

## 16. Soil

### Exercises

#### 1 A. Question

Answer the following question.

What is soil made of?

#### Answer

Soil is the upper layer of earth in which plant grows. It provides nutrients and water to the plants.

Soil is made up of stones and pebbles, sand, fine soil particles and humus (organic substances obtained from dead plants and animals).



Soil supporting plant growth

#### 1 B. Question

Answer the following question.

Which are the constituents of plant origin in soil?

#### Answer

Soil contains organic substances which are either comes from plants or from animals. The organic substances coming from plants are called soil constituents of plant origin. The constituents of plant origin include bacteria, fungi, algae, blue-green algae, decomposed leaves, etc., of plants. These after death and decomposition form organic constituents of plants.



Plant constituents of soil

#### 1 C. Question

Answer the following question.

What steps can be taken to prevent erosion of soil?

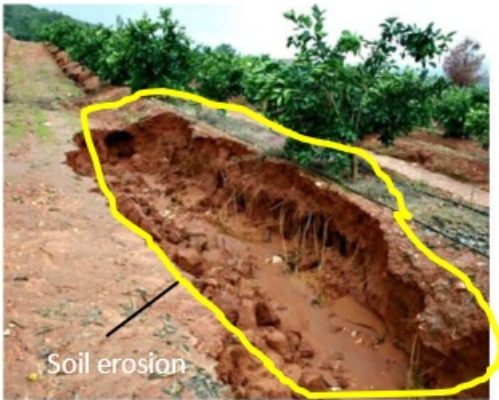
#### Answer

Soil erosion is a process by which top fertile, thin layer of the soil is blown or removed by strong winds and rain. To check soil erosion, we should keep soil covered. Top layer of the soil should not be left open.

The following activity can prevent soil erosion:

- Cover soil by growing grass on it.
- By growing crops in the soil.
- Plant trees on the open soil to prevent soil erosion.

In all these activities, roots of plants bind soil which prevent soil Erosion.



## 2. Question

'True or false?

- (a) The texture of soil can be determined from its colour.
- (b) Soil is formed by the fast flowing currents of water.
- (c) Sandy soil has little capacity for holding water.

## Answer

- (a) True.

Soil contains sand, slit and clay. The size of these particles in the soil is the texture of the soil. Colour of the soil also determines the texture of the soil. For example soils high in iron are deep orange-brown, soils that are high in humus dark brown or black.

- (b) False.

The fast flowing water currents is the agent of soil erosion. The breaking of rocks slowly by rainwater, winds and change in weather form soil.

- (c) True

Sandy soil composed of large sized sand particles. The space between sandy soil particles is more that clay and loam soil. Therefore, sandy soil has little capacity to hold water.

## 3. Question

Match the following.

'A'	'B'
(a) Algae	1. Farming on fallow land
(b) Soil erosion	2. Factors of plant origin
(c) Social forestry	3. Wind
	4. Factors of animal origin

## Answer

Column A	Column B
Algae	Factors of plant origin
Soil erosion	Wind
Social forestry	Farming on fallow land

- (a) Algae are small green plants which dies and decomposed into the soil.

(b) Strong blowing wind is a soil erosion agent. It causes top soil to carry away to the distant places

(c) Social forestry started to encourage small farmers and adivasis to plant trees and do agriculture activity on the fallow (empty) and barren land. The number of trees has risen and wood has become available in plenty for the poor people to earn some money.

#### 4. Question

Fill in the blanks.

- (a) Plants satisfy man's basic needs for .....,..... and .....
- (b) ..... and ..... are the organic constituents of soil.
- (c) Land should be ..... to prevent erosion.
- (d) Disturbance of the natural balance of soil is called soil .....
- (e) The government has started the ..... project protect forests.

#### Answer

(a) Plants satisfy man's basic needs for **food, shelter** and **clothing**.

Without soil, plants cannot grow. Plants provide food and shelter for animals including humans.

(b) **plants** and **animals** are the organic constituents of soil.

Soil contains organic substances which are either comes from plants or from animals.

- i. The organic substances coming from plants are called soil constituents of plant origin.
  - ii. The soil constituents of plant origin include bacteria, fungi, and algae, blue - green algae, decomposed leaves, etc., of plants.
  - iii. The soil constituents of plant origin include insects, protozoa, worms, shells and decomposed remains of dead animals.
- (c) Land should be **covered** to prevent erosion.

Land without vegetation (plants) covering leads to soil erosion.

(d) Disturbance of the natural balance of soil is called soil **pollution**.

Farmers use chemical fertilisers and pesticides in the crop fields in greater quantities than they required then the proportion of chemicals in the soil increases. These chemical disturb the soil natural balance causing soil pollution.

(e) The government has started the **social forestry** project to protect forests.

Social forestry project started by government of India to encourage small/ poor farmers and adivasis to plant trees and do agriculture activity on the fallow (empty) and barren land and draws some income by selling wood and other forest products.

#### Activities

##### 1. Question

Take some clay and sprinkle water on it to make a soft dough. Shape it as you like to make things of your choice. Keep these things aside for a few hours. The clay will harden and your articles will be ready.

##### Answer

Step 1: Take some clay

Step 2: Put some water on it to make a soft dough.

Step 3: Shape the soft dough to make anything of your choice

