

CLASS - 7<sup>th</sup>  
 Subject - science  
 Chapter - 9<sup>th</sup>  
 (Soil)

(Book Activity)

Tick the most suitable answer in question 1 and 2.

1) In addition to the rock particles, the soil contains  
 Ans → minerals, organic matter, air and water.

2) The water holding capacity is the highest is  
 Ans → clayey soil.

3) Match the items in column I with those  
 Ans ↴ in column II.

Column I	Column II
1) A home for living organism	All kinds of soil
2) upper layer of the soil	Dark in colour
3) sandy soil	Large particle
4) middle layer of the soil	Lesser amount of human
5) clayey soil	Small particle and packed tight.

(Note book)

4) Explain how soil is formed.

Ans → soil is formed due to the weathering of rocks.

weathering is a process in which physical breakdown.

and chemical decomposition of mineral takes place primarily by wind, water and climate

change. In the weathering process, rocks are

converted to small pieces which eventually turn to soil particles to form a layer of soil.

5) How is clayey soil useful for crops?

Ans → clayey soil is useful for crops for the following reasons.

- 1) It has excellent water holding capacity
- 2) Clayey soil is rich in organic matter.
- 3) Clayey and loamy soils are suitable for growing cereals like wheat.

6). List the difference between clayey soil and sandy soil.

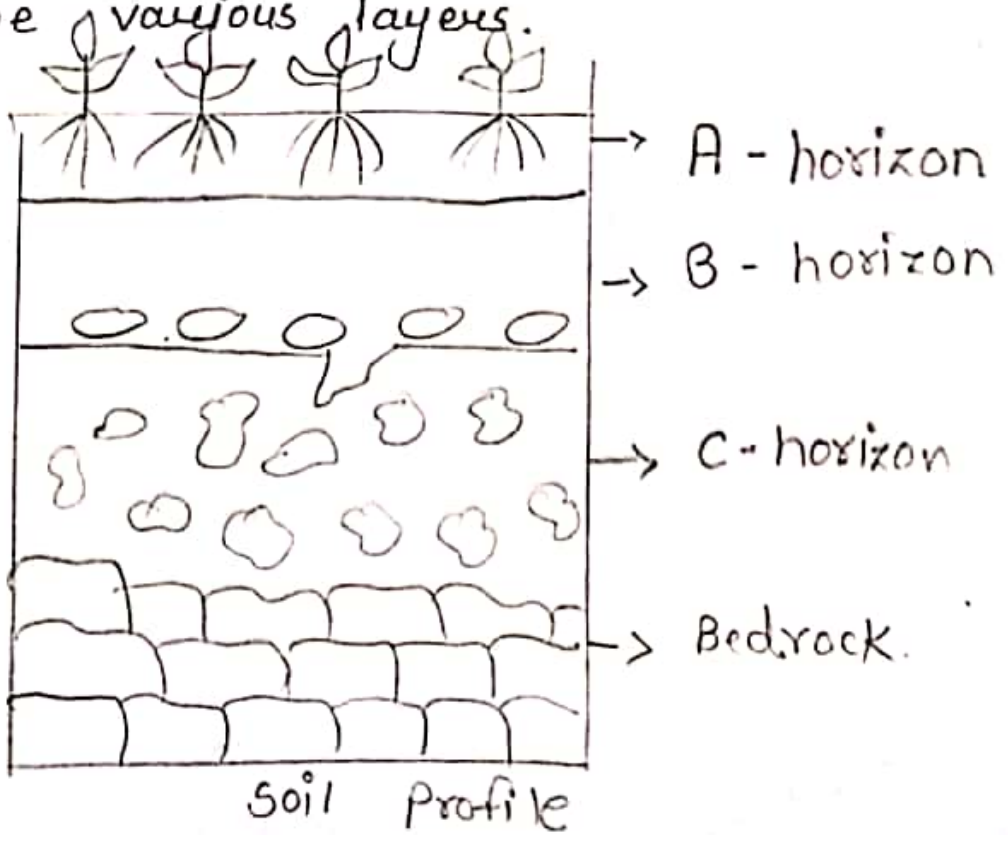
clayey soil

- 1) particle are finer
- 2) particles are tightly packed
- 3) Hold a good amount of water
- 4) It is heavy in weight

Sandy soil

- 1) particles are larger.
- 2) particle are loosely packed.
- 3) water holding capacity is low.
- 4) It is light in weight

7) sketch the cross section of soil and label the various layers.



8). Raziq conducted an experiment in the field related to the rate of percolation. She observed that it took 40 min for 200 mL of water to percolate through the soil sample. Calculate the rate of percolation. (4)

Ans  $\rightarrow$  Amount of water = 200 ml

percolation time = 40 minutes

$$\text{percolation rate} = \frac{\text{amount of water in ml}}{\text{percolation time in min.}}$$

$$\Rightarrow \frac{200 \text{ ml}}{40 \text{ mins}}$$

$$\Rightarrow \boxed{5 \text{ ml/min}}$$

9) Explain how soil pollution and soil erosion could be prevented.

Ans  $\rightarrow$  Soil pollution can be controlled by the following measures:

① By reducing the use of plastics, we can reduce soil pollution.

2) By controlling the use of chemical fertilisers and pesticides, we can control soil pollution.

Soil erosion can be controlled by taking the following steps

- ① planting more and more trees will result ⑤  
in the reduction of soil erosion
- 2) By stopping deforestation and avoiding over-  
-gazing of animal.

book activity ↓

1) solve the following crossword puzzle with the

⊕ Across

- 2.) plantation prevents it. → Erosion
- 5.) use should be banned to avoid soil pollution → (polythene)
- 6.) Type of soil used from making pottery → (clay)
- 7.) Living organism in the soil → (Earthworm)

Down

- ① In desert soil erosion occurs through → (wind)
- 3) clay and loam are suitable for cereals  
like → (wheat)
- 4) This type of soil can hold very little  
water → (Sandy)
- 5) collective name for layers of soil →  
(profile)

## Additional questions

(6)

(NOTE BOOK)

1) what is soil.

Ans → The mixture of rock particles and humus is called soil.

2) what is soil profile.

Ans → A vertical section through different layers of the soil is called soil profile.

3) what is humus.

Ans → The rotting dead matter in the soil is called humus.

4) what are the main functions of the soil?

Ans → ① To provide water to the plant.

2) To provide minerals and nutrients to the plant.

5) what is soil erosion.

Ans → The removal of land surface by water, wind or ice is known as erosion. plants roots firmly binds the soil. In the absence of plants, soil becomes loose. so it can be removed by wind and flowing water. Erosion of soil is more severe in areas of little or no surface vegetation, such as desert or bare lands.

6). Explain different horizons of soil. (7)

Ans → The different horizontal layers of the soil is called horizons.

There are 4 horizons present in the soil.

- 1) A-horizon, also called top soil. The particles are very small in size due to which soft in nature. Humus is present.
- 2) B-horizon also called middle layer of the soil. The quantity of humus decreases.
- 3) C-horizon, particles are ~~layer is~~ larger in size.
- 4) The deepest horizon of the soil is called 'Bedrock'. It is the hardest layer because of the presence of rocks.

7). Discuss the different type of soil.

Ans → The soil is classified into three categories on the basis of proportion of particles.

- 1) sandy soil → This type of soil has large particles low water retention capacity and high percolation rate.

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- 2) clayey soil → This type of soil is very small particles with high water retention capacity and low percolation rate.
- 3) loamy soil → The mixture of sand, clay and another type of soil (silt) is called loamy soil.