**SOIL**

1. a)(i) This is the arrangement of soil layers along a mountain slope from top to

bottom.

(iii) - Soils are thin/shallow

* Have low organic content
* Soils have low moisture content
* Soils are rich in calcium/alkaline

c)

* In savanna areas there is alternating wet and dry season
* During wet season, mineral salts in the horizon A dissolve in the percolating
* rainwater.
* The dissolved minerals are precipitated/deposited in the lower layer. This process is called eluviation.
* Insoluble minerals such as iron and aluminium accumulate in A horizon/top layer to form a crust known as laetrile
* During dry season illuviation occurs. Soluble minerals are dissolved in the capillary water and moves upwards to horizon A.
* Evaporation occurs on the horizon A.
* Minerals are precipitated near/on the surface to form crust.

2. a) Loamy

Clay

Silty

Sandy

Gravel

b) -Humus help to improve soil porosity

-Humus improves the moisture retention capacity in the soil

-Humus improves soil texture

-Humus provides essential minerals in the soil

3. - Soil accumulation of rock particles, minerals, organic matter, water and air

found on the surface of the earth.

- Is the superfacial layer of loose/unconsolidated rock material overlying on crustal rocks and on which plants grow.

4.

* Zonal
* Intrazonal
* Azonal

5.

Take place through to stages namely mineralization and humification **mineralization** is the biological and chemical breakdown of dead plant tissue by soil micro-organisms to produce simple soluble organic substances. This is the initial stage of decomposition.

**Humification** is the second stage of decomposition where the dead plant material which had been mineralized are regrouped into large molecules to form humus.

6.

* Leaching process common in arid areas.
* Soils are leached upward through capillarity
* In some areas this leads to formation of thin salty crust or the surface

7. Zonal order soil is a type of soil classification which group together soils which

have undergone long time of soil formation process under good drainage conditions.

8.

* Planting cover crops
* Ploughing along contours
* Practicing crop rotation
* Controlled grazing
* Agro forestry
* Mulching
* Adding fertilizer

9.

* Is a severe leaching process
* Is limited to middle and high latitude areas
* The climatic conditions are too cold that bacteria action is inhabited while moisture is sufficient enough to allow large green plant to grow.
* Humic acid produced from a abundant leaf mould and humus, leach the upper soil strongly of bases, colloids and oxides of iron and aluminum leaving composed largely ash gray as soil horizon of silica.