mining over-burden and industrial waste
- Benefits: Reduces land degradation in industrial and suburban areas
- Need: Particularly important in states like Jharkhand, Chhattisgarh, MP, Odisha with mining activities

8. Prevention of Over-irrigation:

- Method: Controlled and scientific irrigation practices
- How it works: Prevents water logging and accumulation of salts
- Benefits: Prevents land degradation due to salinity and alkalinity
- Application: Important in Punjab, Haryana, and Western UP where over-irrigation has caused problems

Conclusion: Different conservation methods are suitable for different conditions. A combination of these methods, adapted to local conditions, provides the best results in preventing soil erosion and maintaining soil fertility. Proper implementation requires awareness, planning, and community participation.

SECTION E - Answers to Case Study Based Questions

Q19. Case Study on Resources and Development

(i) Why availability alone is not sufficient: (1 mark)

Mere availability of resources in the absence of corresponding changes in technology and institutions may hinder development. Resources can contribute to development only when they are accompanied by appropriate technological development and institutional changes. Without the ability to extract, process and utilize resources effectively, their presence alone doesn't lead to development.

(ii) Examples of contrasting regions: (2 marks)

Resource-rich but economically backward region: Jharkhand, Chhattisgarh, or parts of Madhya Pradesh - these states are rich in minerals and coal deposits but remain economically backward due to lack of proper infrastructure, technology, and institutional development to fully utilize these resources.

Resource-poor but economically developed region: Some parts of urban areas or regions with limited natural resources but high human resource quality, technological advancement, and strong institutional frameworks. For example, certain industrial belts that import raw materials but have developed strong manufacturing and service sectors.

(iii) Lesson from colonization history: (1 mark)

The history of colonization reveals that rich resources in colonies were the main attractions for foreign invaders. It was primarily the higher level of technological development of the colonizing countries that helped them to exploit resources of other regions and establish their supremacy. This teaches us that technology, quality of human resources, and proper institutions are as important as resource availability for true development.

Q20. Case Study on Red and Yellow Soils

(i) Where red soil develops: (1 mark)

Red soil develops on crystalline igneous rocks in areas of low rainfall in the eastern and southern parts of the Deccan plateau. It is also found in parts of Odisha, Chhattisgarh, southern parts of the middle Ganga plain and along the piedmont zone of the Western Ghats.

(ii) Why red soil appears red or yellow: (1 mark)

Red soil develops a reddish color due to diffusion (spreading) of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form (when iron compounds combine with water molecules).

(iii) Relationship between texture and fertility: (2 marks)

There is a direct relationship between soil texture and fertility in red and yellow soils:

- **Fine-grained red and yellow soils** are normally fertile. The fine particles have better water retention capacity and more surface area for nutrient holding, making them suitable for agriculture.
- **Coarse-grained soils** found in dry upland areas are poor in fertility. The larger particles have less surface area, poor water retention, and cannot hold nutrients effectively. They are also more prone to erosion and have lower organic matter content.

This relationship highlights that not just the type of soil but also its texture plays a crucial role in determining agricultural productivity.

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