KALPAVRUKSHA MODEL SCHOOL

Online class Assignments

Class: VII **Sub: Chemistry** **Date: 30.06.2021**

Topic: Soil

I. Answers for the following questions:

1. Define a) Soil b) Weathering

Ans:

a) Soil: The upper most layer of Earth's surface is called Soil.

b) Weathering: Weathering is the breakdown of rocks on the Earth's Surface caused by exposure to natural forces such as wind, water, frost, roots of plants, etc.

2. Explain Weathering.

Ans: Weathering is the breakdown of rocks on the Earth's Surface caused by exposure to natural forces such as wind, water, frost, roots of plants, etc."

Weathering is of two types they are Physical weathering and Chemical weathering:

Physical Weathering: In this process rocks are broken down to form smaller pieces. It is a mechanical process and no change in characteristic property of original rock. It is caused by temperature difference, frost, growing plants, movement of animals, etc. Chemical Weathering: It is a process in which the existing minerals are broken down into new mineral components here the chemical nature of the rock changes. Water is the one of the main agents of chemical weathering. This process involves three stages, they are

Stage I: Here because of physical or chemical weathering large pieces of parent rock break into smaller one near surface.

Stage II: In this process rocks undergo weathering and forms a fine layer of rock particles at the surface of Earth. Bacteria and other microorganisms break down plant and animal remains to add Humus to it. This makes the soil fertile and rich in organic materials and minerals, which are vital to plants growth.

Stage III: Minerals and salts seep deeper into the ground along with water to complete the formation of soil and make it favorable for plants growth.

3. What are the factors affecting soil formation? Explain.

Ans: There are number of factors affecting soil formation, namely, climate, characteristics of the parent rock and slope of land.

Climate: Climatic factors such as temperature, rain, and wind, play an important role in loosening and breaking up rocks. Soil formation is fastest in hot, moist climates and slowest in cold, dry climates. In the warm and wet tropics bacterial activities is high. As a result in these areas have a rich content of humus. On the other hand desert regions have very little vegetation and animal life so minimal decaying material is available for the soil. The lack of rain leads to the formation of coarse-textured soil in dry areas. In areas that experience severe winter, bacterial activity is slow therefore soil formation in those areas is very slow. Thus the rate of soil formation and the type of soil formed depends on the climate of a place.

Characteristics of the parent rock: The composition of parent rock also determines the kind of soil formed. If it is rich in Calcium content then the soil formed from it also be rich in calcium.

Slope of land: Hilly areas generally have a thin layer of soil because of running water and wind tend to carry the soil down the slope. On flat plains, soil remains undisturbed leading to the formation of a thick layer.