14. SOILS

The topic entails:-

(i) ***Definition of soil, soil profile, soil cartena, soil degradation and soil erosion***
(ii) ***Discussing the composition of soil and soil forming processes***
(iii) ***Description of properties and characteristics of soils***
(iv) ***Description of soil profile and soil cartena***
(v) ***Explaining soil degeneration***
(vi) ***Classifying soils according to soil order***
(vii) ***Discussing the significance of soils***
(viii) ***Discussing ways and means of managing and conserving soils.***
(ix) ***Identifying different types of soils and their uses within the local environment***
(x) ***Demonstrating the ability to manage and conserve soils.***

1. a) Differentiate soil profile from soil catena
   b) Name three types of soil types according to soil structure
   c) i) Beside planting of trees state any other **three** measures that can be used to control desertification.
   ii) Explain how trees help in the conservation of the soil.

2. a) i) What is soil?
   ii) Differentiate between **soil catena** and **soil profile.**
   b)i) Explain how the following factors influence soil formation;
   - Climate
   - Living organisms

   ii) Give **three** factors that determine the colour of the soil.

3. a) Briefly explain the factors that influence the development of soil catena.
   (b) (i) Define the term soil profile
   (ii) Draw a simple diagram of soil catena
   (iii) Give **any four** soil forming processes
   (iv) State **four** causes of soil degeneration

4. a)i) Define the term soil
   ii) Name three components of soils
   b)i) Apart from living organisms state four other factors that influence soil formation
   ii) Explain how living organisms influence soil formation
   c) i) Distinguish between soil air and soil texture
   ii) Describe the process of podzolisation
   iii) State the characteristics of soils in grassland areas

5. (a) Draw a diagrammatic representation of vegetation zones on a slope common in tropical land
   (b) (i) What is soil catena?
   (ii) Draw a labeled diagram to show a well developed soil profile.
   (iii) State **three** characteristics of the soils found in the arid regions of Kenya.
   (b) Give **three** factors that determine the colour of soil.
   (c) Describe how laterization occurs.
   (d) Explain how the following farming practices cause soil erosion;
   (i) Burning.
   (ii) Continuous application of fertilizer on farm lands.

(iii) Monoculture.

6. (a) (i) Apart from latosols name any **two** other types of zonal soils
(ii) Describe how lateritic soils are formed
(iii) State any **two** characteristics of azonal soils
(b) (i) Explain any **three** ways in which rain water can lead to degeneration of soils.
(ii) Apart from growth of plants, state any **three** other ways in which soils are beneficial to people

7. (a) (i) Differentiate between a soil profile and soil catena
(ii) State **two** processes of soil formation
(b) Explain how the following factors influence soil formation:
(i) Climate
(ii) Living organisms
(iii) Topography
(c) (i) What is soil degeneration
(ii) Explain **three** ways through which vegetation naturally protects and prevent soil erosion
(iii) Give **two** sound farming methods that help conserve soil erosion

8. (a) (i) What is soil Catena?
(ii) State **three** factors which influence the development of a soil catena
(b) Explain **five** negative effects of soil erosion
(c) Describe how podzolization occurs in soils

9. (a) Name **three** components of soil
(b) Explain how the following factors influence the formation of soil :
(i) Climate
(ii) Parent material
(c) (i) Explain **three** ways in which human activities contribute to soil degeneration
(ii) Draw a well labeled diagram to show a mature soil profile

10. a) What is a **lake**?
b) State **three** ways through which lakes are formed

11. a) Define the term **"Soil"**
b) Explain how the following factors influence the formation of soil
i) Climate
ii) Topography
c) i)State **two** ways in which humus improves the quality of soil
ii) State **four** characteristics of desert soils
d) Describe how the following types of erosion occur
i) Sheet erosion
ii) Gulley erosion
iii) State **two** economic uses of soils

12. (a) What is soil conservation?;
(b) State **three** methods that assist in soil conservation