WEEK 4-6

FACTORS WHICH INFLUENCE AGRICULTURE

In this topic, the following factors influence agriculture.
-Human factors e.g. -level of education, -Health HIV/AIDS, -Economic status of the farmer e.t.c
- Biotic factors e.g. pests, parasites, decomposers, pathogens, pollinators, predators e.t.c.
- Climatic factors e.g. rainfall, temperature, wind and relative humidity, light
- Edaplus factors e.g. type of soils, soil profile, soil structure, soil texture, soil chemical properties.

The following relevant questions and their answers in this topic will greatly help and

motivate the user to comprehend and understand the required concepts:

1. State **two** roles of humus in the soil that are beneficial to crops

2. a) outline **five** activities that may be undertaken in organic farming

3. List **four** effects of temperature on crop growth

4. State **four** ways by which wind affects the growth of crops

5. Name **two** factors related to light that affect crop production and distribution in Kenya

6. Describe the environmental conditions that may lead to low crop yields

7. List **three** environmental factors that affect crop distribution in Kenya

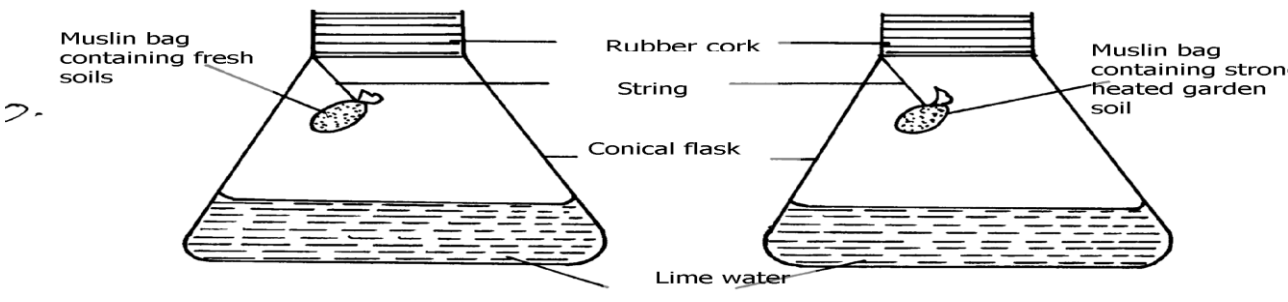
8. State **one** physical characteristic used in classifying soil

9. Outline **four** advantages of organic farming

10. The diagrams below show an experiment carried out by a form 1 class. Study them carefully and

answer questions that follow:

D **E**



(a) What was the aim of the experiment?

(b) What was the observation that form 1 students made at the end of the experiment in
flasks **D** and **E?**

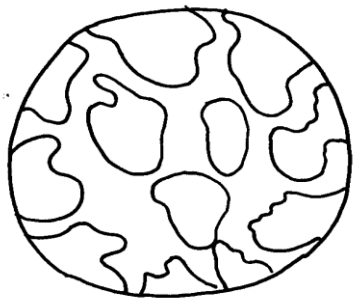
(c) Give the reason for the observation made in flask **D**

12. Briefly explain how sub-soil as a horizon in a soil profile can affect soil productivity

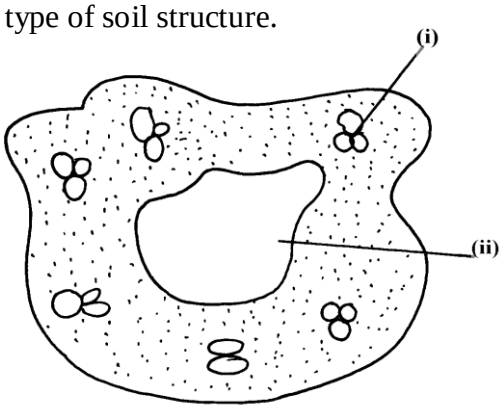
13. (a) What are the **three** aspects of light that are important to a farmer?

(b) Mention **three** ways through which relative humidity affect crop production

14. The diagram labeled **E** and **F** below illustrates some type of soil structure. Study the diagrams carefully and answer the questions that follow:



E



F

(a) Identify the types of soil structure illustrated in diagrams **E** and **F**

(b) Identify the parts labeled **(i)** and **(ii)** in diagram **F**

(c) Outline the influence of physical characteristics of soil on its properties

15. State **three** physical characteristics of soil

16. Study the diagram below and answer the questions that follow

a) State merits of horizon **A**

b) State distinct features of horizon **B**

c) What does the term **transition zone** refer to in soil profile

i) Name horizon **C** and state its importance

17. Outline **two** ways temperature affects crop production

18. List **four** ways by which biological agents can enhance the process of soil formation

19. List **four** environmental factors that affect crop production in Kenya

20. Explain the role played by topography in soil formation

22. Mention **two** importance of parent's material in soil profile

23. Mention **four** ways of modifying soil temperature in crop production

24. a) Mention **two** factors that affect selectivity of herbicides

b) Name **two** farming practice that cause water pollution

25. Give **four** factors that influence soil formation

26. State **three** properties of soil that is influenced by soil texture

27. Name any t**hree** agents of biological weathering

FACTORS WHICH INFLUENCE AGRICULTURE

WEEK 1-3

WATER SUPPLY, IRRIGATION AND DRAINAGE

This topic entails the following:

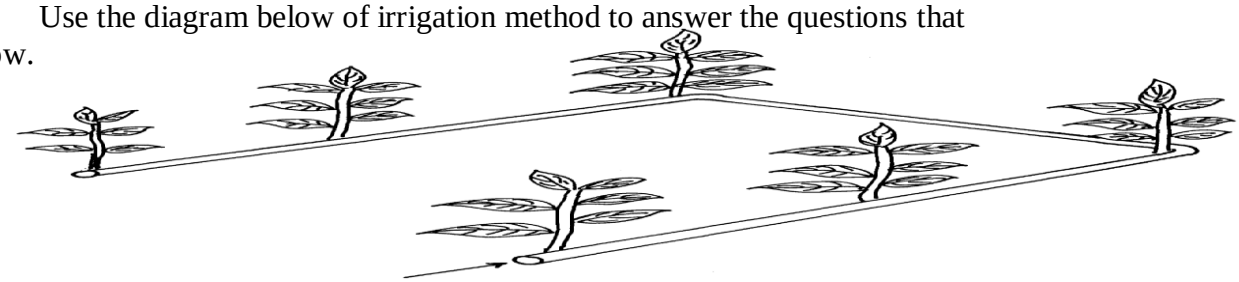
- Hydrological cycle
- Sources of water on the farm
- Water collection and storage
- Pumps and pumping of water
- Types water pipes
- Water treatment
- Uses of eater of the farm.
- Types of irrigation advantages and disadvantages.
- Importance and methods of drainages
- Water pollution causes and prevention.

The following relevant questions and their answers in this topic will greatly help and motivate the user to comprehend and understand the required concepts and practices:

1. State **two** reasons for treating water for us on the farm

2. State **three** reasons for draining swampy land before growing crops

3. Use the diagram below of irrigation method to answer the questions that follow.



a) Identify the method of irrigation

b) State **four** advantages of the above irrigation system

c) State **three** factors that determine the type of irrigation on the farm

d) State **two** disadvantages o f the above system of irrigation

4. a) What is **irrigation**

b) Outline **three** methods of irrigation

5. a) List **four** use of water on the farm

b) Give **four** methods of harvesting water on the farm

c) Outline the stages involved in water treatment process

6. List any **four** uses of water in the farm

7. State **two** types of irrigation used in Kenya

8. Outline **four** disadvantages of cambered beds

Describe the process of water treatment

9. Give **four** roles of drainage as a method of land reclamation

10. Name **two** types of water pumps which can be used in the farm

11. Name any **four** examples of working capital in maize production

12. List **four** types of water pumps which can be used in the farm

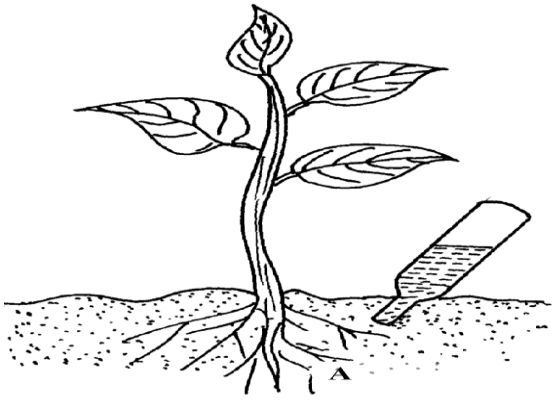
13. State **four** methods of drainage

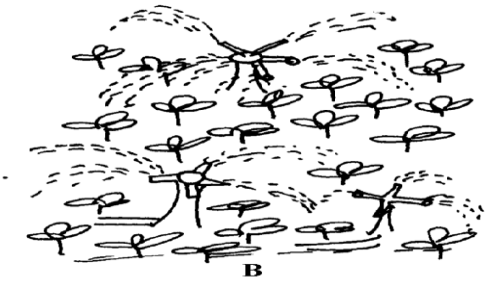
14. Distinguish between **a dam** and **a weir**

15. How do the government control prices of essential farm produce

16. What is the difference between pumping and piping of water in the farm?

17. List four reasons of draining water logged soils before planting.
18. Give three Agricultural practices which lead to water pollution
19. The diagrams below illustrate some methods of irrigating crops in the field. Study the diagrams
and answer the questions that follow:





(a) Identify the methods used ; (i) A (ii) B
(b) State **two** advantages of method **A** over method **B**

(c) What material should be inserted at point **T**

b) Name **two** farming practice that cause water pollution

20. Give **four** reasons for practicing irrigation

22. a) State **four** importance of water to plants

b) State **four** reasons for treating water before use

c) Describe water treatment system in a chemical treatment plant

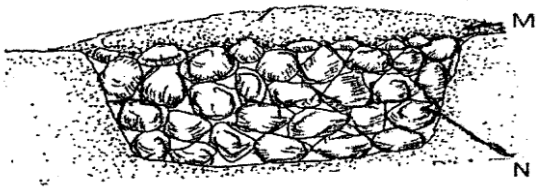
23. Name **four** diseases caused to man by drinking untreated water

24. State the functions of the following chemicals as used in water treatment;

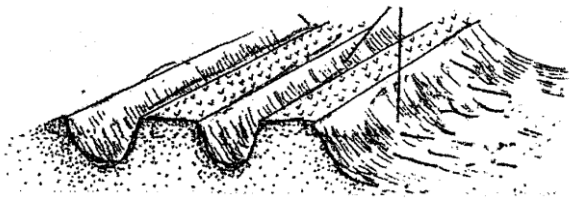
(a) Chlorine.

(b) Aluminum sulphate (AIlum)

21. The diagrams labeled **S** and **T** illustrate some methods of draining waterlogged fields; use it to answer the questions that follow:



S



T

(a) Identify the methods illustrated

(b) What are the materials in **S** labeled **M** and **N**

(c) Name **two** types of crops that can be planted in the field instead of carrying out the practice illustrated in **S** and **T**

(d) What is the importance of carrying out land reclamation?

WATER SUPPLY, IRRIGATION AND DRAINAGE

1