

CLASS 8TH GEOGRAPHY
CHAPTER 2
ABIOTIC RESOURCES:LAND,SOIL AND WATER

I) Multiple choice questions (MCQ)

- 1.Individuals
- 2.Soil texture
- 3.All of these
- 4.3/4
- 5.Water
- 6.Sprinkles or drip irrigation should be used.

II) Very short answer type questions-

- 1.The factors responsible for soil formation are Parent rock,Relief,Climate,Time,natural vegetation,wildlife and micro-organisms.
- 2.Two factors are responsible for land degradation:-a)Deforestation b)Human activities.
- 3.The land resources are important because-
 - I) Land resources are rich resources of timber and other products such as gum,resin,medicinal herbs etc.
 - II) These are the store house of mineral deposits
- 4.Two ways to conserve water are:-
 - I) Rain water harvesting technique can also be used to save surface run off.
 - II) Sprinklers,drip or trickle irrigation methods should be used as the coolant in the industries.

III)Short answer type questions:-

- 1.Short notes on the abiotic resources-
Abiotic resources consists of non-living things mineral,rocks,metal,land,soil and water.These are the free gifts of nature for the living organisms.
- 2.The land use patterns-
 - I) Land use pattern is used to indicate the different uses of land.
 - II) There are considerable variations in land use among nations of the world.
 - III) Australia(56%) has high percentage of area under pastures,as India has under croplands(57%)
- 3.I)Soil has certain properties such as fertility,ability to retain air and moisture.
 - I) But when any of these properties is diminished or increased soil erosion takes place and plants fail to grow.
 - II) To prevent soil erosion,afforestation,mulching,rotation of crops,controlled growing must be done.
- 4.I)Afforestation-under this method rose of trees are planted at short distances in the farm to provide shelter belt.

II) Mulching-organic matter such as straw, grass etc. are used to cover the bare ground between rows of plants. It helps soil to retain moisture.

III) Construction of dams-Dams are constructed to slow down the flow of running water.

5. Water has more importance as an environmental resource than natural resources of human use.

I) It covers about $\frac{3}{4}$ th of the earth's surface. The earth is therefore called the water planet or the blue planet.

II) It is a tasteless and colourless substance.

III) Water is a vital renewable natural resource of the earth's surface. It is necessary for all kinds of living organisms.

IV. Long answer type questions-

1. The main factors that affect the land use pattern-

I) Climate-Land use pattern of any place is directly or indirectly influenced by the climatic conditions. Climate is very harsh in the polar and equatorial regions. Thus, these areas are not suitable for croplands and pastures.

II) Topography- Well drained plain regions provide suitable conditions for agricultural activities and pastures. Such type of land use pattern attracts a huge number of people.

III) Type of soil- Well planned land use pattern can be seen in the areas having fertile soil. Areas like cold and hot deserts have infertile soil, therefore these are free from proper land use.

IV) Availability of water- The water availability is essential for a well developed and planned land use pattern.

V) Minerals- Mineral deposits also influence the land use pattern of a place,

VI) Technology and human resources- Human resources use technology to convert the raw natural resources into the valuable products, that fulfil the requirements of the successful land use pattern.

2) Soil refers to the thin layers of grainy substance covering the surface of the earth. It is closely related to land.

Soil profile is further divided into a number of horizons.

I) Horizons (top soil)-It contains humus and the finer particles of rock. It is the uppermost horizon of soil profile.

II) Horizon (sub soil)-It lies below the top soil and contains small rock particles, soluble minerals and iron oxides.

III) Horizon (fragmented rock material)-It lies below the sub-soil. It is made up of the small pieces of rocks, that come from the parent rock.

IV) Horizon (parent rock)-This horizon consists of parent rock. It is the solid unweathered rock.

Different types of parent rock and different climates produce different types of soil.

(Both the diagrams given on the page no. 275)

3) A comparative study on the land and soil resources-

I) Land resources refer to the shape, form and nature of the land surface. Almost all the activities are associated with the land resources whereas soil refers to the thin

layer of grainy substance covering the surface of the earth. It is closely related to land. The quality of land is determined by its soil cover.

II) Land can be classified as private and community land. Soil is divided into a number of horizons- top soil, sub soil, fragmented soil and parent rock.

III) Factors affecting land use pattern are climate, topography, types of soil, availability of water, minerals, technology and human resources whereas factors affecting formation of soil are parent rock, relief, climate, time, natural vegetation, wildlife and micro-organisms.

IV) The use of bio-fertilizers should be encouraged. Whereas soil can be conserved by afforestation, mulching, rotation of crop, contour ploughing, contour barrier, by construction of dams.

4) Water scarcity is being felt in many parts of the world due to the following reasons-

I) Changing land use pattern and need for irrigation coupled by inefficient use of water.

II) Pollution of water bodies as well as degradation of our environment.

III) Global warming and drying up of many streams and rivers. The ground water level has decreased in many parts of the world.

IV) Over exploitation, excessive use and unequal access to water among different areas are the main factors responsible for water scarcity.

The water scarcity is causing ecological crises in the world. To overcome such situation, human beings have to conserve and manage water resources.

5) Land resource

I) Land resource refers to the shape, form and nature of the land.

II) The land covers about 30% of the total area of the earth's surface.

III) Land resources are the storehouse of mineral deposits.

IV) Conservation of land by controlling overgrazing by planting trees.

Water Resources

I) Water is a vital renewable natural resource of the Earth's surface.

II) Water is not only essential for drinking purposes but it also provides shelter to many of the organisms.

III) It is a tasteless and colourless substance that covers about 3/4th of the earth's surface.

IV) Growing different types of natural vegetation to slow down the surface runoff.

6) Afforestation- In this method more and more trees are planted at short distances to conserve soil.

Shelter belt- In this method trees are planted in rows to provide shelter belt. It is mainly used in the coastal and dry regions.

7) Water Conservation- I) Conservation of water resources by growing vegetation to slow down the surface runoff. In this way, the underground water storage can be improved.

II) Rainwater harvesting technique can be also used to save surface runoff.

III) Sprinklers, drip or trickle irrigation methods should be used in agriculture activities.

IV) Recycled water should be used as the coolant in the industries. Check the wastage of water.

Soil Conservation

I) The preservation, protection and efficient utilization of soil resources is known as the soil conservation.

II) Afforestation- Rows of trees are planted at short distance in the farms to provide shelter belt.

III) Rotation of crop- In this method, different crops need different elements from the soil.

IV) Construction of dams- Dams are constructed to slow down the flow of running water.

V. Match column A with column B

1. Fertile layer of soil---Humus
2. Land used for agricultural activities----Arable land
3. Adequate use of land resources----land use
4. To check soil erosion---Rock dams
5. Cycle of water circulation----water cycle.