

# **F1 TOPICAL REVISION**

## **AGRICULTURE**

***A SERIES OF TOPICAL REVISION  
AGRICULTURE QUESTIONS IN THIS CLASS.***

***An Intensive Analysis of Past KCSE  
Questions. Candidates are Hereby  
Advised to Keep attention to this  
Crucial Quick Revision Kit.***

***For Marking Scheme/Answers  
Call/WhatsApp 0746 222 000***

**MWALIMU AGENCY**

## INTRODUCTION TO AGRICULTURE

This topic entails the following:-

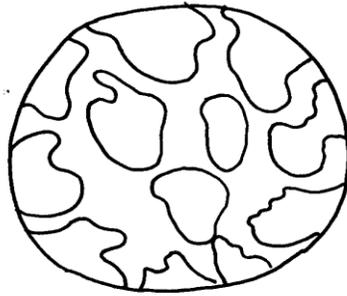
- **Definition of agriculture**
- **Main branches of agriculture**
- **Farming systems**
- **Farming methods**
- **Role of agriculture to Kenya's economy**
- **Varied opportunities in agriculture.**

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

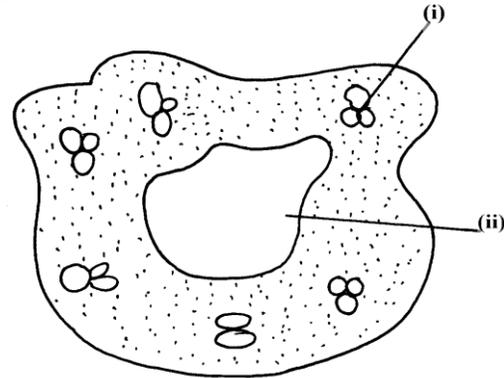
1. Give **two** factors which characterize intensive farming
2. State **three** reasons why organic farming is encouraged in farming
3. State **two** ways in which agriculture contributes to industrial development
4. State **four** ways by which wind affects the growth of crops
5. State **one** physical characteristic used in classifying soil
6. Outline **four** advantages of organic farming
7. State **two** conditions under which shifting cultivation is practiced
8. Differentiate between the following terms as used in Agriculture:-
  - (a) Oleculture and floriculture
  - (b) Apiculture and aquaculture



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
- State merits of horizon **A**
  - State distinct features of horizon **B**
  - What does the term **transition zone** refer to in soil profile
    - 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 **three** agents of biological weathering

## FARM TOOLS AND EQUIPMENTS

There are five categories of farm tools and equipment namely:

- Garden tools and equipment e.g. pangas, jembe, pick axe, spade e.t.c.
- Workshop tools and equipment e.g. saws, hammers, planes, chisels e.t.c
- Livestock production tools and equipment e.g. milking stool, strip cup, milk churn etc.
- Masonry tools and equipment e.g. wood float, spirit level, plumb bob e.t.c
- Plumbing tools e.g. pipe wrench spanner, stock and die e.t.c

It is very important to identify the farm tools and equipment, give the correct users and maintenance practices.

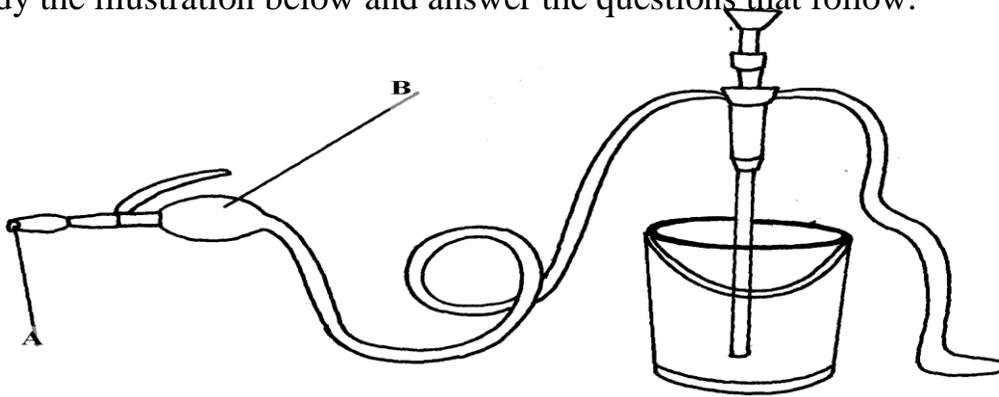
The following relevant questions and their answers in this topic will greatly help and motivate the user to comprehend and understand the require concepts and practices:

1. List **four** maintenance practice carried out on a cross-cut saw
2. Identify the following tools and state their functions



Identify A, B, C, D

3. Study the illustration below and answer the questions that follow.



i) Identify the equipment represented by the illustration

ii) What is the use of the equipment?

iii) Name the parts labeled **A** and **B**

iv) What is the function of the part labeled **A** and **B**

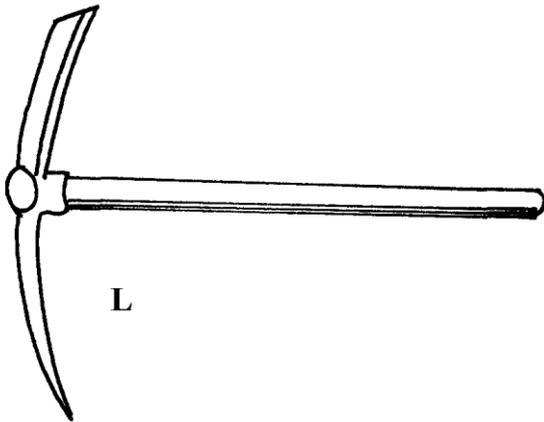
4. What is the use of a garden fork?

5. Name the tool that a builder would use to check the vertical straightness of a wall during construction

6. Name the farm tool that can be used when removing nails from timber

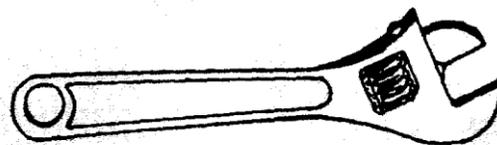
7. Give **two** examples of equipment that a livestock farmer can use in administering oral anti helminthes

8. Below are farm tools, study them and answer the questions that follow:-



L

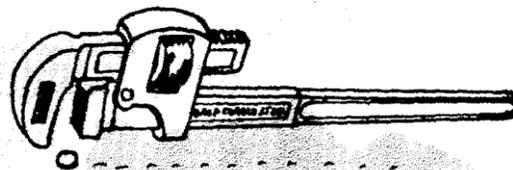
.....



M.....



N.....

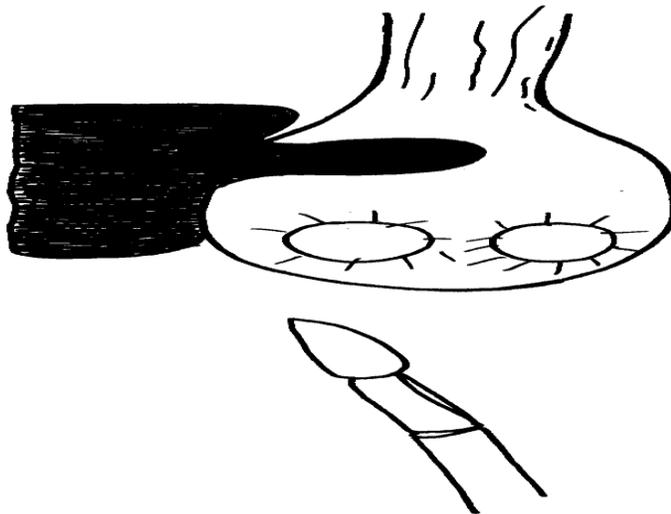


O.....

- (a) Identify the tools L, M, N, O  
 (b) **Give one** functional advantage of tool **M** over tool **N**
9. Name a tool used to perform the following functions on the farm;
- (i) Drilling of small holes on metal  
 (ii) Bore holes on wood
10. State the common faults in the operation of Knapsack spray
11. (a) Name the **three** tools in castration of livestock
12. Name the most appropriate set of animal handling tools that a farmer uses for the following operations:-
- (i) Restraining a large bull when taking it around the show ring
- (ii) Cutting tail in sheep
13. a) Given below is an illustration of one of the routine management practices in livestock

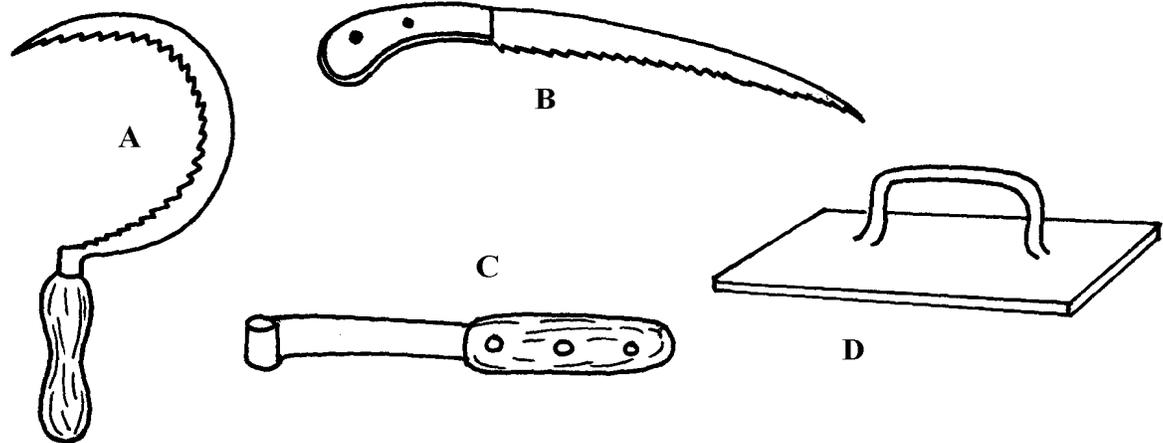
Production.

Study the diagram and answer the following questions



- i) Name the practice indicated in the diagram above  
 ii) Describe the procedure you would follow when carrying out the practice named in (i) above in piglets

14. Study the diagram below and answer the questions that follow;



- i) Identify the tools
- ii) Give the use of each of the tools named above
- iii) State **two** maintenance practices that should be carried out on tool **D**

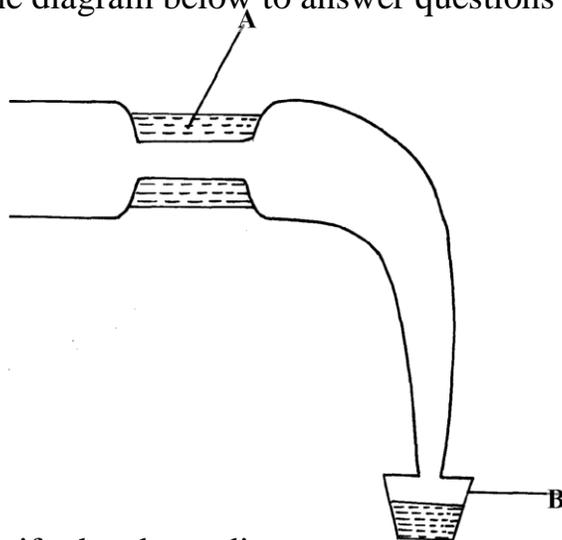
15. List **two** equipments used in handling cattle during an Agricultural exhibition

16. Mention the use of the following tools.

- i) Dibber
- ii) Spokeshaves
- iii) Tinsnips
- iv) Burdizzo

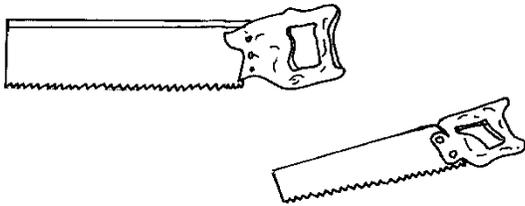
17. List **four** precautions that should be taken when using workshop tools and equipment.

18. Use the diagram below to answer questions which follow



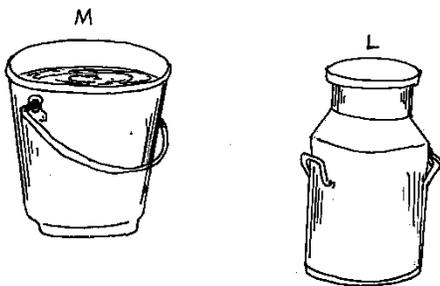
- i) Identify the above diagram
- ii) Name the parts labelled **A** and **B**

19. The diagrams below are of farm tools and equipment. Study them and answer the questions that follow



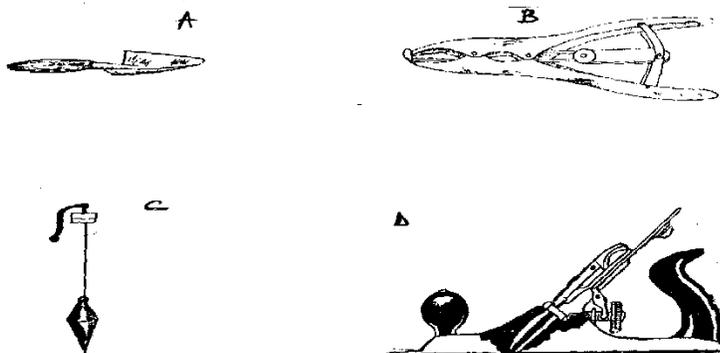
- i) Identify the tools 1 mk
- ii) Give one functional difference between the tools above. 1 mk

20. The diagram below show farm equipment. Use them to answer the questions that follow.



- a) Identify the equipments M and L. (1mk)
- b) State the functional difference between M and L. (2mks)
- c) State TWO common maintenance practices carried out on both M and L. (2mks)

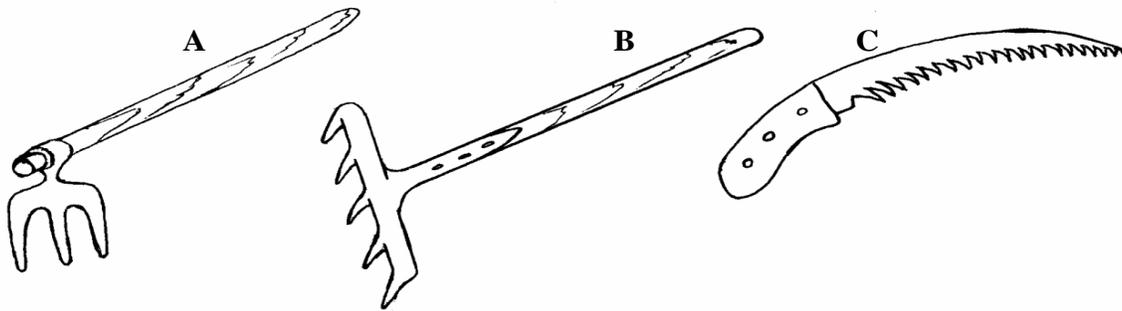
21. Study the diagrams below and answer the questions that follow.



- (a) Identify the tools. A-B-C-D (2mks)
- (b) State the correct use of each of the tools above. (2mks)
- (c) Give two maintenance practices carried out on tool D for efficient use. (1mk)

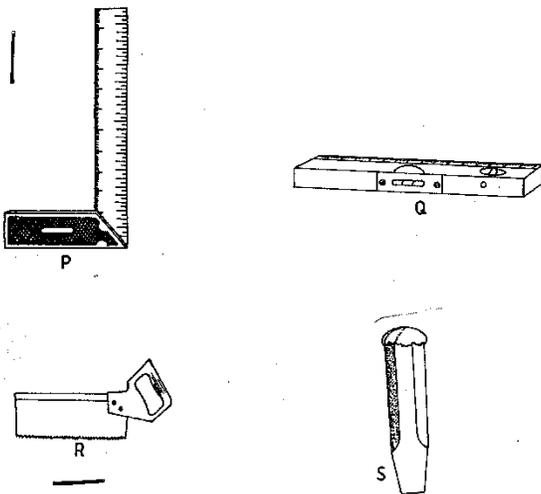
- 22. (a) Name four types of tools used in smoothing wood. (2mks)
- (b) Give three reasons why farm tools and equipment should be well maintained. (1½mk)

23. Study the diagrams of garden tools shown below and answer the question that follows



- (i) State two field conditions under which tool A would be more suitable for use in crop Production (2mks)
- (ii) Give the function of the tool labelled C. (1mk)
- (iii) State two maintenance practices of the tool labelled B. (2mks)

24. Study the diagrams below labeled P, Q, R and S representing some workshop tools and then answer the questions that follow.



a) identify the tools 2mks

Tool	Name
P	.....
Q	.....
R	.....
S	.....

b) Give one use of tools P and R in the construction of a wooden feed trough. 1mk

- P .....
- R.....

c) How would the tool labelled Q be used in the construction of a calf pen? ½ mk

d) Give two maintenance practices carried out on tool S. 1mk

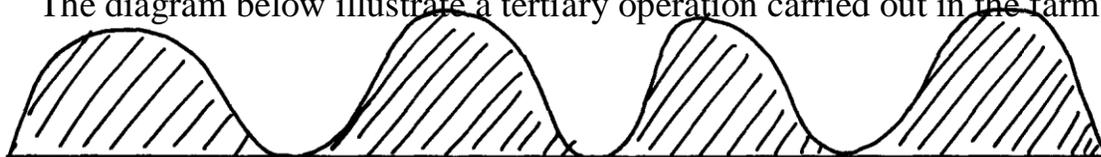
## CROP PRODUCTION I (LAND PREPARATION)

- Land preparation entails the following farming practices.
- Land clearing or bush clearing tools, chemicals and equipment used.
- Primary cultivation, tools and equipment as machines used.
- Primary cultivation, tools and equipment as machines used.
- Secondary cultivation, tools and equipment used.
- Tertiary operations e.g. ridging, rolling and leveling.
- Sub-soiling, tools used and reasons for the same.
- Minimum tillage and reasons for the same.

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 farming practices:

1. Give **three** factors that determine depth of ploughing during land preparation
2. List **four** reasons for cultivating land before planting
3. (a) What is minimum tillage?  
(b) Give four farming practices that help in achieving minimum tillage.
4. (a) Describe the establishment of grass pasture from the time the land is ploughed using a mould board plough to the time the pasture is ready for grazing  
(b) Explain **five** practices that a farmer should carry out to ensure uniform germination of seeds
5. State **four** physical conditions of the seedbed that need to be changed to facilitate germination
6. State **four** importance of sub soiling as a tertiary operation
7. Outline **four** advantages of rolling in seedbed preparation
8. State **four** disadvantages of minimum tillage
9. The diagram below illustrate a tertiary operation carried out in the farm



- a) Identify the tertiary operation
- b) (i) State the importance of the tertiary operation identified in **20(a)** above  
(ii) Give **two** other tertiary operations carried out in the field besides the one identified above

10. Give **two** reasons why it is advisable to cultivate the field during the dry season
11. How are hard pans caused by cultivation?
12. Give **four** factors that determine the number of secondary cultivation operations
13. Define the term minimum tillage
14. List four advantages of timely planting
15. State any **two** factors that determine the number of cultivation on a field before it is ready for  
planting
17. Give **three** benefits of timely planting of annual crops
18. State **four** factors determining the depth of ploughing land

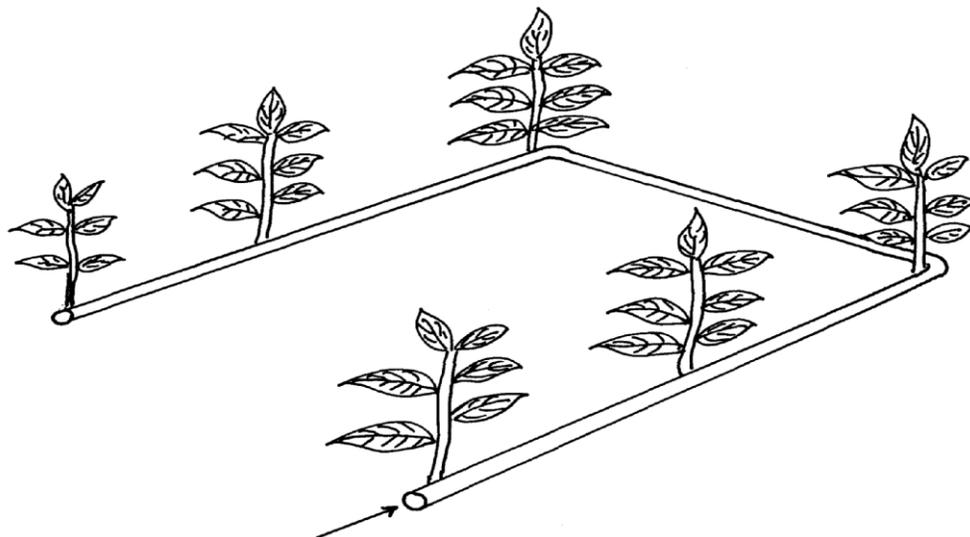
## WATER SUPPLY, IRRIGATION AND DRAINAGE

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.

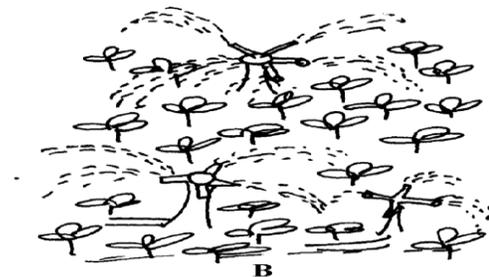
The following relevant questions and their answers in this topic will greatly help and motivate the user to comprehend and understand the required concepts and practices:

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.



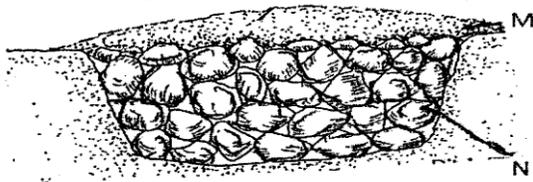
- a) Identify the method of irrigation
  - b) State **four** advantages of the above irrigation system
  - c) State **three** factors that determine the type of irrigation on the farm
  - d) State **two** disadvantages of the above system of irrigation
4. a) What is **irrigation**
- b) Outline **three** 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:

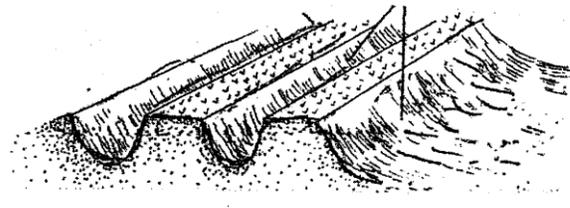


- (a) Identify the methods used ; (i) A (ii) B
- (b) State **two** advantages of method **A** over method **B**
- (c) What material should be inserted at point **T**
- b) Name **two** farming practice that cause water pollution
  
20. Give **four** reasons for practicing irrigation

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 (Alum)
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?

## SOIL FERTILITY 1 (ORGANIC MANURE)

This topic entails the following:

- **Characteristics of a fertile soil**
- **How soil loses soil fertility**
- **Soil fertility maintenance**
- **Reasons of adding organic matter to soil**
- **Disadvantages of organic manure**
- **Types of organic manure i.e green manure, farm yard manure and compost measure.**

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

1. State **two** roles of humus in the soil that are beneficial to crops
2. List **four** characteristic of fertile soil
3. The diagram below illustrates a compost heap. Study it and answer the questions that follow

a) Name the part labeled **Q** and state its function

b) What is the function of each of the following components in preparation of compost manure

- i) Top soil
- ii) Wood ash
- iii) Rotten manure

4. The illustration below shows a four heap system of making compost manure. Study it and answer the questions that follow.

(a) By use of arrows indicate on the diagram above how the following material should be

transferred from one heap to another till the manure is applied in the field

(b) How long does the material take to be ready for application in the field as manure?

(c) Give a reason for turning the material in the heap regularly

(d) Give **two** reasons why it is necessary to sprinkle water on the heap

5. Name **four** indicators of well-decomposed manure

6. (a) State **two** factors that should be considered when siting a compost manure heap  
 (b) When preparing compost manure, explain the importance of each of the following:-  
 (i) Addition of ash  
 (ii) Regular turning of the compost manure
7. What is **leaching**?
8. State **four** advantages of adding organic matter to a sandy soil
9. (a) Describe the preparation of the following farm materials:-  
 (i) Farm yard manure  
 (ii) Hay  
 (b) Explain the factors considered in timely planting of annual crops
10. A ration containing 18% protein is to be made from maize and sunflower cake. Given that maize contains 7% protein, and sunflower seed cake 34% protein. Use Pearson square method to calculate the value of feedstuffs to be used to prepare 100kgs of the feed
- ii) A part from Pearson square method, name **two** other methods that can be used to formulate feed ration

## LIVESTOCK PRODUCTION I COMMON LIVESTOCK BREEDS

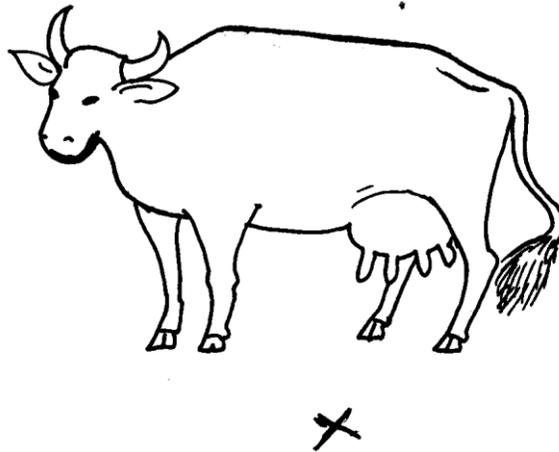
This topic entails the following:

- Reasons of keeping livestock
- Parts of a cow
- Characteristics of indigenous and exotic cattle breeds
- Dairy cattle breeds
- Beef cattle breeds
- Dual purpose cattle breeds
- Pig breeds
- Sheep breeds
- Goat breeds
- Rabbit breeds
- Camel breeds

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 use on the farm
2. State **four** advantages of applying lime in clay soil
3. State **four** ways by which Re-forestation help in land reclamation
4. Give **two** distinguishing features between the following breeds of rabbits; Kenya white and California white
5. Give **four** reasons why most farmers keep livestock in Kenya
6. Give **three** ideal conformation features of beef cattle
7. (i) Name a dual purpose cattle breed reared in Kenya  
ii) State **three** uses of a rotavator
8. Name a pig breed with the following features:  
White body colour, erect ears, dished snout, big in body size
9. What does the term '**epistasis**' mean in livestock improvement?
10. (a) Explain the role of livestock industry in Kenya's economy  
(b) Outline the general characteristics of indigenous cattle

11. Below is a diagram of a cattle. Study it and answer the questions that follow:-



- (i) What type of animal is represented above?  
 (ii) If you stand at a point marked **X**, state **five** characteristics that tells you that the animal belong to type name in (i) above?  
 (iii) State **three** areas on the body of a cow where ticks are commonly found
12. Name **four** breeds of dairy goats
13. List **two** distinguishing characteristics of Californian breed of rabbit
14. Name the common milk breed of goats reared in Kenya
15. Name **four** dairy cattle breeds reared in Kenya.
16. Differentiate between 'breed' of animal and 'type' of animal.
17. Name the camel breed that is adapted to cooler regions and has a woolly body covering
18. State any **two** channels through which beef is marketed in Kenya

## AGRICULTURE ECONOMICS (BASIC CONCEPTS AND FARM RECORDS)

This topic entails the following

- Definition of scarcity, preference and classic, opportunity cost as used in agriculture production.
- Uses of farm records
- Types of farm records i.e production records, field operation records, breeding records, feeding records, health, labour records and master roll.

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

1. (a) What are the uses of farm records to a farmer?
2. Identify the farm record below and the questions that follow:

Date	Disease symptoms	Animals affected	Drug used	Cost of treatment	Remarks

- (a) Identity of the record
- (b) State **two** different information that should be entered in the remarks column
- (c) Give **two** importance of keeping the farm record illustrated above
3. State **four** uses of farm records
4. State **four** uses of farm records
5. Outline **two** ways the level of education and technology influence the efficiency of agricultural production
6. Study the illustration below of farm records:- Use it to answer the questions that follow:

Enterprise  
Month

Name of cow	DAYS IN MONTH											
	1	2	3	4	5	6	1	2	3	4	5	6
	A	PM	AM	PM	AM	PM	AM	PM	AM	PM	A	PM
	M										M	

- (a) Name the type of the farm record illustrated above

(b) Give **three** reasons for keeping health records in a livestock production

(c) Give **three** pieces of information a dairy farm manager should collect for planning purposes

7. List down four pieces of information recorded in a field operation record.
8. List **two** events occur during induction stroke in a four stroke engine
9. Give **two** conditions under which a farmer may prefer the use of donkey trailed cart instead of a tractor drawn trailer in his farm

***FOR MARKING SCHEMES  
CALL/WHATSAPP  
0746 222 000***

**MWALIMU AGENCY**