

CLASS: X
SUB: GEOGRAPHY - CHAPTER: 1: Resources and Development
WORKSHEET: No. 01



Please write the following questions in your note book: 8, 12, 18, 28, 35, 38, 42, 43 & 55.

Summary of the Lesson

No.	Question	Marks
1	<p>What do you understand by the term resource? Ans. Everything available in our environment which can be used to satisfy our needs, provided, it is technologically accessible, economically feasible and culturally acceptable can be termed as 'Resource'.</p>	1
2	<p>What does the process of transformation of things available in our environment involve? State the role of human beings to accelerate their economic development. Ans. A) The process of transformation of things available in our environment involves an inter-dependent relationship between nature, technology and institutions. B) Human beings interact with nature through technology and create institutions to accelerate their economic development.</p>	2
3	<p>Do you think that resources are free gifts of nature? Justify the statement. Ans. 1) They are not. Resources are a function of human activities. 2) Human beings themselves are essential components of resources. 3) They transform material available in our environment into resources and use them.</p>	3
4	<p>Give a detailed classification of resources. OR Distinguish between renewable and non-renewable resources. (CBSE, S.A.-1, 2015) Ans. Resources can be classified in the following way: (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</p>	2 marks of each
5	<p>Classify the resources on the basis of: a) Meaning b) 2 examples (Any 4) A) Biotic resources and Abiotic resources B) Renewable and Non-renewable resource C) Individual resources and Community owned resources. D) National resources and International resources E) Potential resources and Developed resources</p>	4
6	Briefly explain the term Stock Resources with the help of examples.	4
7	What are Reserve Resources? Explain with examples.	4
8	<p>State the major problems caused due to indiscriminate use of resources by human beings. (CBSE, S.A.-1, 2011)and (CBSE, S.A.-1, 2015) Ans. <u>Following problems are caused:</u> 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.</p>	3 / 5

	3. Indiscriminate exploitation of resources has led to global ecological crises such as, global warming, ozone layer depletion, environmental pollution and land degradation.																
9	<p>Why is resource planning essential for sustainable existence of all forms of life?</p> <p>Ans. 1. An equitable distribution of resources has become essential for a sustained quality of life and global peace.</p> <p>2. If the present trend of resource depletion by a few individuals and countries continues, the future of our planet is in danger.</p> <p>3. Resource planning is essential for sustainable existence of all forms of life. Sustainable existence is a component of sustainable development.</p>	3															
10	<p>What does the term Sustainable development mean?</p> <p>Ans. Sustainable economic development means development should take place without damaging the environment and development in the present should not compromise with the needs of the future generations.</p>	1															
11	<p>How do regions differ in terms of availability of resources? Give examples from four states to show the reasons.</p> <table border="1" data-bbox="240 772 1380 1146"> <thead> <tr> <th>Regions/ States</th> <th>Rich in</th> <th>Poor / Deficient in</th> </tr> </thead> <tbody> <tr> <td>Jharkhand, Chhattisgarh and Madhya Pradesh</td> <td>Minerals and coal deposits</td> <td>_____</td> </tr> <tr> <td>Arunachal Pradesh</td> <td>Abundance of water resources</td> <td>Lacks infrastructural development</td> </tr> <tr> <td>Rajasthan</td> <td>Well endowed with solar and wind energy</td> <td>Lacks water resources</td> </tr> <tr> <td>Cold desert of Ladakh</td> <td>Rich cultural heritage</td> <td>Deficient in water, infrastructure and some vital minerals.</td> </tr> </tbody> </table> <p>Therefore, there is a need for balanced resource at the national, state, regional and local levels.</p>	Regions/ States	Rich in	Poor / Deficient in	Jharkhand, Chhattisgarh and Madhya Pradesh	Minerals and coal deposits	_____	Arunachal Pradesh	Abundance of water resources	Lacks infrastructural development	Rajasthan	Well endowed with solar and wind energy	Lacks water resources	Cold desert of Ladakh	Rich cultural heritage	Deficient in water, infrastructure and some vital minerals.	5
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12	<p>“Resource planning is a complex process”. Justify</p> <p>Ans. It involves the following steps:</p> <p>a) Identification and inventory of resources across the regions of the country: It involves surveying, mapping and qualitative and quantitative estimation and measurement of the resources.</p> <p>b) Evolving a planning structure: Endowed with appropriate technology, skill and institutional set up for implementing resources development plans.</p> <p>c) Matching resource development plans with: Overall national development plans.</p>	3															
13	<p>How has colonization established relation between technological development and institutional changes?</p> <p>Ans. 1. The history of colonisation reveals that rich resources in colonies were the main attractions for the foreign invaders.</p> <p>2. It was primarily the higher level of technological development of the colonising countries that helped them to exploit resources of other regions and establish their supremacy over the colonies.</p> <p>3. Resources can contribute to development only when they are accompanied by appropriate technological development and institutional changes.</p>	3															
14	<p>What does resource development involve in particular in India?</p> <p>Ans. The availability of resources, technology quality of human resources and the historical experience of the people.</p>	2															
15	What are the two problems of irrational consumption and over-utilization of	1															

	resources in India? Ans. Socio-economic and environmental problems.													
16	What was Gandhiji's concern about resource conservation? Ans. Gandhiji believed that: a) There is enough for everybody's need and not for anybody's greed. b) He placed the greedy and selfish individuals and exploitative nature of modern technology as the root cause for resource depletion at the global level. c) He was against mass production and wanted to replace it with the production by the masses.	3												
17	'Land is a natural resource of utmost importance'. Justify the statement. Ans: We live on land, we perform our economic activities on land and we use it in different ways with careful planning.	1												
18	Explain the variety of relief features in India with reference to percentage and uses. Ans: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Relief feature</th> <th style="width: 10%;">%</th> <th style="width: 60%;">Uses</th> </tr> </thead> <tbody> <tr> <td>Plains</td> <td>43</td> <td>Provides facilities for agriculture and industry.</td> </tr> <tr> <td>Mountains</td> <td>30</td> <td>ensure perennial flow of some rivers, provide facilities for tourism and ecological aspects.</td> </tr> <tr> <td>Plateau</td> <td>27</td> <td>possesses rich reserves of minerals, fossil fuels and forests.</td> </tr> </tbody> </table>	Relief feature	%	Uses	Plains	43	Provides facilities for agriculture and industry.	Mountains	30	ensure perennial flow of some rivers, provide facilities for tourism and ecological aspects.	Plateau	27	possesses rich reserves of minerals, fossil fuels and forests.	5
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19	A} What do the following categories of land use pattern include: (2) Ans. I) <u>Land not available for cultivation</u> : a) Barren and waste land b) Land put to non-agricultural uses, e.g. buildings, roads, factories etc. II) <u>Fallow land</u> - a) Current fallow- left without cultivation one or less than one agricultural year. b) Other than current fallow land-left uncultivated for the past 1 to 5 agricultural years. III. <u>Other uncultivated land- excluding fallow land</u> - a) Permanent pastures and grazing land b) Land under miscellaneous tree crops groves not included in net sown area. c) Culturable wasteland- left uncultivated for more than 5 agricultural years. B}Difference between: (1) <u>Grossed Cropped Area</u> :Area sown more than once in an agricultural year plus net sown area is known as gross cropped area. <u>Net Sown Area</u> : Area sown under one crop in one agricultural season. Example rice grown in Kharif season.	3												
20	Mention the physical and human factors that determine the use of land. (2+2) Ans. <u>A) Physical factors</u> : Topography, climate and soil types. <u>B) Human factors</u> : Population density, technological capability and culture & tradition.	5												
21.	The land under permanent pastures has declined. How are we able to feed our huge cattle population? What are the consequences of it? Ans. 1. Agricultural residue will provide fodder for our huge cattle population. 2. Consequences: a) Tremendous pressure on agricultural land b) Animal products and milk production will decline.	3												
22.	Name the two states that have over 80% of total area under NSA. Also name the states that have less than 10% of land under NSA. Find out reasons for low and high proportion of Net Sown Area in these states. 2+2 Ans. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Two states that have</td> <td style="width: 30%;">Punjab and Haryana</td> <td style="width: 40%;">1. Gentle slope</td> </tr> </table>	Two states that have	Punjab and Haryana	1. Gentle slope	4									
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	<p>over 80% of total area under NSA</p> <p>States that have less than 10% of land under NSA</p>	<p>Arunachal Pradesh, Mizoram, Manipur and Andaman and Nicobar Islands</p>	<p>2. Fertile soil 3. Abundance of water</p> <p>1. Unfavourable topography 2. Unfavourable climate 3. Dense forests</p>													
23.	<p>What percentage of land in India is under forest? Why is it essential to increase area under forests?</p> <p>Ans. 22.57%.</p> <p>Reasons: a) Essential for maintenance of the ecological balance. b) Livelihood of millions of people who live on the fringes of these forests depends upon it.</p>			3												
24.	<p>Give examples of wasteland and land put to other non-agricultural uses.</p> <p>A) Wasteland- Rocky, arid and desert areas. B) Non-agricultural uses- Settlement, roads, railways, industry.</p>			3												
25.	<p>What has resulted in land degradation? What are its consequences?</p> <p>Ans. A) Continuous use of land over a period of time without taking appropriate measures to conserve and manage it, has resulted in land degradation. B) It has serious repercussions on society and the environment.</p> <div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;"><u>Land Degradation</u> <u>Deforestation</u></p>			2												
26.	<p>How has human activities led to land degradation? Also name human activities that have contributed to land degradation.</p> <p>Ans. a) Human activities have not only brought about degradation of land but have also aggravated the pace of natural forces to cause damage to land. b) Human activities contributing to land degradation- Deforestation, over grazing, mining and quarrying etc.</p>			3												
27.	<p>Explain the degraded land or wasteland in India with the help of examples.</p> <p>Ans. 1. At present there are about 130 million hectares of degraded land in India. 2. Approximately, 28 percent of it belongs to the category of forest degraded area. 3. About 56% of it is water eroded area. 4. Rest of the land is affected by saline and alkaline deposits.</p>			3												
28.	<p>Explain the reasons for land degradation with the help of examples.</p> <p>Ans.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Reasons</th> <th>States/Areas</th> <th>Analysis</th> </tr> </thead> <tbody> <tr> <td>1. Mining sites</td> <td>Jharkhand, Chhattisgarh, Madhya Pradesh and Orissa</td> <td>Mining sites are abandoned after excavation work is complete leaving deep scars and traces of over-burdening. deforestation due to mining in these states have caused severe land degradation.</td> </tr> <tr> <td>2. Overgrazing</td> <td>Gujarat, Rajasthan, Madhya Pradesh and Maharashtra</td> <td>overgrazing is one of the main reasons for land degradation.</td> </tr> <tr> <td>3. Over irrigation</td> <td>Punjab, Haryana,</td> <td>over irrigation is responsible for land degradation due to water logging leading to increase in</td> </tr> </tbody> </table>			Reasons	States/Areas	Analysis	1. Mining sites	Jharkhand, Chhattisgarh, Madhya Pradesh and Orissa	Mining sites are abandoned after excavation work is complete leaving deep scars and traces of over-burdening. deforestation due to mining in these states have caused severe land degradation.	2. Overgrazing	Gujarat, Rajasthan, Madhya Pradesh and Maharashtra	overgrazing is one of the main reasons for land degradation.	3. Over irrigation	Punjab, Haryana,	over irrigation is responsible for land degradation due to water logging leading to increase in	5
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		western Uttar Pradesh	salinity and alkalinity in the soil.	
	4.Mineral Processing		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.	
	5.Industrial effluents		In recent years, industrial effluents as waste have become a major source of land and water pollution in many parts of the country.	
29.	Explain the ways to solve the problem of land degradation. Ans. There are many ways: a) Afforestation and proper management of grazing can help to some extent. (1) b) Planting of shelter belts of plants, control on over grazing, stabilization of sand dunes by growing thorny bushes are some of the methods to check land degradation. (1) 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. (1)			3
30.	State the importance of soil as natural resource. What does it consist of? (1+2) Ans. 1) It is the most important renewable natural resource. It is the medium of plant growth and supports different types of living organisms on earth. 2) It consists of organic (humus) and inorganic material.			3
31.	Name the important factors that contribute to the formation of soil. Ans. Relief, parent rock or bed rock, climate, vegetation and other forms of life and time are important factors.			2
32.	State various forces of nature that contribute to the formation of soil. Ans. Various forces of nature such as change in temperature, action of running water, wind and glaciers, activities of decomposers etc.			2
33.	Name any six factors responsible for the classification of different types of soils in India. Ans. Colour, thickness, texture, age, chemical and physical properties.			3
34.	Mention any four factors that have contributed to the development of various types of soils of India. Ans. Varied relief features, landforms, climatic realms and vegetation types.			2
35.	Name the most widely spread and important soil of India. Write any three characteristics of this type of soils. (1+3) OR Which type of soil is found in the river deltas of the eastern coast? Give three main features of this type of soil. Ans. A) Alluvial soils. B) These soils consist of various proportions of sand, silt & clay. C) As we move inland towards the river valley, soil particles appear some what bigger in size. D) According to the size of their grains or components they are also known as old alluvial (Bangar) and new alluvial (Khadar) soils.			5
36.	Name the three areas where alluvial soils are found in India. Ans. They are found as: 1) The entire northern plains. 2) They extend in Rajasthan and Gujarat through a narrow corridor. 3) Eastern coastal plains particularly in the deltas of the Mahanadi, the Godavari, the Krishna and the Kaveri rivers also contain these soils.			3
37.	Explain the characteristics of the alluvial soils found in the Piedmont plains. Give examples.			3

(Piedmont plain: An area of land formed or lying at the foot of a mountain or mountain range. **Piedmont** is sometimes referred to as a **plateau** because it is high and mostly flat.)



Piedmont Plains

Ans. A) In the upper reaches of the river valley i.e. near the place of break of slope, the soils are coarse.

B) Such soils are more common in piedmont plains such as Duars, Chos and Terai.

38. **Differentiate between Khadar and Bhangar soils.**

5

Ans.

<i>Basis</i>	<i>Khadar soils</i>	<i>Bhangar soils</i>
1. Old/Newer	Newer deposition of alluvium.	Older deposition of alluvium
2. Concentration of kanker nodules	Less concentration of kanker nodules	Higher concentration of kanker nodules
3. Particles	It has more fine particles.	It has less fine particles.
4. Fertility	It is more fertile.	It is less fertile.

39. **Name the minerals that are found in alluvial soils. Also state the crops that are ideally grown in alluvial soils.**(2+2)

3

Ans. I) Adequate proportion of potash, phosphoric acid and lime.

II) Ideal for the growth of sugarcane, paddy, wheat and other cereal and pulse crops.

40. **a) What is the implication of alluvial soils having high fertility? (2)**

3

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

b) How can alluvial soils in drier areas be made productive? (1)

Ans. Soils in the drier areas are more alkaline and can be productive after proper treatment and irrigation.

41. **Explain Black soil on the basis of the following:**

5

Ans.

- Different name:** Regur soil or black cotton soil (1)
- Crop grown:** Ideal for growing cotton (1)
- Important factor for the formation:** Climatic condition along with the parent rock material. (1)
- Distribution:** Typical of the Deccan trap (Basalt) region spread over northwest Deccan plateau and is made up of lava flows. They cover the plateaus of Maharashtra, Saurashtra, Malwa, Madhya Pradesh and Chhattisgarh and extend in the south east direction along the Godavari and the Krishna valleys. (2)
- What are they made up of?:** The black soils are made up of extremely fine i.e. clayey material. (1)

42. **Explain the important characteristics of Black soils.**

5

Ans. 1) They are well-known for their capacity to hold moisture.

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 hot weather, which helps in the proper aeration of the soil.

5) These soils are sticky when wet and difficult to work on unless tilled immediately

	after the first shower or during the pre-monsoon period.	
43.	Explain the red and yellow soils on the basis of the following: Ans. I) Where are they developed? – Red soil develops on crystalline igneous rocks in areas of low rainfall in the eastern and southern parts of the Deccan plateau. II) Distribution: Red and Yellow soils are also found in parts of Orissa, Chhattisgarh, southern parts of the middle Ganga plain and along the piedmont zone of the W. Ghats.	3
44.	Why does the red soil appear reddish and yellow in colour? Ans. These soils develop a reddish colour due to diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form.	1
45.	Explain laterite soils on the basis of the following: i) Derivation of the term: Laterite has been derived from the Latin word ‘later’ which means brick. ii) Areas of development: The laterite soil develops in areas with high temperature and heavy rainfall. iii) Reason for development: This is the result of intense leaching due to heavy rain. iv) Humus content: Humus content of the soil is low because of the micro organisms, particularly the decomposers, like bacteria, get destroyed due to high temperature. v) How can the laterite soil be made suitable for cultivation?- Laterite soils are suitable for cultivation with adequate doses of manures and fertilizers. vi) Distribution (main states)- Mainly found in Karnataka, Kerala, Tamil Nadu, Madhya Pradesh and the hilly areas of Orissa and Assam.	5
46.	In which states and for what crops laterite soils have become very productive? Ans. After adopting appropriate soil conservation techniques particularly in the hilly areas of Karnataka, Kerala and Tamil Nadu, it’s useful for growing tea and coffee.	3
47.	In which states Red laterite soils are more suitable for crops like cashew nut? Ans. Red laterite soils in Tamil Nadu, Andhra Pradesh and Kerala are more suitable for crops like cashew nut.	1
48.	Describe arid soils on the basis of the following: (Any three points) Ans. a) Colour: Arid soils range from red to brown. b) Texture and nature- They are generally sandy in texture and saline in nature. c) Salt content: In some areas the salt content is very high. d) Utility: Common salt is obtained by evaporating the water.	3
49.	Describe the lower horizon and bottom horizon of arid soils. Ans. I) Lower horizons: The lower horizons of the soils are occupied by Kankar because of the increasing calcium content downwards. II) Bottom Horizon: The Kankar horizons restrict the infiltration of water. After proper irrigation these soils become cultivable as has been in the case of western Rajasthan.	3
50.	Explain the forest soils on the basis of the following: (1+2) i) Areas- Found in the hilly and mountainous areas where sufficient rain forests are available. ii) Soil Texture: The soils texture varies according to the mountain environment where they are formed. They are loamy and silty on valley sides and coarse grained on the upper slopes.	3
51.	Explain the characteristics of forest soils in snow covered areas and the lower parts of the valleys. Ans. a) In the snow covered areas of Himalayas, these soils experience denudation and are acidic with low humus content. (2) b) The soils found in the lower parts of the valley particularly on the river terraces and alluvial fans are fertile. (1)	3
52.	What is soil erosion? State the human activities and natural forces that lead to soil erosion. (1+3) OR Mention any two human activities which are responsible for the	3/5

	<p>process of soil process of erosion. Explain any two types of soil erosion mostly observed in India. (S.A.- 1-2012)</p> <p>Ans. Meaning: The denudation of the soil cover and subsequent washing down is described as soil erosion. (1) Human activities: Deforestation, over-grazing, construction and mining. (2) Natural forces: Wind, glacier and water lead to soil erosion (2)</p>	
53.	<p>Define the following:</p> <p>Ans. 1) Gullies: The running water cuts through the clayey soils and makes deep channels as gullies. 2. Bad lands: The land becomes unfit for cultivation and is known as bad land. 3. Ravines: Bad land in the Chambal basin is called ravines. 4. Sheet Erosion: Sometimes water flows as a sheet over large areas down a slope. In such cases the top soil is washed away, this is known as sheet erosion.</p>	1/3/5
54.	<p>What is wind erosion? How do the defective methods of farming cause soil erosion?</p> <p>Ans. a) Wind erosion: Wind blows loose soil off flat or sloping land known as wind erosion. (1) b) Defective methods of farming: Soil erosion is also caused due to defective methods of farming. Ploughing in a wrong way i.e. up and down the slope form channels for quick flow of water leading to soil erosion. (2)</p>	3
55.	<p>What steps can be taken to control soil erosion? (S.A.-1, 2012) OR Suggest any three measures to control soil erosion caused by various reasons. (S.A.- 1- 2013)</p> <p>Ans. The following steps can be taken to control soil erosion:</p> <p>1) Contour ploughing: Ploughing along the contour lines can decelerate the flow of water down the slopes.</p> <div data-bbox="362 1133 802 1447" data-label="Image"> </div> <div data-bbox="805 1124 1261 1447" data-label="Image"> </div> <p style="text-align: center;"><u>Contour Ploughing</u></p> <p>2) Terrace farming: Steps can be cut out on the slopes making terraces. Terrace cultivation restricts erosion. Western and central Himalayas have well developed terrace farming.</p> <div data-bbox="290 1630 735 1895" data-label="Image"> </div> <div data-bbox="738 1688 1243 1912" data-label="Image"> </div> <p style="text-align: center;"><u>Terrace Farming</u></p> <p>3) Strip cropping: Large fields can be divided into strips. Strips of grass are left to grow between the crops. This breaks up the force of the wind. This method is known as strip cropping.</p>	One mark of each point



Strip Cropping

4) **Planting lines/shelter belts:** Planting lines of trees to create shelter also works in the similar way to check soil erosion. Rows of such trees are called shelter belts.



Shelter Belts

56.	<p>How can we check the stabilization of sand dunes in the deserts? Ans. Rows of trees are called shelter belts. These shelter belts have contributed significantly to the stabilization of sand dunes and in stabilizing the desert in W. India.</p>	1
<p><i>Map work: Major soil types (Identification only)</i></p>		
