F3 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

LIVESTOCK PRODUCTION III
(SELECTION AND BREEDING)

THIS TOPIC ENTAILS THE FOLLOWING:

- **Description of reproduction**
- **Description of reproduction systems**
- **Selection f breeding stock**
- **Description of breeding system.**
- **Identification of livestock on heat**
- **Description of methods used in serving livestock.**

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

1. State **four** ways of minimizing disowning of lambs by ewes
2. State the gestation period of the following farm animals
   i) Pigs
   ii) Rabbits
3. i) What is selection in live stock production
   ii) State **three** methods used in selection of livestock
4. Give **four** signs of heat observed on female rabbit
5. Name **four** meat breeds of rabbits
6. State **four** reasons for cutting a breeding boar
7. List the methods of selection in livestock
8. Define the following terms as used in livestock breeding
   i) Heterosis
   ii) Epistasis
9. State **three** signs of heat in Does (Female Rabbits)
10. Give the gestation period of the following:
    i) Cow
    ii) Sow
11. State **three** disadvantages of natural methods of mating in cattle breeding
12. a) Explain the advantage of battery cage system of rearing layers
    b) Outline **ten** factors considered when selecting dairy cattle for breeding
13. What is upgrading as used in livestock production?
14. Define the word breech of birth as used in livestock production
15. What does the term "**drift lambing'** mean in livestock production?

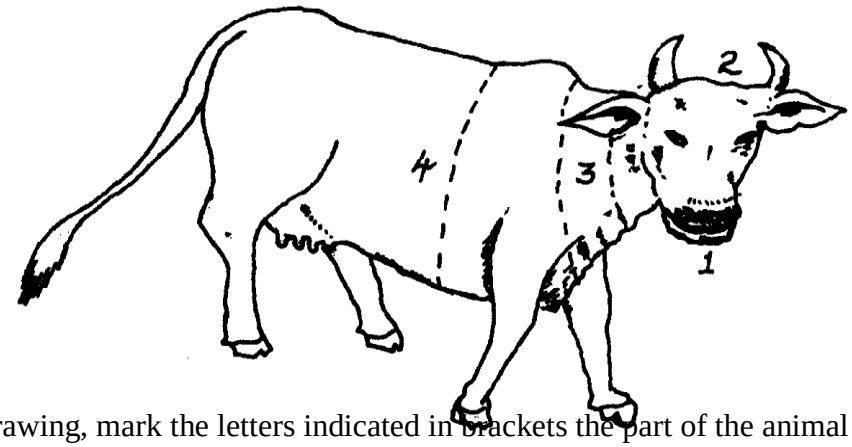
LIVESTOCK PRODUCTION IV
(LIVESTOCK MANAGMENT PRACTICES)

This topic entails the following:

- **Description of livestock rearing practices**
- **Carrying out livestock rearing practices**
- **Livestock routine management practices i.e. feeding, de-beaking e.t.c.**

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

1. Give **four** reasons of carrying out crutching sheep management
2. Name **two** ways a farmer can perform closed methods of castration on his male livestock
3. Below is a diagram of a farm animal. Study the diagram carefully and then answer the questions that follow



a) On the drawing, mark the letters indicated in brackets the part of the animal where:
   i) Branding should take place (B)
   ii) Vaccination should be carried out (V)
   iii) Body temperature of the animal should be taken (BT)
iv) Mastitis infection may occur (M)

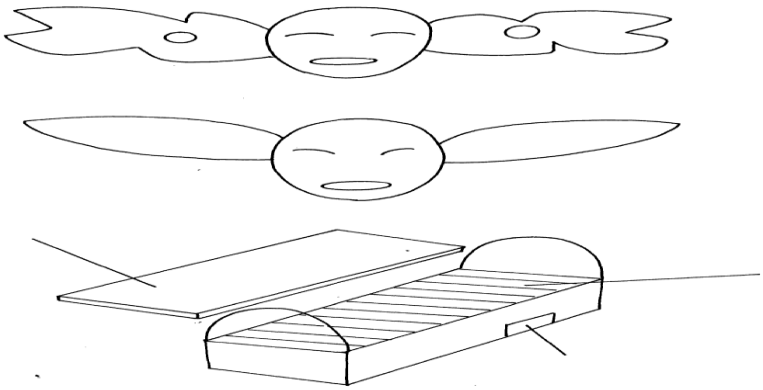
b) Name **three** areas of the animal body where ticks are likely to be found
c) Name the parts of the animal numbered 1-4

4. a) What is castration as used in livestock production?
   b) State **four** reasons why castration is done in livestock
5. (a) Describe the management of a gilt from weaning to furrowing
   (b) Discuss the preparation a poultry farmer should make before the arrival of day old chicks
6. Outline **two** reasons for raddling in sheep management
7. State any **four** reasons for castrating male piglets
8. What are the methods of stocking bees? Give **two**.
9. State **two** ways that show how good feeding help to control livestock diseases
6. Name any **two** recommended methods of docking lambs
7. State three disadvantages of inbreeding
8. State **four** routine management practices that should be carried out on a lactating ewe
9. (a) Describe the procedure which should be followed to castrate a three weeks old piglet using surgical method
   (b) (i) State **five** factors that should be considered when sitting a bee hive in a farm

(ii) Describe the management practices that would ensure maximum harvest of fish from a fish pond

10. Give **three** types of bees found in a bee colony
11. List **three** methods of castrating farm
12. Outline the routine management practices of piglets from the 1st day to the 8th week
13. List **three** types of calf pens
14. State **two** factors that could lead to failure to conceive in sows after service
15. List **three** advantages of hoof trimming in sheep production
16. State **four** factors considered when citing an apiary in the farm
17. Name **three** methods of stocking a beehive with honey bees
18. List **three** common methods of extracting honey from the combs
19. a)The illustration below shows a method of identifying pigs, study the diagram and answer the questions that follow:-

i) On the diagram **A** provided below, draw the mark to indicate a pig number 147, using the procedure of ear-notching in diagram

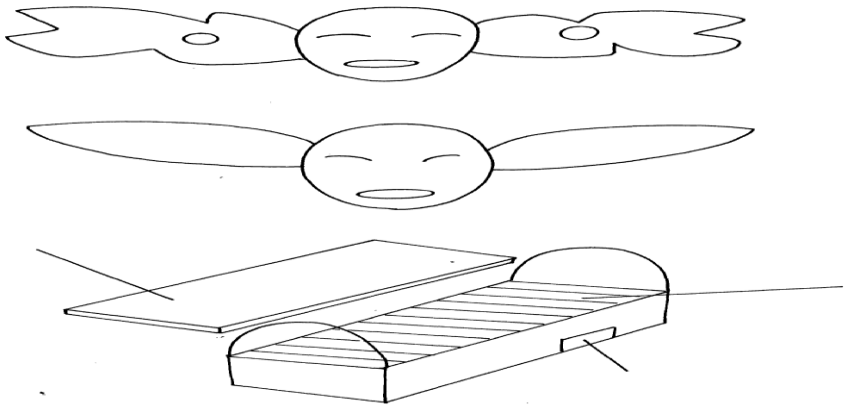


A

ii) What is the recommended stage of growth in pigs at which the ear-notching should be carried out?

iii) State any **three** reasons why weight is an important routine management practice in pig production

b) Below are illustrations showing the various parts of the Kenya top bar hive. Use the illustration to answer the question that follow



D

C

B

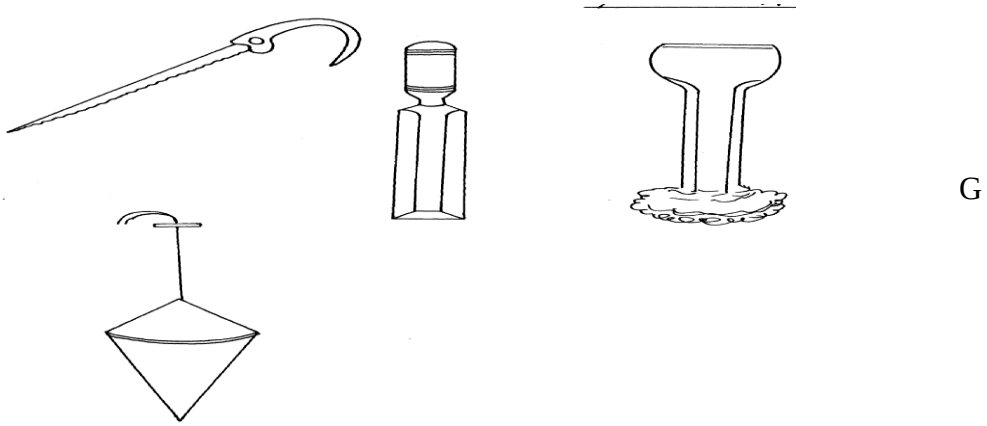
i) label the parts **B ,C** and **D**

ii) How can a farmer attract bees to colonize a new hive?
iii) Outline the procedure of opening the hive to harvest honey

20. a) Below are illustrations of farm tools

F

E



G

H

ii) State the use of the tools
iii) Name the type of hammer that may be used for driving tool **F** during work

b) 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

21. a) State and explain **four** advantages of age grouping farm animals as a management practice
b) Explain **four** major causes of lamb mortality from birth to weaning
c) Describe brucellosis under the following sub headings
i)Cause
ii) Transmission
iii) Symptoms
iv) Control measures

22. a) Explain the advantage of battery cage system of rearing layers

23. Give **two** reasons why it is important to castrate animals when they are still young

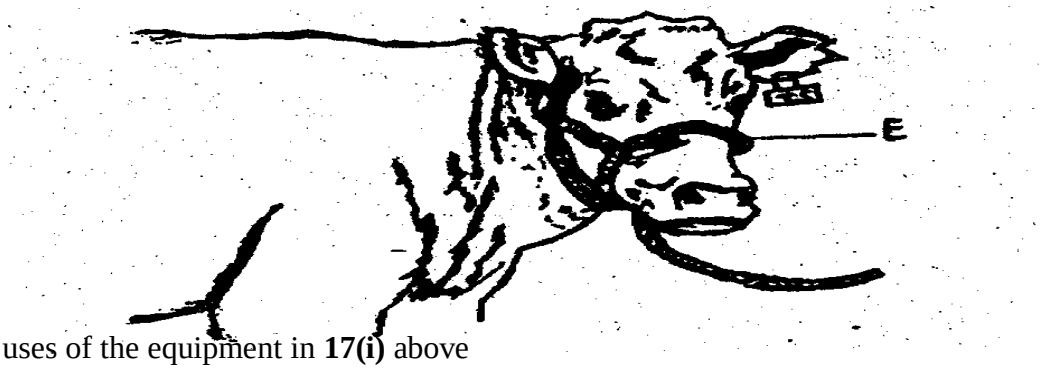
24. (a) Give **two** reasons why dehorning is carried out in farm animals
(b) State **four** methods of dehorning livestock

25. (a) What is **steaming up** in livestock production?
(b) Give **two** reasons why the practice is important in pig rearing

26. State **four** management practices that should be carried on a fish pond in order to obtain maximum fish production.

27. List four factors considered when formulating livestock ration. (2mk)

28. Study the diagram of a cow below and answer the subsequent questions



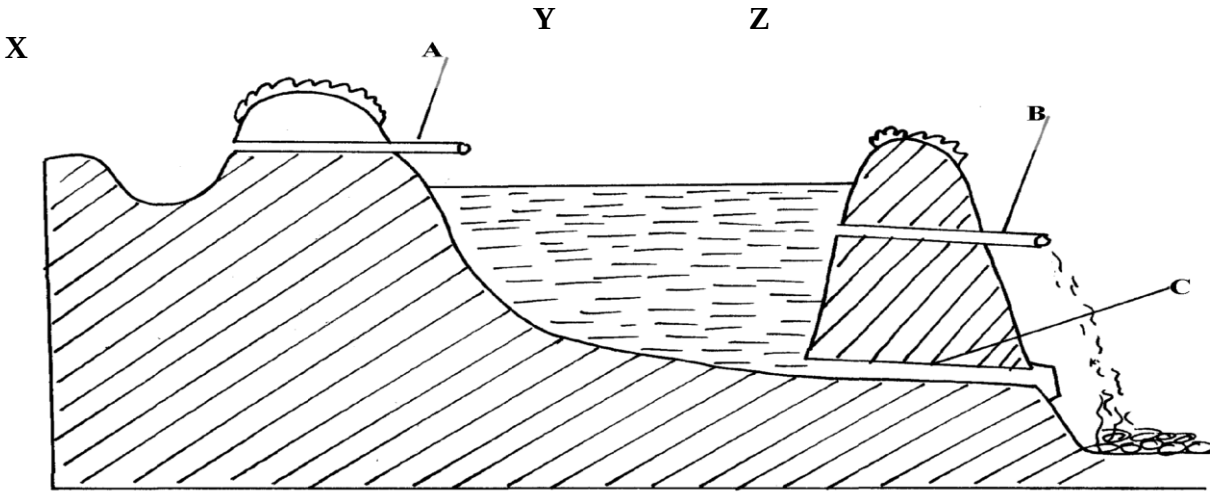
State **two** uses of the equipment in **17(i)** above

FARM STRUCTURES

This topic entails the following:

- Description of parts of a building
- Identification of materials for construction
- Description of various farm structures and their uses
- Construction and maintenance of farm structures.
- The following relevant questions and their answers in this topic will greatly motivate and help the user to comprehend and understand the required concepts and practices:

1. Mention **four** disadvantages of using steel materials for construction of farm structures
2. Give **two** reasons for placing a polythene sheet on a foundation of farm buildings
3. What is "**calf crop**" in beef production?
4. a) Outline the procedure in construction of a barbed wire fence
   b) List any **four** wood preservatives
   c) Give **four** factors that will determine the choice of farm building materials
5. i) Give **four** factors considered when citing a fish pond
   ii) Give **four** features of a good laying nest
6. State **two** uses of a footbath in cattle dip
7. a) What is a green house
   b) Name **four** materials used in green house construction
   c) Give **four** maintenance practices carried out on a green house
   d) Explain the importance of maintaining farm structures
8. Give **two** disadvantages of a barbed wire fence when used in paddocking
9. The diagram below illustrates a cross-section of a fish pond. Study it carefully and answer the questions that follow:-



(a) Identify the parts marked **A, B**, **C** and **C**

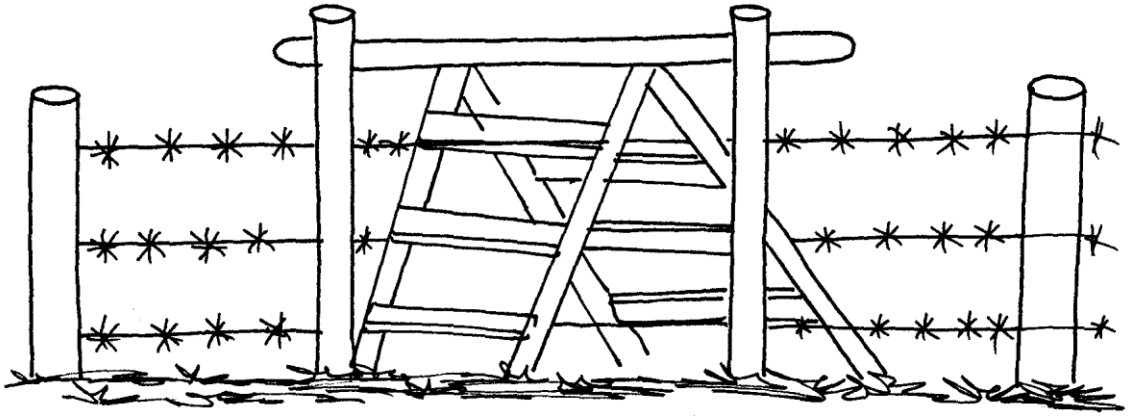
(b) On the diagram the points marked **X**, **Y** and **Z** are possible sites where fish feeding can be done. Which is the most appropriate point for feeding?

(c) Give **two** reasons why the floor of the pond should be covered with lime 14days Before filling it with water

(d) Why should part marked **B** be screened?

(e) State **three** maintenance practices carried out on the structure

10. Study the farm structure below illustrating a pass:-



(a) Identify the type of pass illustrated above
(b) Distinguish between a pass and a gate
(c) Name **one** type of live fence

11 State **four** requirements of a good maize store

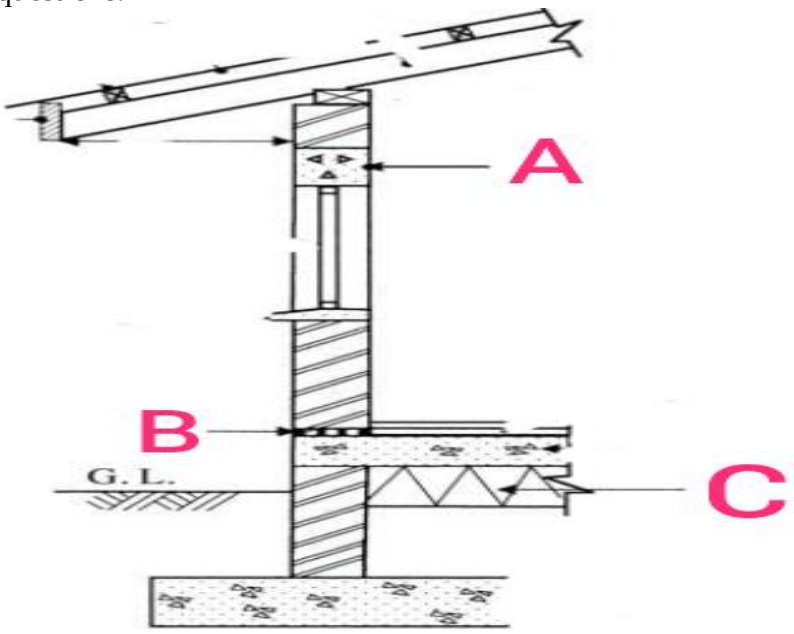
12 State **three** factors that determine the depth and size of foundation in a farm building

13 (a) Explain the uses of various hand tools in the construction of a poultry house
(b) Describe the procedure of erecting wooden rail fence
(c) Explain various factors considered when choosing the construction materials for farm building

14 State **four** features of a good calf pen

15 State **four** uses of a fence

16 Below is a diagram of a cross section of a farm structure. Study it carefully and answer the following questions.



(i) Identify the labeled parts **A, B,** and **C**
(ii) What is the importance of the part labeled **B** to the structure

(b) (i) When making concrete blocks the ratio 1:3:5 may be used. What do these figures represent?

(ii) In a concrete mixture 1:3:5, twenty four cubic metres of sand were recommended to be used in putting up of a foundation of a building. Find the volume of the other two

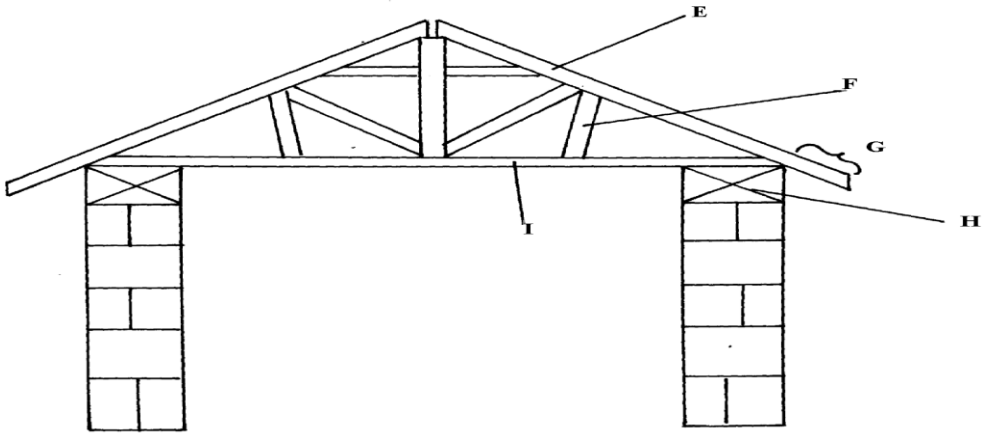
17 (a) Explain the maintenance practices of a fish pond
(b) Give **four** ways of controlling fish predators in a fish pond

18 Mention **four** reasons of treating timber before roofing farm buildings

19 List **four** uses of crushing in the farm

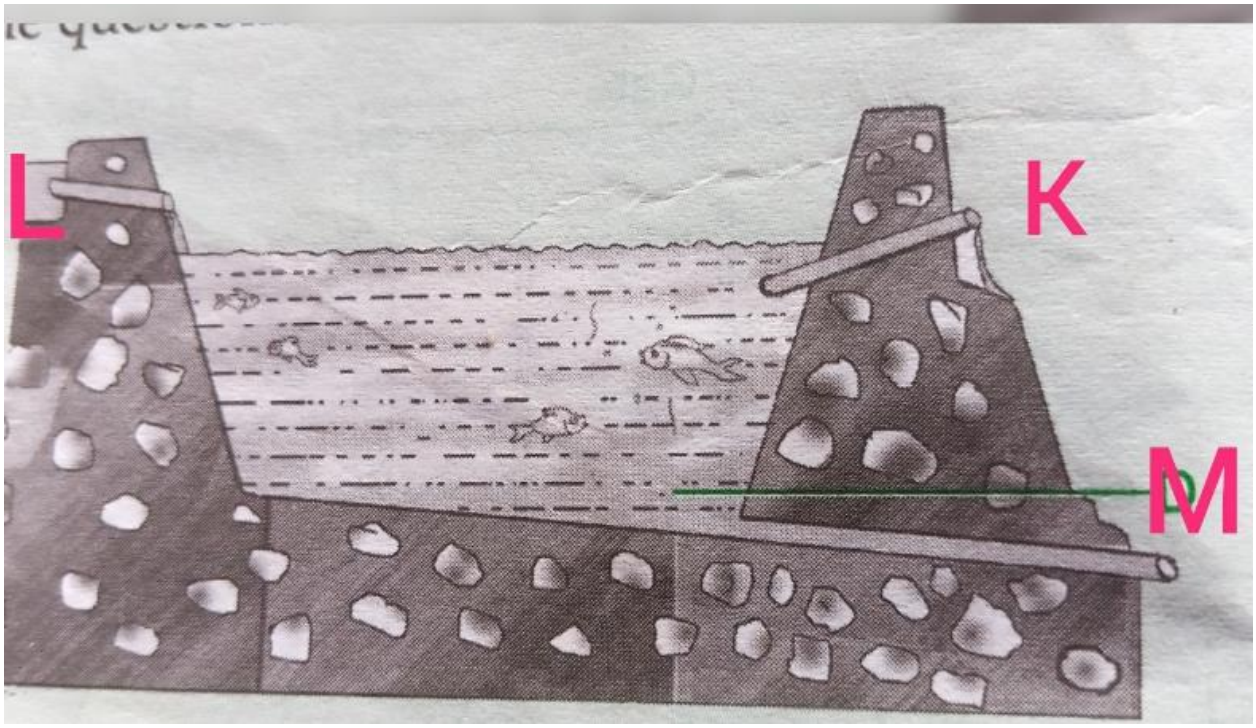
20 a) Define the term **fence**
b) List various types of fences
c) Describe advantages of fences

21 Study the illustration of a farm structure below and answer the questions that follow



i) Name the parts labeled
ii) State the function of the parts labeled
iii) Name **two** chemicals preservatives used to treat the wooden parts of the structure against insects and fungal damage

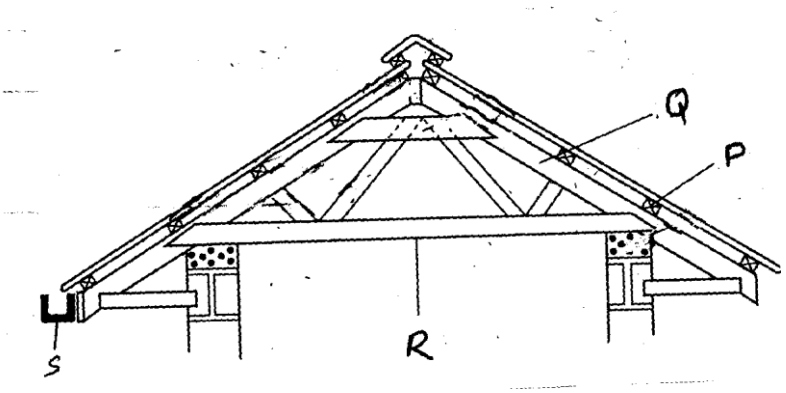
21. Below is a diagram of a fish pond, study it and answer the questions that follow



i) Label the parts marked **K** and **L**

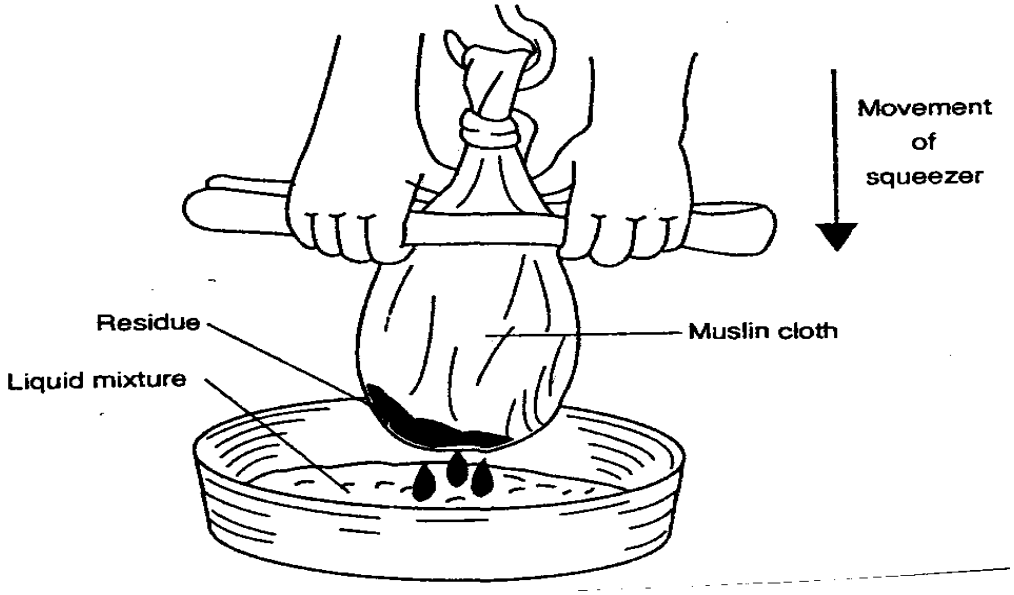
ii) Give a reason why part **M** is usually deeper than the rest of the pond
iii) State **three** maintenance practices carried out in the pond

22. a) Explain **five** factors to consider when siting a fish pond
b) Explain the measures used to control livestock diseases
23. State four factors which influence the selection of materials for constructing a diary shed
24. a) State **five** maintenance practices of a mould board plough
b) Explain **five** structural and functional differences between the petrol and diesel engines
c) List **five** uses of farm fences
25. State **four** uses of farm buildings
26. List **four** structural requirements for proper housing of farm animal to maintain good health
27. The diagram below is part of a farm structure. Study it and then answer the questions that follow:



(a) Name part of structure represented above
(b) Identify parts labeled **P, Q, R,** and **S**
(c) Give the functions of the part labeled **P** and **S**

28. The diagram below shows an activity of processing a farm product. Study it and answer the questions that follow:



(a) Name the product being processed
(b) Identify the method used in processing the product names in the diagram
(c) Outline the procedure used when harvesting the product named in the diagram
(d) List **two** factors that affect quality of the product processed in the diagram

31 (a) Describe **five** parts of a plunge dip
(b) Outline **six** uses of live fences on the farm
(c) Outline **four** factors that influence power output of drought animals

32. a) Explain the factors a farmer needs to consider before siting a farm structure on his farm
b) Outline the desirable features of a good grain store
c) Describe the uses of farm fences in promotion of agriculture

33. Name any **two** pests that attack timber used for construction in the farms

34. State **three** factors that may lead to dip wash being exhausted or weakened while in the dip tank

AGRICULTURAL ECONOMICS II
(LAND TENURE AND LAND REFORM)

- **Definition of land tenure.**
- **Description of tenure systems.**
- **Descriptions of land reforms.**

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

1. State **four** ways by which Re-afforestation help in land reclamation
2. State **three** objectives of land reforms that are taking place in Kenya
3. State **two** causes of land fragmentation in Kenya since independence
4. Outline the process followed in land adjudication
5. State **four** benefits of a farmer having land title deed
6. State **four** reasons for practicing land consolidation
7. Give **four** advantages of communal land tenure system
8. State **four** advantages of landlordism and tenancy
9. Outline **four** objects of land tenure reform
10. State **three** advantages of communal land tenure system
11. List down four important details in a land title deed.

SOIL AND WATER CONSERVATION

This topic entails the following:

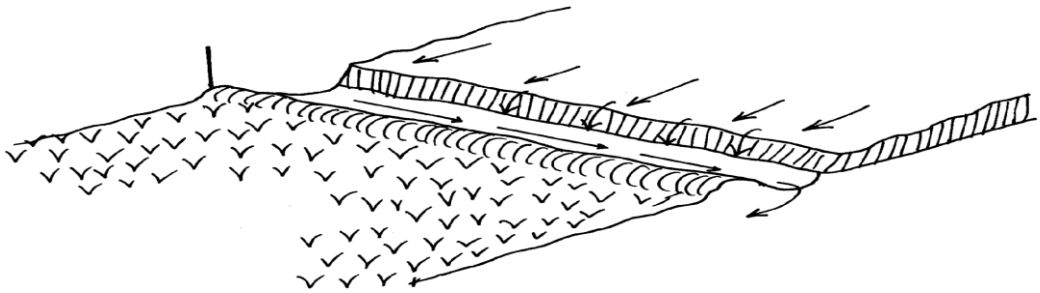
- Definition of soil erosion
- Explanation of various factors which influence erosion.
- Agents of erosion
- Description various methods of erosion
- Description of various methods of erosion control
- Description of micro-catchments and then uses.

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

1. Name **three** human activities that may influence soil erosion
2. Below is a diagram showing soil erosion control method

Soil Uncultivated land

Water movement



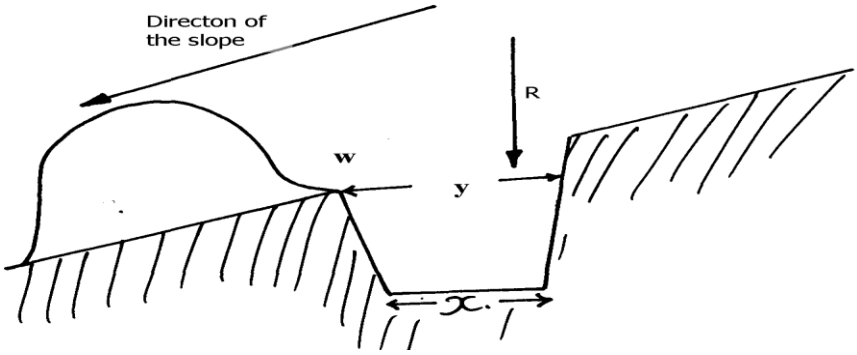
Cultivated land with crops

a) Identify the structure used to control soil erosion
b) What is the function of the structure made
c) Why was soil not put on the upper side of the trench made
d) State **four** effects if water was allowed into the cultivated land

3. Give **two** roles played by Grassley in soil erosion control
4. List **three** materials that may be used for constructing a gabion
5. State **one** factor that would determine the width and depth of a cut off drain
6. Explain **five** ways by which grass helps to conserve soil
7. Give **four** farming practices that help in reducing the effects of water shortage in crop production
8. Name **two** types of terraces
9. Name **two** forms of gully erosion

9 -V- shaped
-U – shaped

10. Explain the cultural methods of soil erosion control
11. Mention **four** control measures of river bank erosion
13. The figure below represents a physical soil and water conservation measure used on various slopes



a) Identify the measure represented above
b) Describe the construction of the identified measure above

15. a) What is soil erosion
b) Give **four** types of water erosion
c) Explain factors which influence soil erosion
d) State any **seven** cultural ways of controlling weeds

16. Give **two** ways through which gabions control soil erosion

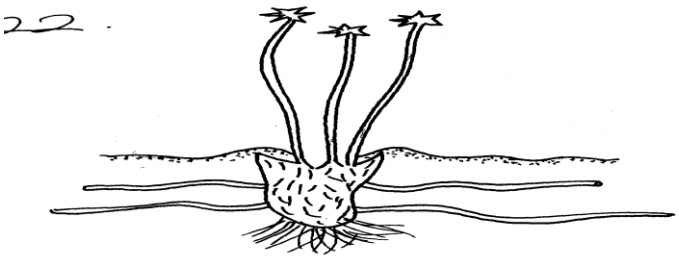
WEEDS AND WEED CONTROL

This topic entails the following:

- Definition of a weed
- Identification of weeds
- Classification o weeds
- Competitive ability of weeds
- Description of weed control methods
- Harmful effects of weeds

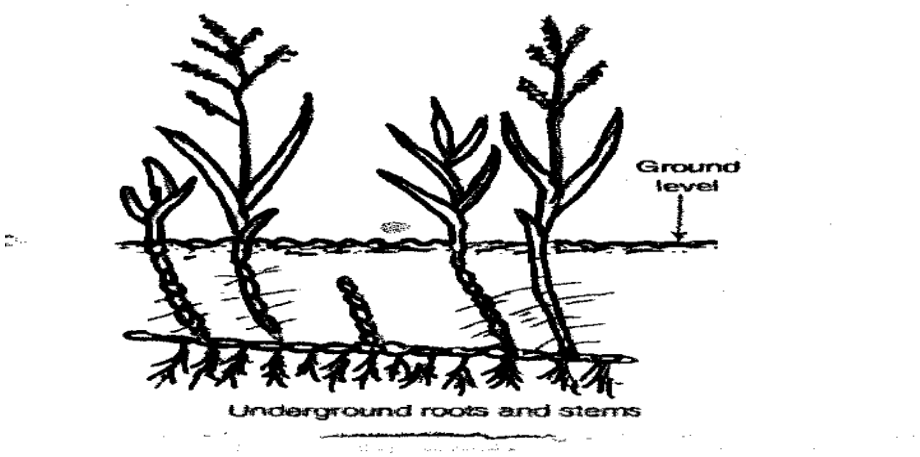
The following relevant questions and their answers in this topic will greatly motivate and help the user to comprehend and understand the required concepts and practices:

1. Study the diagram below and answer the questions that follow:



(a) Identify the weed
(b) Why is it difficult to control the weed?
(c) State the economic importance of the weed shown above

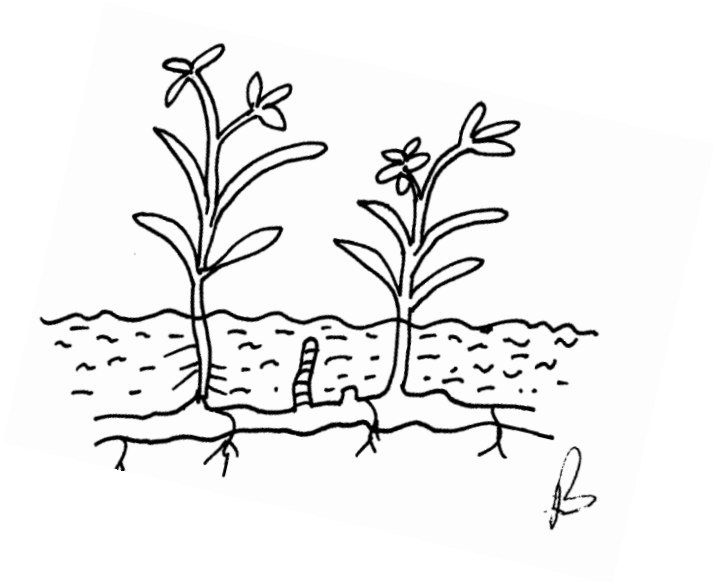
2. The following is an illustration of a common weed of arable land



(a) Identify the weed
(b) Why is it difficult to control the weed?
(c) State **one** harmful effect of the weed on crop production

(d) Give **two** measures used to control the weed

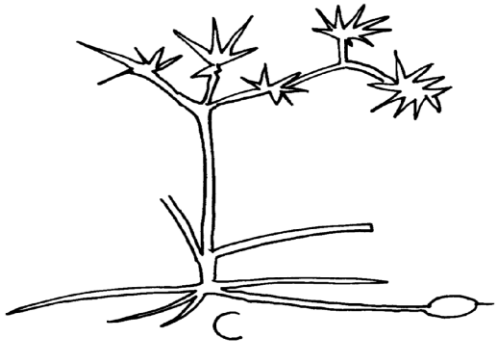
3. Below is a diagram of some common weeds. Study then and answer the questions that follow:-

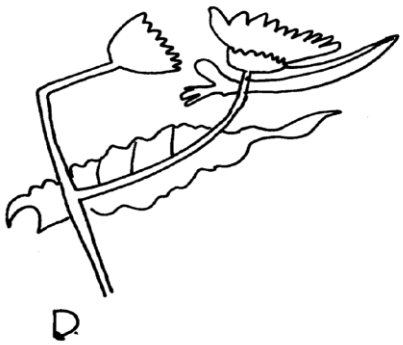


(i) Identify weed **A** and **B**
(ii) State **two** effects of weed **B** on crop production
(iii) Give a reason why weed **B** is difficult to control
(iv) State the effective method of controlling weed **B**

4. Give **four** methods of propagation which make weeds have a high competitive ability over crops

5. The diagrams below show weeds:-





C

D

Identify the weeds **C** and **D**
(b) State why it is difficult to control weed **C**
(c) State **two** economic importance of weed **D**

6. (a) List any **four** types of weeds known to be poisonous to livestock
(b) At what stage of life cycle is best recommended to control weeds?

7. State **two** disadvantages of using herbicides

8. a) Name **four** herbicides that can be used to control weeds in a field of maize
b) At what stage of growth of maize should the weeds be controlled by use of a post emergence herbicides

9. (b) Give an account of economic importance of weeds

10. a) mention **two** factors that affect selectivity of herbicides

11. Listing specific examples of weeds describe their harmful effects in agricultural production

CROP PESTS AND DISEASES

This topic entails the following:

- Definition of a pest and a disease
- Main cause of crop diseases
- Description of harmful effects of crop pests and diseases
- Identification of crop pests and diseases
- Control measures of crops pests and diseases

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

1. State **two** possible causes of swelling on the roots of legume crops
2. Discuss the various cultural methods of controlling pests in crops
3. What does the term 'close season' mean in crop production?
4. Explain **five** cultural methods of pest control in stored grains
5. Name **four** symptoms of viral infections in plants
6. Study the illustrations given below and then answer the questions that follow:-



C



B

(a) Identify the pests shown by the illustrations **B and C**
(b) State **one** effective method of controlling the pest labelled
(c) Name the type of crop commonly attacked by the pest labelled '**C**'

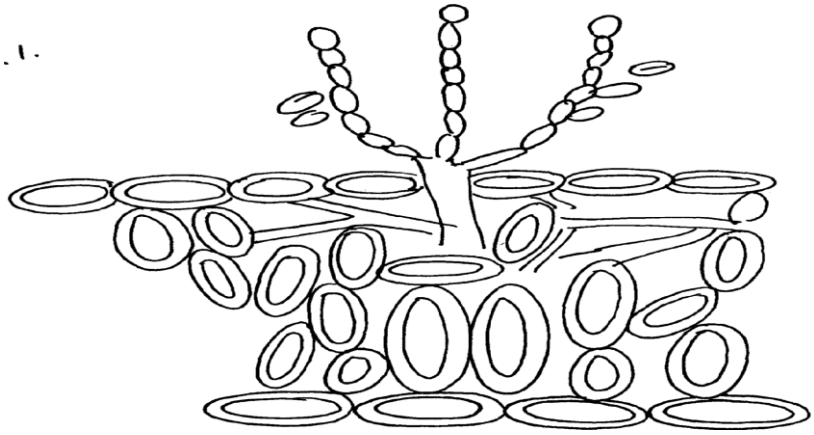
7. State the various practices carried out in the field to help control crop diseases
8. State t**wo** ways in which pesticides kill crop pests

9. The diagram below shows kale seedling attacked by a pest



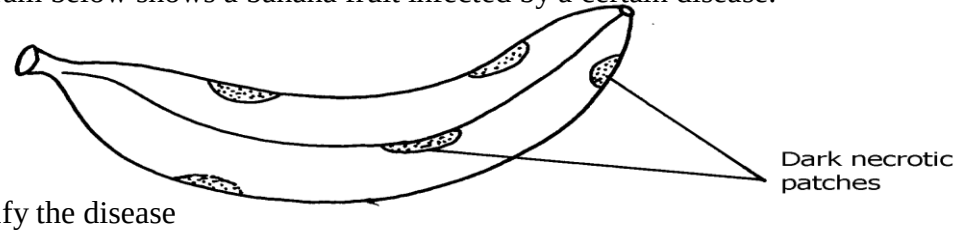
(a) Identify the pest
(b) What damage does the pest cause to the crop
(c) State **two** methods of controlling the pest

11. Define the term 'economic injury level of a pest and integrated pest control management
12. List **four** harmful effects of crop pests
13. The diagram below shows a fungal disease in a section of potato crop leaf



a) Identify the fungal disease
b) (i) State the causal organism of the disease identified above
ii) Give **two** symptoms of the above disease
c) Give **two** control measures of the disease

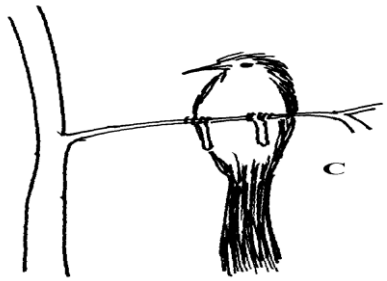
14. The diagram below shows a banana fruit infected by a certain disease.



(a) Identify the disease

(b) Suggest any **one** control measure for the disease you have named in **(a)**

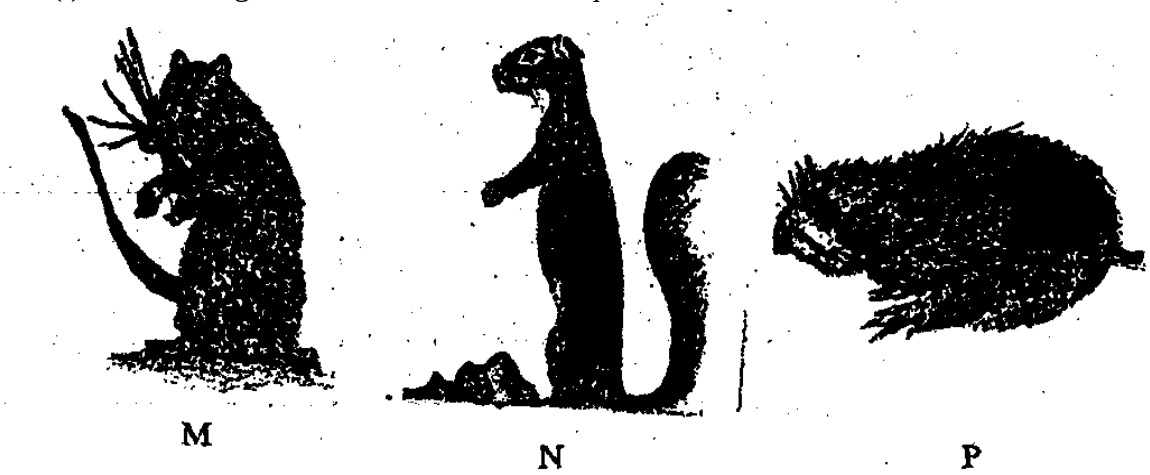
15. The diagram below shows a crop pest;



(a) Identify the crop pest
(b) State **two** damages the pest would cause to crops

16. Give two symptoms of nematode attack on bananas.
17. Give **four** cultural practices used in controlling crop pests
18. State **three** symptoms of coffee berry disease.

19 (i) Use the diagrams below to answer the question that follow.



(a) Identify the crop pests labeled **M**, **N** and **P**
(b) State **one** control measures of crop pests labeled **M**
(c) State the damage caused to crops by crop pest labeled **N**

20. State and explain the cultural methods of pest control

CROP PRODUCTION VI
FIELD PRACTICES FOR MAIZE, MILLET, SORGHUM, BEANS AND RICE: HARVESTING OF COTTON PYRETHRUM, SUGAR CANE COFFE AND TEA

This topic entails the following:

- Description of management practices of the food crops from planting to harvesting and marketing.
- Economic value of food crops and industrial crops

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

1. List **four** management practices carried out in maize field at 45cm high
2. Why is it not recommended to use sisal bags in handling cotton
3. Describe the production of rice under the following sub-headings:-
   (a) Land preparation
   (b) Water control
   (c) Fertilizer application
   (d) Weed control
   (ii) Describe the environmental conditions that may lead to low crop yields
4. Describe the production of maize for dry grain production under the following sub-headings
   (a) Seedbed preparation
   (b) Planting
   (c) Weed control
   (d) Pest control
   (e) Disease control
   (f) Harvesting
5. Two precautions taken when harvesting cotton
6. Describe production of maize under the following sub-headings ;
   (a) Varieties
   (b) planting
   (c) pest and pest control
   (d) harvesting and storage
7. Describe the field production of maize under the following sub headings
   a) Ecological requirement
   b) Varieties
   c) Seedbed preparation
   d) Pests and diseases
   e) Harvesting
8. a) Discuss harvesting of cotton
   b) Explain the roles of Agricultural co-operatives in Kenya
9. Describe the production of maize under the following sub-headings:
   (a) Ecological requirements
   (b) Land preparation
   (c) Planting and field management
   (d) Pests and disease control
   (e) Harvesting and marketing
10. Give **two** precautions measures a farmer should put into consideration when harvesting cotton
11. Describe the production of beans under the following sub headings:
    (a) Ecological requirements (b) Seedbed preparation
    (c) Planting (d) Pest and pest control

FORAGE CROPS

This topic entails the following:

- Definition and classification of pasture crops.
- Identification of pasture corps
- Description of ecological requirements of forage crops
- Description of the establishment of pasture and fodder crops
- Description of forage utilization and conservation.

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

1. State **three** factors which affects the quality of standing forage given to livestock
2. Explain Napier grass production under the following sub-headings
   i) Seedbed preparation
   ii) Planting
   iii) Fertilizer application
   iv) Weed control
   v) Utilization
3. Why is it necessary to allow freshly cut nappier grass to wilt before ensiling
4. 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
5. State **two** causes of failure in pasture establishment
6. State **two** advantages of grass-legume mixture
7. List **four** factors that determine the quality of hay
8. i) Discuss the production of Guatemala grass (Trypsacum Laxum) under the following headings
   a) Ecological required
   b) Land preparation
   c) Planting
   d) (i) Utilization and defoliation
   ii) Discuss **six** effects of late defoliation of fodder
9. Give **four** factors that determine the nutrient content in hay
10. (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
11. (a) What is topping in pasture management
    (b)State two methods used in topping in pasture management
12. Give **two** advantages of grass-legume pasture over pure grass pasture
13. Why are farmers encouraged to conserve excess forage in the farm?
14. Give **two** factors affecting the quality of hay

LIVESTOCK HEALTH III (LIVESTOCK DISEASES)

This topic entails the following:

- Description of causes and vectors of the main livestock diseases.
- Signs of each stated livestock disease
- Stating predisposing factors where applicable
- Control measures of livestock disease

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

1. Name **two** diseases that affect female animals only
2. Give **four** pre disposing factors of foot rot disease in sheep
3. i) Name the causative organism of contagious abortion in cattle
   ii) Give **four** symptoms of contagious abortion in cattle
   iii) State **three** methods of controlling contagious abortion in cattle
4. What is a vaccine?
5. (a) Discuss black quarter under the following sub-headings:-
   (i) Animal affected
   (ii) Casual organism
   (iii)Symptoms of disease
   (iv) Control measures
   (b) (i) Explain **four** measures used to control liver flukes
   (ii) Name an intermediate host of liver fluke
   (c) Explain the following terms as used in livestock production
   (i) Embryo transfer
   (ii) Artificial insemination
   (iii) Line breeding
   (iv) Cross breeding
   (v) Up-grading
6. Give **four** predisposing factors of foot rot disease in sheep
7. (a) Discuss **coccidiosis** disease under the following headings:-
   (i) Causal organism
   (ii) Livestock species attacked
   (iii) Symptoms of attack
   (iv) Control measures
   (b) (i) What are the characteristics of an effective acaricide?
   (ii) Explain **three** methods of acaricide application
8. Name **four** ways of controlling coccidiosi in the farm
9. State **four** predisposing factors of scour in calves
10. Name **four** notifiable diseases of livestock
11. Name **two** diseases of poultry that are controlled by vaccination
12. State **three** signs of anthrax injection disease observed in the carcass of a cattle
13. Differentiate between active immunity and acquired passive immunity
14. Name **four** systems of a tractor engine
15. State **two** adjustments that should be carried out on a tractor – mounted mould board

Plough in preparation for ploughing

16. List **three** causes of ruminal lympany (Bloat) in ruminant animals
17. (a) Give **four** symptoms of milk fever
    (b) State **two** methods of controlling milk fever

18. (a) Describe East Coast Fever (E.C.F) under the following sub-topics:
    (i) Animal attacked
    (ii) Causal organisms
    (iii) Symptoms of attack
    (iv) Control and treatment
    (b) Explain **ten** measures used to control livestock diseases

29. Name **two** livestock diseases that are spread through natural mating.
20. a) Give the method used in introducing a vaccine to poultry against fowl typhoid
    b) State other methods introducing vaccines to livestock

FOR MARKING SCHEMES CALL/WHATSAPP 0746 222 000

MWALIMU AGENCY