1. Answer the following questions in details :

(1) What is meant by resource? Describe its usages.

- Out of thousands of elements in nature the elements that are utilized by men through his special knowledge and expertise are known as resources.
- Human needs can be fulfilled by such natural elements and man has the physical and intellectual capacity to utilize it as resources.
- > Anything which is used to fulfill partial or total human needs becomes a resource.
- > The natural resources should have both the virtues of utility and capability to work.
- > The resources are made of the interactions of three : nature, man and the culture.
- > Various food requirements are compiled by various resources.
- Fruits grown naturally, various crops obtained through agriculture, milks and its products and meat obtained through domestic animals, fish and other aquatic animals from reservoirs, honey prepared by honeybees etc. are used as food items.
- Various goods obtained from forests, agro products, wool, hide, meat available from animals mineral ores etc. form the raw material for many industries.
- > Coal, petroleum, natural gas etc. are used as fuel in industries as well as domestic fuel.
- > Energy can be generated through solar insolation, wind, sea waves, tides and ebbs and waterfall etc.
- Thus, resources are useful to us in various ways. Its role is seen in the human life at one or other stage. All activities from agriculture to the industries directly or indirectly depend on natural resources.

(2) What is meant by soil conservation? State the remedies of soil conservation.

- Soil conservation means to prevent the soil erosion and maintain its quality. Soil conservation is directly connected to retain the soil particles at their original place. Different remedies are used at different places.
- Remedies of soil conservation :
- > Plant trees in river gorges and on mountain slopes.
- > The river floods should be controlled by diverting their flow in other rivers or in dry river beds.
- > The roots of forest cover hold up the soil particles.
- > A series of trees should be grown near a desert region to prevent the winds with more velocity.
- It will stop the advancing desert.
- > Methods like horizontal cultivation, terraced farms etc. should be implemented.
- Humus contents should be added to the soil which has lost its fertility.
- > Unrestricted pasturing loosens the soil layer on the mountains. It should be prevented.
- Thus conservation of soil is a strong necessity today. Government, society and the people should work together for this cause.

2. Answer the following questions as directed :

(1) Describe the process of soil formation and state on which basis these are classified '?

- Soil formation is done due to material available through the denudation. Minerals, humidity, air and humus are mixed up in it. Thus soil is the natural mixture of minerals and biotic elements which has the capacity to grow and develop vegetation.
- > The parental rock lies below the soil. Generally the part of the surface of the earth wherein the vegetation grows is known as soil.
- The soil is the layer or the surface of the matter formed due to the mixture of the scattered material of the parental rocks and vegetation. Factors of denudation prepare very thin powder through the denudation of rocks. The humus formed due to the disintegration or decay of vegetation or insects is added to this. These biotic elements play an important role in the development of the vegetation.
- The climatic impact on the duration of soil formation is so important and widespread the soil formed of different type of rocks in that region over long time is the same.
- So the soil formed out of the same parental rocks under different climatic influence is different.
- Soils are classified on the basis of their colour, climate, parental rocks, structure, humus etc.
- > It Recently ICAR (Indian Council of Agricultural Research) has divided Indian soils into 8 types.
- ➤ (1] Alluvial soil
- > (2) Red soil
- > (3) Black soil
- (4) Laterite soil
- > (5) Desert soil
- ➢ (6) Mountain soil
- > (7) Forest soil
- > (8] Marshy or Peaty soil

(2) Write notes on Alluvial soil.

- > Alluvial soil is spread about 43% of the total area of India.
- This soil is found in the Northern plain from the Brahmaputra valley in the East up to Satluj in the west in the valley.
- > It is found in the valley regions of Tapi, Mahanadi, Godavari, Krishna and Kaveri rivers.
- > Moreover it is found in the delta regions of above rivers.
- > The formation of alluvial soil is due to the alluvial deposition by the rivers.
- Potash, phosphoric acid and limestone are in more proportion while nitrogen and humus are in less proportion.
- > Nitrogen content can be stabilized by taking the crops of pulses in this type of soil.

Crops like wheat, paddy, sugarcane, jute, cotton, maize, oil seeds etc. can be grown in this type of soil.

(3) Write notes on Black soil.

- Black soil is also known as Regur soil.
- > This soil was formed due to the spreading of Deccan Lava.
- > Lava rocks and climate play an important role in the formation of such soil.
- It covers about 15% of the total area of India.
- > As this soil is more suitable to cotton it is also known as 'Cotton soil'.
- It is found in entire Maharashtra, Western Madhya Pradesh, Andhra Pradesh and certain parts of Karnataka.
- > In Gujarat Surat, Bharuch, Narmada, Vadodara, Tapi and Dang districts have this type of the soil.
- There is more proportion of iron, lime, calcium, potash, aluminium and magnesium carbonates in its soil.
- It is considered to be quite fertile soil.
- > This soil has capacity of retaining more moisture.
- > Whenever the moisture dries up they develop fissures.
- > Crops like cotton, linseed, mustard, groundnut, tobacco and udad are grown in this soil.

3. Answer the following questions in brief:

(1) State the remedies to prevent soil erosion.

- Plant trees in fallow land.
- Control the grazing activity on the land.
- > Plantation should be carried out in contour method in sloppy regions.
- > Construct check dams where there are streams.
- > Cultivate very deeply in the field to decrease the speed of the water.

(2) What is called as Mountain soil '?

- This type of the soil is found in the valley and sloppy regions of the Himalayas as an altitude of about 2700 to 3000 meters.
- > This soil is very underdeveloped and its layer is very thin.
- > This soil is found in Assam, Darjeeling, Uttarakhand, Himachal Pradesh and Kashmir.
- > In Himalayas the soil is found at a general altitude in the regions of pine and Chid trees.
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(3) Write short note about the desert soil.

> Desert soil is found in the area where climate is arid or semi-arid.

- This soil is sandy and less fertile.
- > Rajasthan, Haryana and southern Punjab states of India have this type of soil.
- > It is found in Kachchh and some parts of Saurashtra in Gujarat.
- > Crops like millet and jowar can also be taken in this soil if provided with irrigation facility.

4. Select the correct option and write answer :

(1) The resource available at one or two places in the world

- (A) Universal resource (B) Common available resource
- (C) Rare resource (D) Solitary resource
- (2) Soil formation takes place due to elements of parental rocks.
 - (A) Weathering and erosion (B) Transportation and stagnancy

(C) Sequence and non-sequence (D) Vertical and headwards

(3) Which is the other name of Padkhau soil?

(A) Alluvial soil	<u>(B) Lateritc soil</u>	(C) Black soil	(D) Red soil
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(4) Recently the soils of India are classified into types by Indian Council for Agricultural Research (ICAR).

(A) Seven (B) Sixteen (C) Five (D) Eight