SOIL

Tick the most suitable answer in questions 1 and 2.

Q.1 In addition to the rock particles, the soil contains

(i) air and water
(ii) water and plants.
(iii) minerals, organic matter, air and water.
(iv) water, air and plants.

Sol: (iii) minerals, organic matter, air and water.

Q.2 The water holding capacity is highest in

(i) sandy soil
(ii) clayey soil
(iii) loamy soil
(iv) mixture of sand and loam.

Sol: (ii) clayey soil

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

Column I	Column II
(i) A home of living organisms	(a) Large particles.
(ii) Upper layer of the soil	(b) All kinds of soil.
(iii) Sandy soil	(c) Dark in colour
(iv) Middle layer of the soil	(d) Small particles and packed tight.
(v) Clayey soil	(e) lesser amount of humus.

Sol: Match the items in Column I with those in Column II.

Column I	Column II
(i) A home of living organisms	(b) All kinds of soil.
(ii) Upper layer of the soil	(c) Dark in colour
(iii) Sandy soil	(a) Large particles.
(iv) Middle layer of the soil	(e) Lesser amount of humus.
(v) Clayey soil	(e) Lesser amount of humus.

Q.4 Explain how soil is formed.

Sol: Soil is formed due to the breaking down and chemical composition of rocks and minerals and it converts into smaller particles by the action of wind, water and climate. This process is called weathering.

Q.5 How is clayey soil useful for crops?

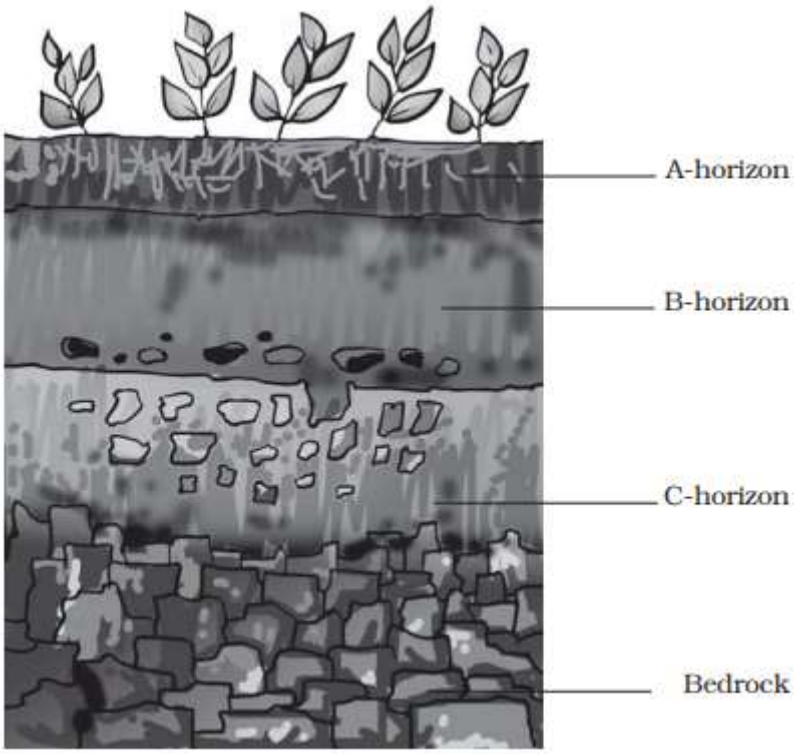
Sol: Clayey soil has very good water holding capacity and very rich in nutrients and organic matter. That's why clayey soil is very useful for crop production.

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

Sol: the difference between clayey soil and sandy soil.

Sandy soil	Clayey soil
1. It high percolation rate. 2. It has low water retention capacity. 3. It cannot hold water. 4. It is not fertile	1. It has low percolation rate. 2. It has high water retention capacity. 3. It has very good water holding capacity. 4. It is fertile.

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



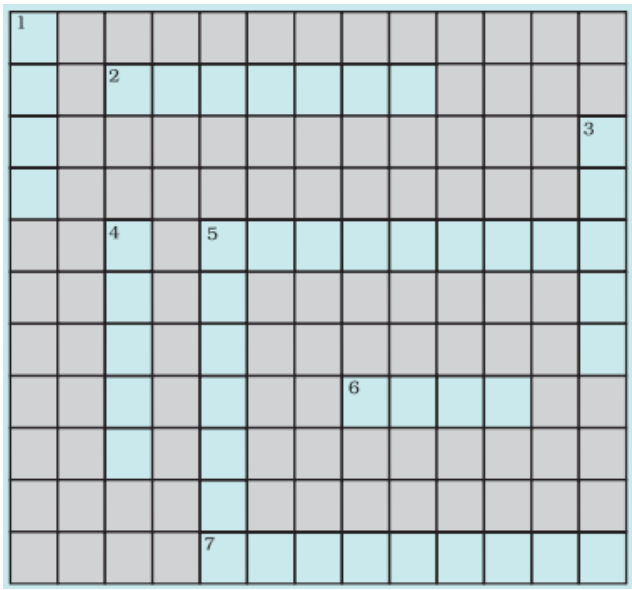
Q.8 Razia conducted and experiment in the field related to the rate of percolation. She observed that it took 40 min. for 200mL of water to percolate through the soil sample. Calculate the rate of percolation.
Sol: Since, rate of percolation = amount of water (mL)/percolation time(min).
= 200mL/40 min.
= 5 mL/min.

Q.9 Explain how soil pollution and soil erosion could be prevented.
Sol: Prevention of soil pollution can be done by reduce the use of plastics, reduction in industrial or house wastes and avoid the use of insecticide in crop production.
Prevention of soil erosion can be done by reduction in deforestation for industrial purposes, by planting trees.

Q.10 Solve the following crossword puzzle with the clues given:

Across
2. Plantation prevents it.
5. Use should be banned to avoid soil pollution.
6. Type of soil used for making pottery.
7. Living organism in the soil.

Down
1. In desert soil erosion occurs through.
3. Clay and loam are suitable for cereals like.
4. This type of soil can hold very little water.
5. Collective name for layers of soil.



Sol: