

Science

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(Chapter – 14) (Natural Resources)

(Class – IX)

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Question 1:

How is soil formed?

Answer 1:

Soil is formed by breaking down of rocks at or near the surface of the Earth through various physical, chemical, and biological processes by various factors such as the sun, water, wind and living organisms.

(i) **Sun:** During day time, the rocks are heated. This causes the rocks to expand. During night time, these rocks cool down and contract. Since all parts of the rock do not undergo expansion and contraction at the same rate, this causes the formation of cracks in these rocks. These cracks lead to the breaking up of huge rocks into smaller pieces.

(ii) **Water:** Water catalyses the process of formation of soil in two ways.

(a) Water goes into the cracks and crevices formed in the rocks. When this water freezes, its volume increases. As a result, the size of the cracks also increases. This helps in the weathering of rocks.

(b) Running water wears away hard rocks over long periods of time. Water moving in fast speed carries big and small particles of rock downstream. These rocks rub against each other, resulting in breaking down of rocks. These smaller particles are carried away by running water and deposited down its path.

(iii) **Wind:** Strong winds carry away rocks, which causes rubbing of rocks. This results in the breaking down of rocks into smaller and smaller particles.

(iv) **Living organisms:** Some living organisms like lichens help in the formation of soil. Lichens also grow on rocks. During their growth, lichens release certain substances, which cause the rock surface to powder down forming a thin layer of soil. On this thin layer of soil, some small plants like moss also grow. They further cause the breaking down of the rock particles.

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Question 2:

What is soil erosion?

Answer 2:

The blowing away or washing away of land surface by wind or water is known as soil erosion.

Question 3:

What are the methods of preventing or reducing soil erosion?

Answer 3:

The methods of preventing or reducing soil erosion are:

- (i) Prevention of deforestation
- (ii) Plantation of trees