

SOIL

1. In addition to the rock particles. The soil contains
 - i) Air and Water
 - ii) Water and Plants
 - iii) Minerals and Organic matter, Air and Water
 - iv) Water, Air and Plants
- A. iii) Minerals and Organic matter, Air and Water

2. The water holding capacity is the highest in
 - i) Sandy soil
 - ii) Clayey soil
 - iii) Loamy soil
 - iv) Mixture of sand and loam
- A. ii) Clayey soil

3. Match the items in Column - I with those in Column - II

Column - I

- i) A home for living organisms
- ii) Upper layer of the soil
- iii) Sandy soil
- iv) Middle layer of the soil
- v) Clayey soil

Column - II

- a) Large particles
- b) All kinds of soil
- c) Dark in colour
- d) Small particles and packed tight
- e) Lesser amount of humus

- A. i) b ii) c iii) a iv) e v) d

4. Explain how soil is formed?

- A. Soil has been formed by weathering of parent rock material over millions of years. It is a very slow & gradual process forming fine particles of soil.

5. How is Clayey soil useful for crops?

- A. Clayey soils are very useful for crops because, these soils:
- a) Contain humus, providing fertility to the soil.
 - b) Hold sufficient water due to the presence of smaller particles.

6. List the differences between clayey soil & sandy soil

Sandy soil

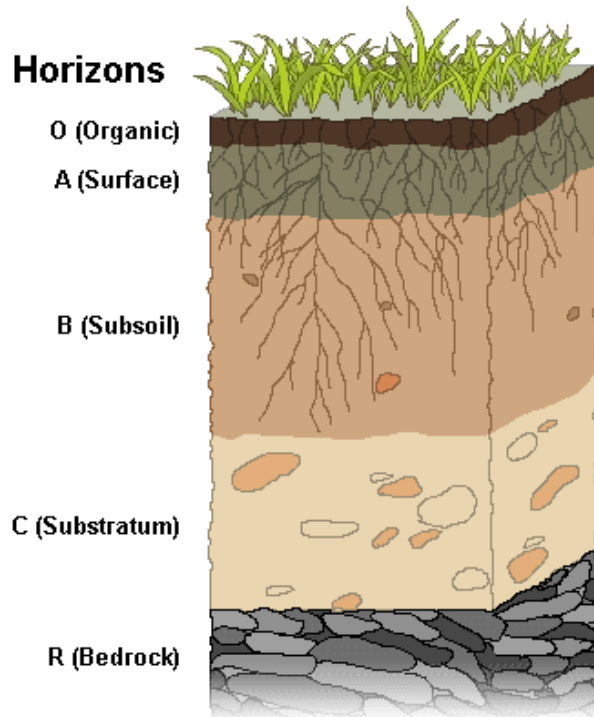
- 1) It contains greater proportion of big particles
- 2) Particles are loosely packed

Clayey soil

- 1) It contains greater proportion of fine particles
- 2) Particles are tightly packed

- | | |
|--|---|
| 3) Large space is present between particles | 3) Very less space is present between particles |
| 4) Water holding capacity is very less | 4) Water holding capacity is maximum |
| 5) Sandy soil is well aerated | 5) Clay is not well aerated |
| 6) Water can drain quickly through particles | 6) Water cannot drain quickly through particles |

7. Sketch the cross section of soil and label the various layers



A.

8. Razia conducted an experiment in the field related to the rate of percolation she observed that it took 40 mins for 200 ml of water to percolate through the soil sample. Calculate the rate of percolation.

A. Formula of percolation rate

$$\begin{aligned} \text{ml / min} &= \frac{\text{amount of water}}{\text{percolation time (min)}} \\ &= \frac{200\text{ml}}{40\text{min}} = 5\text{ml / min} \end{aligned}$$

9. Explain how soil pollution & soil erosion could be prevented

A. Polyethene bags are made up of plastics that pollute the soil other substances which pollute the soil are a number of waste products, like chemicals & pesticides. So to prevent the soil pollution.

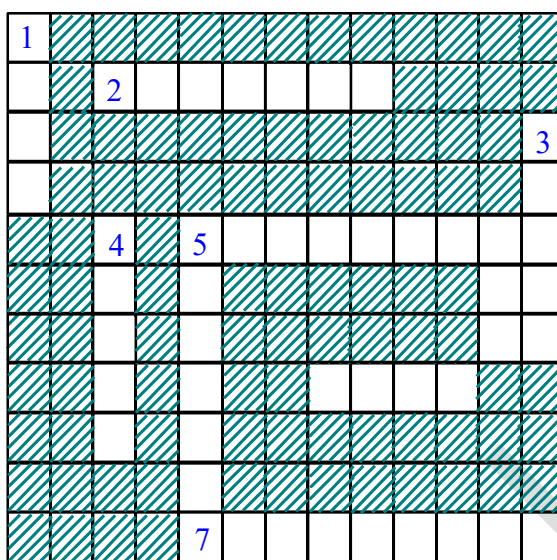
Prevention of soil pollution:

- 1) There should be a ban on polyethene bags & plastics
- 2) Waste products & chemicals should be treated before they are released into the soil
- 3) The use of pesticides should be minimised

Prevention of soil erosion: It can be done by

- Planting of trees
- Protecting of forests
- Holding suitable material (or) organic matter in proper amounts.
- Maintaining porous structure of soil
- Control & reclamation of streaks & shifting of cultivation

10. Solve the following cross word puzzle with the clues given:



A.

CROSS

- Plantation prevents it
- Use of these should be banned to avoid soil pollution like
- Type of soil used for making pottery
- Living organism in the soil

DOWN

- In desert, soil erosion occurs through
- Clay and loam are suitable for cereals
- This type of soil can hold very less water
- Collective name for layers of soil

