GOLDEN ELITE EDUCATIONAL PUBLISHERS 0724351706

TOP NATIONAL SCHOOLS TRIAL EXAMS 2022

AGRICULTURE

A SOURCE YOU CAN TRUST

- NAIROBI SCHOOL
- KENYA HIGH
- MANG'U SCHOOL
- MOI GIRLS NAIROBI
- MASENO
- BAHATI GIRLS
- ALLIANCE BOYS' HIGH
- ALLIANCE GIRLS
- KABARAK SCHOOL
- SUNSHINE SCHOOL

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NAIROBI

NAIROBI SCHOOL

PAPER 1

SECTION A: *(30 marks)*

*Answer **all** questions in this section in the spaces provided*

1. State **four** advantages of mixed farming to the farmer (2 marks)
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   ……
   ……
2. State **two** reasons for forage conservation (1 mark)
   ……
   ……
3. Give **four** reasons for using certified seeds for planting (2 marks)
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   ……
4. State **four** activities carried out by young farmer's club in Kenya (2 marks)
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5. Give **two** benefits of possessing title deed to a farmer (1 mark)
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   ……
6. State **four** ways of classifying crop pest (2 marks)
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7. State **four** observable indicators of economic development of a Nation. (2 marks)
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8. State **two** effects of HIV /AIDS on agricultural production. (1 mark)
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   ……
9. State **four** factors which may affect the quality of Hay. (2 marks)
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10. State **four** reasons why burning is discouraged as a method of land clearance. (2 marks)
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    ……
    ……
    ……
11. Give **two** forms in which nitrogen is absorbed by crops from the soil. (1 mark)
    ……
    ……

12. State **four** factors that determine the stage at which crop is harvested (2mks)
13. Name **two** types of non-competitive markets (1 mark)
14. State **four** agricultural activities that may pollute water (2 marks)

……..……
……..……
……..……
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15. Name **four** appropriate sites for Agroforestry trees. (2 marks)

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16. State **four** characteristics of good seedling for transplanting (2 marks)

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……
17. State **four** financial documents kept by a poultry farmer. (2 marks)

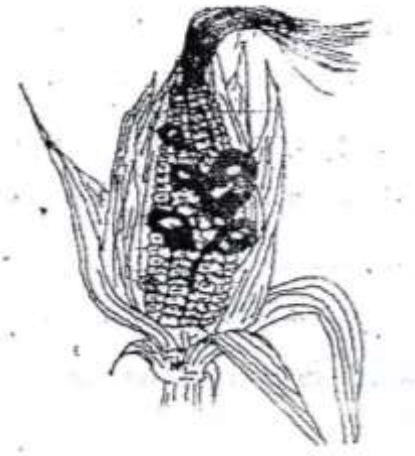
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18. Name any **two** types of labour records. (1 mark)

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SECTION B: *(20 marks)*

*Answer **all** question in this section in the space provided*

19. below is a diagram showing a crop disease

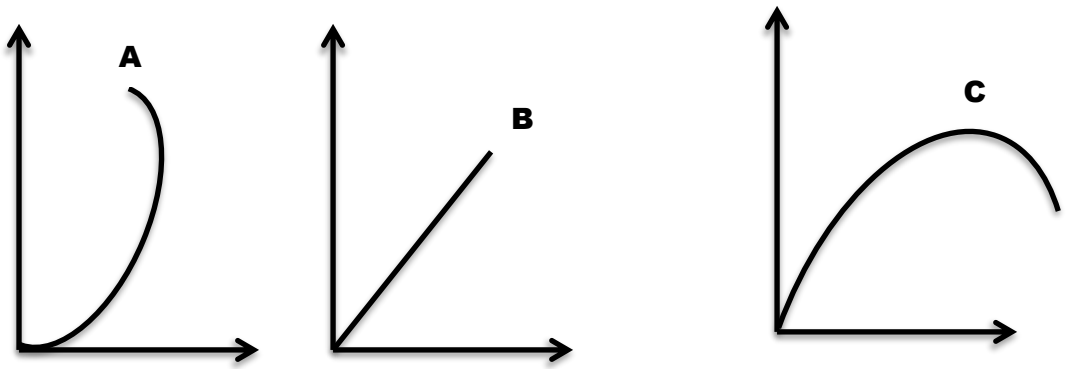


a. Identify the crop disease (1 mark)
b. State **three** control measures for the crop disease (3 marks)

……
……
……
c. Name the category in which the disease is classified (1 mark)

……..…

20. The following illustration show different production function curves in agricultural economics. Study them and answer the questions that follows



a. Identify the production function curves labeled A and B (2 marks)
A……..……
B……..……

b. What does the law derived from the production labeled C state (1 mark)
……..……
……..…….

c. i. Which one of the three production function curves is rare in agriculture. (1 mark)
…….

ii. Give reason for your answer in (i) above (1 mark)
……..……
……..……

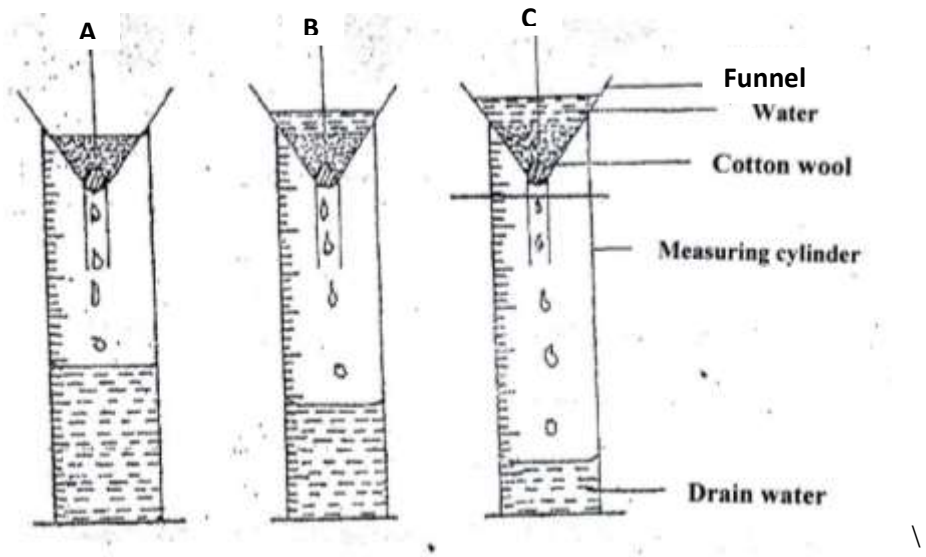
21. The following is a farm record Mrs. Sanda had kept as at 30th June 2006.
Study it carefully and answer the questions that follow

\

Cash in hand	20,000
Cash at bank	66,000
Buildings	50,000
Disc plough	16,000
Debtors	16,000
Working tools	12,000
Bank overdraft	24,000
Creditors	20,000
Loan	50,000
Cattle	40,000
land	80,000

Prepare the balance sheet from the above information for Mrs Sanda's farm (5mks)

22. The diagram below illustrates an experiment on soil. Study it carefully and answer the questions that follow

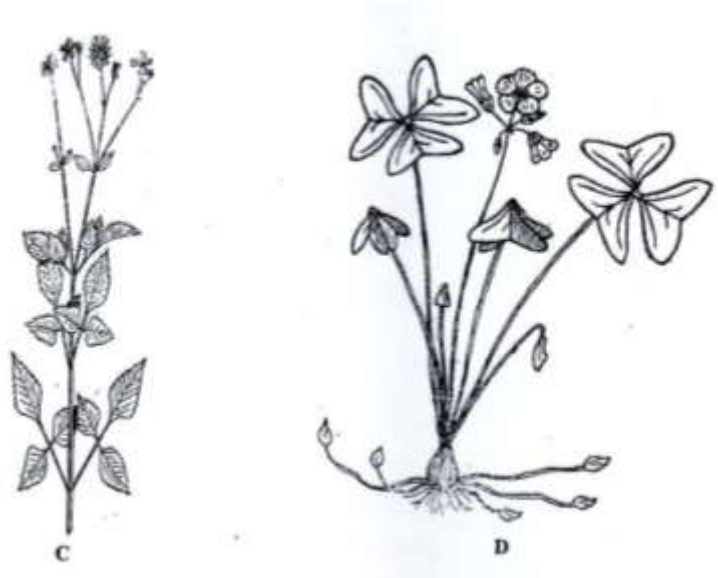


a. State the aim of the experiment (1 mark)
……

b. If the volume of water illustrated in the measuring cylinder was observed after one hour, identify the soil samples labeled
A: ……..….. (1 mark)
B: …… (1 mark)

c. State **two** ways in which the soil structure of the sample labeled C above can be improved (2 marks)
……
……

23. The diagram below illustrates common weeds in arable land, study them carefully and answer the questions that follow.



a. Identify the weed labeled
C……..….. (1 mark)

D……... (1 mark)

b. Classify the weed labeled C according to plant morphology. (1 mark)
……....

c. Explain the reason why it is difficult to control the weed labeled D. (2 marks)
……
……

SECTION C *(40 marks)*

*Answer any **TWO** questions from this section*

24. a. Describe **seven** problems of marketing of agricultural produce (7 marks)
b. State **five** importance of crop rotation (5 marks)
c. Describe cultural pest control (8 marks)

25. a. Describe **eigh**t factors that contribute to competitive ability of weeds. (8 marks)
b. Describe the harvesting of coffee (5 marks)
c. Describe production of onion under the following sub-heading
i. Seedbed preparation (3 marks)
ii. Field management practices (4 marks)

26. a. Give **five** reasons why land consolidation should be encouraged in Kenya (5 marks)
b. Discuss **seven** ways by which the government of Kenya can improve on maize production to ensure food security in the country (7 marks)
c. Discuss **four** farming practices that may destroy soil structure. (8 marks)

Paper 2

SECTION A (30 marks)

Answer ALL the questions in this section in the spaces provided.

1. State **two** control measures for fowl pox disease in poultry. (2 marks)
……
……

2.
a) Give **two** reasons for carrying out maintenance practices on a mower. (2 marks)
……

3. Give **two** limitations of using solar power on the farm. (2 marks)
……
……
……

4. Name **two** methods used in selection of breeding stock in livestock production. (2 marks)
……
……
……

5. State **four** methods of controlling roundworms in livestock. (2 marks)
……
……
……
……
……

6. Name the type of breed into which each of the following breeds of cattle are classified.
a) Aberdeen Angus. (½ marks)
……
……
b) Guernsey. (½ marks)
……
……

c) Sahiwal. (½ marks)
……
……

d) Redpoll. (½ marks)
……

7.

a) Give **two** ways in which proper nutrition help to control livestock diseases. (2 marks)
……
……
……

b) Name **two** nutritional diseases in cattle. (2 marks)
……
……
……

8.

a) State **two** advantages of housing calves singly in cattle management. (1 mark)
……
……
……

b) State **four** advantages of natural calf rearing. (2 marks)
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.....
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.....

9. State **four** reasons for dehorning in cattle management. (2marks)
……
……
……
……
……

10. Name **two** methods of harvesting fish in fish pond. (1 mark)
……
……
……

11.

a) State **four** causes of egg eating in flock of layers. (2 marks)
……
……
……
……
……

b) State **two** advantages of fold system on poultry rearing. (1 mark)
……
……
……

12. Name **four** parts of farm building that can be reinforced using concrete. (2 marks)
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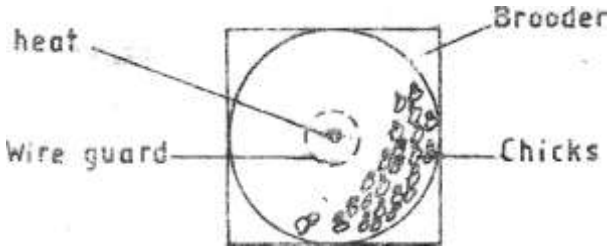
13. State function of the following farm tools and equipment.
    a) Pipe cutter (1 mark)
    ……
    ……..
    …….
    b) Wire strainer (1 mark)
    ……
    ……
    ……
14. State **four** ways in which vaccine can be administered to livestock. (2 marks)
    ……
    ……
    ……
    ……
    ……
15. State **two** disadvantages of using plunge dips in tick control. (1 mark)
    ……
    ……
    ……
16. State **two** features on the animal which may predispose it to livestock diseases. (1 mark)
    ……
    ……
    ……

SECTION B (20 marks)

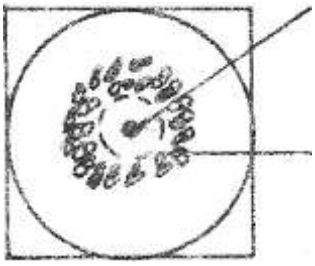
*Answer **all** the questions in this section in the spaces provided.*

17. The following illustrations show the behavior of chicks in a brooder. Study them carefully and answer the questions that follow.

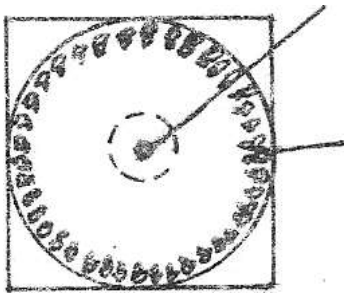
A



B Source of **heat**

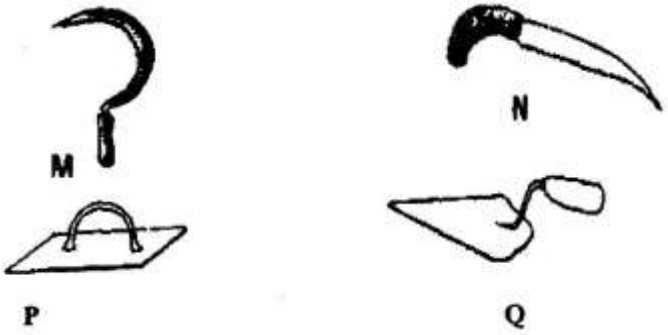


C Source of heat

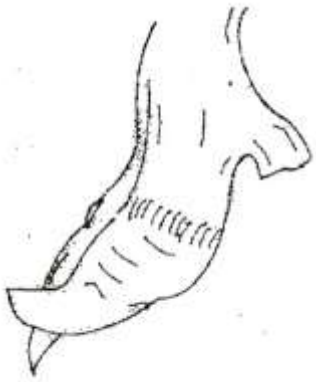


a) Explain the cause of behavior observed in chicks for each of the illustrations labeled A, B and C. (3 marks)
b) Give a reason for making the brooder wail round in shape. (1 mark)
c) State **one** way of correcting the behavior of chicks shown in an above. (1 mark)
……

18. Diagrams M, N, P and Q represents some farm tools.



a) Identify the tools; M, N, P and Q. (2 marks)
b) Give the use of each of the tools named above. (2 mar
19. State **two** maintenance practices that should be carried out on tool M. (1 mark)
The diagram below illustrate a hoof of a sheep .Study it carefully and answer the questions that follow.



a) Name the routine management practice that should be carried out on the hoof illustrated above. (1 mark)
b) State **two** reasons for carrying out the management practice in (a) above. (2 marks)
20. Name the **two** tools used to carry out the routine management practice named in (a) above. (2 marks)
A farmer wanted to prepare a 200kg of calf rearing ration containing 20% DCP. Using the Pears Square Method, calculate the amount of Maize containing 10% DCP and Sunflower containing 35% DCP the farmer would need to prepare the ration.(Show your working) (5 marks)

SECTION C

Answer any two questions in this section in the spaces provided

21.
a) State **five** indicators that can be observed on a goat to confirm sickness. (5 marks)
b) Describe **eight** physical characteristics of a poor layer in a flock of hens. (8 marks)
c) Give **seven** harmful effects of liver fluke in sheep rearing. (7 marks)

22.
a) Outline **five** characteristics of a clean milk. (5 marks)
b) Describe Brucellosis disease under the following sub-headings.
i) Causal organism. (1 mark)
ii) Signs of attack. (3 marks)
iii) Control measures. (3 marks)
c) State **eight** advantages of Artificial Insemination (8 marks)

23.
a) Describe **five** structural requirement of a good calf pen. (10 marks)
b) Describe the cycle of a four stroke petrol engine. (10 marks)

Paper 2

SECTION A (30 MARKS)

Answer ALL the questions in this section in the spaces provided.

1. Give **two** reasons for washing the udder with warm water before milking. (1mk)

   ……..……
   ……..
   ……..

2. State **four** pre-disposing factors of scours in calves. (2mks)

   ……
   ……
   ……
   ……
   ……

3. Name the livestock disease associated with deficiency of the following in the diet. $(1\frac{1}{2} mks)$

   a) Iodine…….
   b) Copper……
   c) Manganese…….

4. Name **three** kinds of livestock which can be castrated using a rubber ring. $(1\frac{1}{2} mks)$

   ……
   ……
   ……

5. State **three** disadvantages of natural method of calf rearing. $(1\frac{1}{2} mks)$

   ……
   ……
   ……
   ……

6. Give **four** reasons why proper feeding of livestock is important. (2mks)

   ……
   ……
   ……
   .....

7. State **four** maintenance practices of a jack plane. (2mks)

   ……..……
   ……..……
   ……..……
   ……..……
   ……

8. State **four** control measures of cannibalism in poultry. (2mks)

   ……
   ……
   ……
   ……
   ……

9. State **four** advantages of a four stroke cycle engine. (2mks)

   ……
   ……
   ……
   ……
   ……

10. Give **four** disadvantages of inbreeding in livestock. (2mks)

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11. State **four** practices that should be carried out on wooden fencing posts to make them last long. (2mks)

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……

12. Give **four** physiological body functions used as indicators of ill-health in livestock. (2mks)

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……
……

13. Name **three** dual purpose breeds of sheep. $(1\frac{1}{2} mks)$

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……
……

14. State **four** disadvantages of natural incubation. (2mks)

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……

15. State **four** harmful effects of ticks on livestock. (2mks)

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16. Outline **four** advantages of farm mechanization. (2mks)

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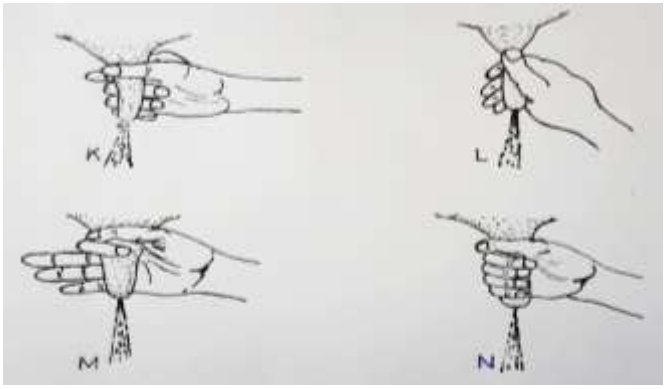
17. Give **two** factors that can lower the quality of concrete. (1mk)

……
……

SECTION B (20 MARKS)

Answer <u>All</u> the questions in this section in the spaces provided.

18. The diagrams K, L, M and N below show four possible ways of drawing milk from the teat of a cow during milking.



a) Which diagram shows the proper way of drawing milk. (1mk)
……

b) How long should it take to milk a cow from the start to the end of milking. (1mk)
……

c) How would a milkman ensure that no milk remains in the udder at the end of milking? (1mk)
……

d) Give **two** practices carried out on milk immediately after milking. (2mks)
……
……
……

19. Describe the procedure for castrating a male piglet using a surgical knife. (5mks)
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……

20. The diagram below shows a livestock parasite.

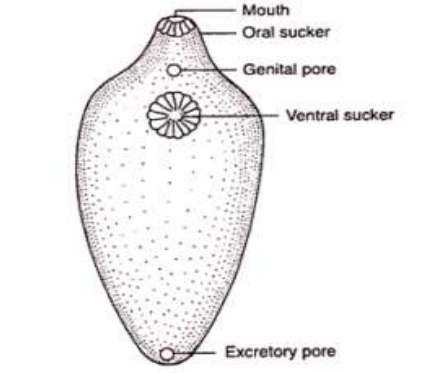


Fig. 8.2: External morphology of Liver-fluke (*Fasciola hepatica*)

a) Identify the parasite. (1mk)
……

b) In which organ in livestock is the parasite found. (1mk)
……

c) Name the intermediate host for the above parasite. (1mk)
……

d) Outline **two** symptoms of attack in livestock by the above parasite. (2mks)
……
……
……

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



a) Identify the tools labelled A and C. (2mks)
A…….
B…….

b) Give **one** advantage of tool B over A. (1mk)
……
……

c) Give **one** advantage of tool C over tool A and B. (1mk)
…….....
.....

d) State **two** maintenance practices of tool C. (2mks)
……
……

SECTION C (40 MARKS)

Answer <u>Any</u> two questions from this section in the spaces provided after question 21.

22. a) Describe short term tractor servicing practices. (10mks)
b) Explain **five** factors influencing milk composition in dairy animals. (10mks)

23. a) Give **six** reasons why embryo transfer use should be encouraged in dairy cattle breeding. (6mks)
b) Explain **ten** measures used to control livestock diseases. (10mks)
c) Outline **four** functions of water in livestock nutrition. (4mks)

24. a) Describe the causes of stress in poultry production. (7mks)
b) State **eight** uses of fences in farms. (8mks)
c) State **five** care and maintenance of a water cooling system of a tractor. (5mks)

PAPER 1

1. Give two ways in which agriculture is termed as an Art (1Mk)

2. State main characteristic of plantation farming (1Mk)

3. State two policies that regulate the amount of imported agricultural goods (2Mks)

4. List four factors that determine the kind of soil formed in an area. (2Mks)

5. State three factors which determine the depth of ploughing. (1½Mks)

6. Outline four advantages of overhead irrigation over surface irrigation. (2Mks)

7. List four pieces of information contained in health record. (2Mks)

8. State two functions of sulphur in plant growth. (1Mk)

9. State two characteristics of potassic fertilizers. (2Mks)

10. a) State two disadvantage of state ownership of land tenure system. (2Mks)

    b) Write down three objectives of settlement and resettlement to Kenya after independence. (3Mks)

11. State four modes of classification of crop pests. (2Mks)

12. State two advantages of strip grazing. (2Mks)

13. Define the following as used in soil conservation. (1Mk)
    a) Solifluction erosion.

    b) List four factors influencing mass wasting. (2Mks)

14. State two damages caused by nematodes on crops. (2Mks)

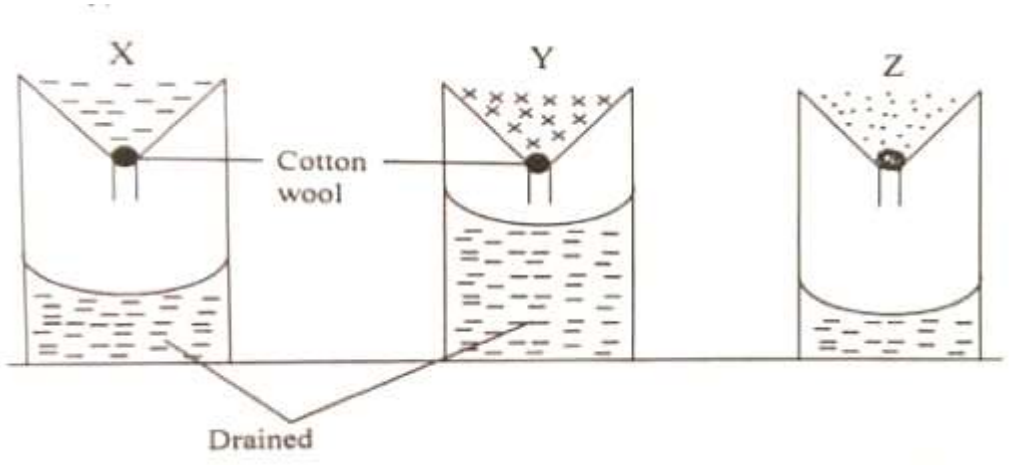
15. List three crop diseases caused by bacteria. (1½ Mk)

SECTION B (20 MARKS)

Answer ALL questions in the space provided in this section.

16. The experiment below was set to compare porosity and water holding capacity of three different types of soils samples.

Sample X Sample Y Sample Z



i) Identify the soil in each of the following funnels labeled (3Mks)

X_____

Y_____

Z_____

ii) Which of the types of soil can be said to have the highest porosity rate? (½Mks)

_____

_____

iii) Give reasons for your answers in (ii) above (½ Mk)

_____

_____

iv) Which type of soil would be suitable for planting paddy rice? (1Mk)

_____

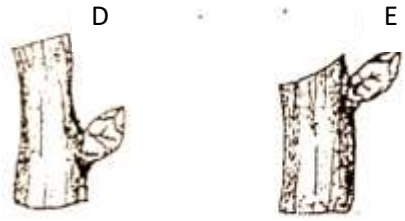
_____

v) Explain your answer in (iv) above (1Mk)

_____

_____

17. The diagram below represents two ways in which a crop was prunned. Study them and answer the questions that follow,



i) Which diagram represented the correct way of pruning (1Mk)

_____

_____

ii) Give a reason for your answer in (i) above (1Mk)

_____

_____

iii) State two ways in which pruning assists in controlling diseases. (2Mks)

_____

_____

_____

_____

c) Outline three reasons for pruning coffee. (3Mks)

_____

_____

_____

_____



_____
_____

18. Below are diagrams of common weeds found in crop field, study them carefully and answer the questions that follows:-

a) Identify the weeds (3Mks)
F_____
G_____
H_____

b) Why is it difficult to control weed labelled F? (1Mk)
_____
_____

c) Classify weed G based on plant morphology and anatomy (1Mk)
_____
_____

d) State importance of weeds labeled G and H (2Mks)
_____
_____

SECTION C (40MARKS)

Answer any TWO questions in this section spaces provided after.

19. a) Describe the effects of diseases on tomatoes in the field (5Mks) b) Describe the procedure of harvesting coffee (4Mks)
c) Explain the precautions observed during harvesting of cotton (4Mks)
d) Explain seven factors that contribute to competitive ability of weeds (7Mks)

20. a) Describe the production of maize for grain production under the following sub-heading
i) Four varieties common in Kenya (2Mks)
ii) Seedbed preparation (3Mks)
iii) Field practices (5Mks)
b) State and explain five cultural methods used to control weeds (5Mks)
c) State five effects of late defoliation of forage crops (5Mks)

21. a) State and explain five ways in which human factors influence agriculture (5Mks)
b) Describe the preparation of compost manure using indore method (pit method) (9Mks)
c) State and explain how soil loses soil fertility. (6Mks)

KABARAK HIGH SCHOOL

PAPER 1
SECTION A (30MARKS)
Answer all the questions in this section in the space provided.

1. Give four advantages of intensive farming. (2mks)
   ……
   ……
   ……
   ……..
2. State four benefits of agroforestry to a maize crop. (2mks)
   ……
   ……
   ……
   ……
3. Name the plant part used for vegetative propagation of each of the following plants.
   (i) Sisal (½ mk)
   ……
   (ii) Pyrethrum (½ mk)
   ……
   (iii) Sweet potatoes (½ mk)
   ……
   (iv) Sugar cane (½ mk)
   ……
4. State four cultural ways of controlling couch grass (2mks)
   ……
   ……
   ……
   ……....
5. Name three sources of underground water (1½mks)
   ……
   ……
   ……
6. State three causes of blossom end of rot in tomatoes (1½mks)
   ……
   ……
   ……
7. Give three qualities of a good green manuring plant (1½mks)
   ……
   ……
   ……....
8. State four reasons for practicing minimum tillage. (2mks)
   ……
   ……
   ……
   ……
9. Name four farm records that should be kept by a poultry farmer. (2mks)
   ……
   ……
   ……
   ……
10. Give three ways in which pastures are classified (1½mks)

……
……
……

11. State four ways in which land reforms can be implemented in Kenya. (2mks)
……
……
……
……

12. State four factors that determine the stage at which a crop is harvested. (2mks)
……
……
……
……

13. Give four beneficial effects of weeds to a farmer. (2mks)
……
……
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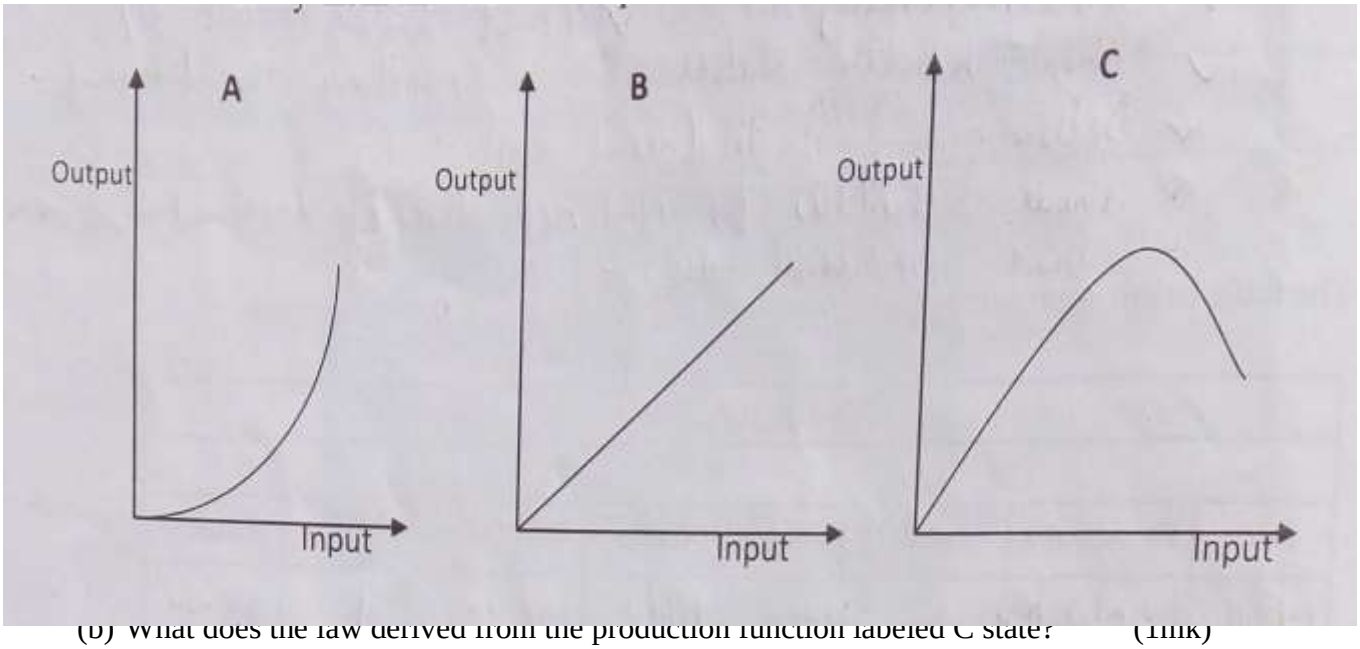
14. Give four advantages of practicing crop rotation. (2mks)
……
……
……
……
……

15. Name four methods of controlling pests. (2mks)
16. Distinguish between intensive hedgerow and border planting forms of agroforestry (2mk)

SECTION B (20 MARKS)

Answer all the questions in this section in the spaces provided.

17. The following illustrations show different production function curves in agricultural economics. Study them and answer the questions which follows;



(b) What does the law derived from the production function labeled C state? (1mk)
……

(c)

(i) Which one of the three production functions curves is rare in Agriculture (1mk)
……..

(ii) Give a reason for your answer in (i) above (1mk)

……..

18. The table below shows the population and gross domestic products of countries A and B

Country	**Gross Domestic product (million Ksh)**	**Population (million)**
A	1800	36
B	1200	15

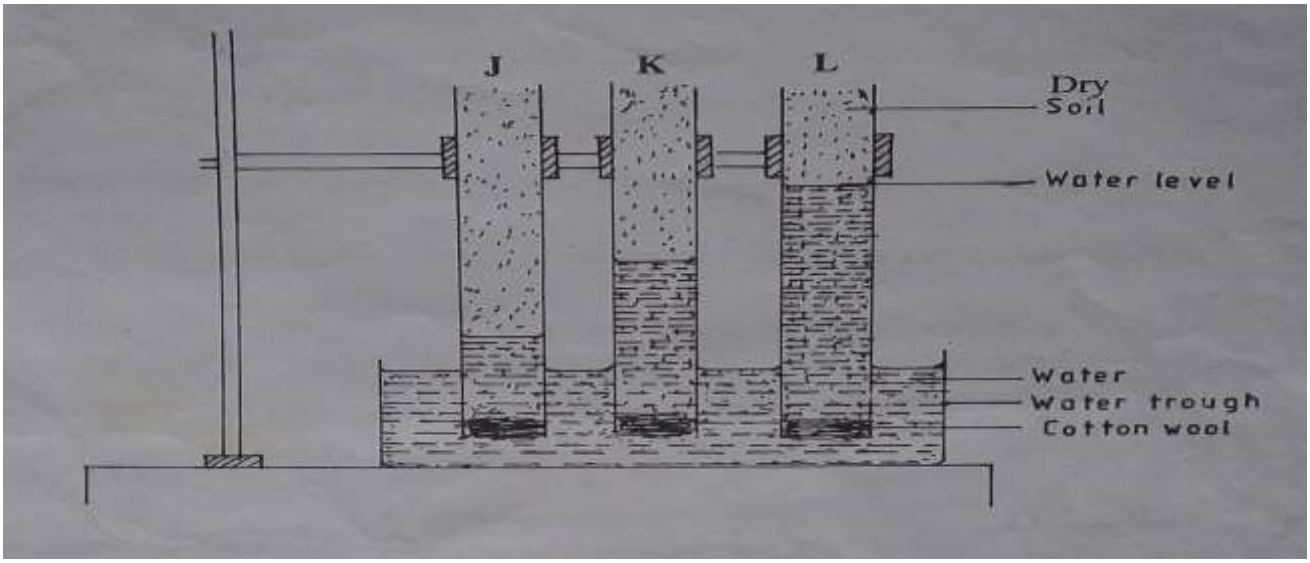
(a) Calculate the per capita income for each country show your working (2mks)
……
……
……
……...…….

(b) Which of the two countries is more developed economically (1mk)
……..……..

(c) Give a reason for your answer in (b) above (1mk)
……
……

(d) How can agriculture increase the gross domestic product of a country (1mk)
……
……..…….

19. The diagram below illustrate investigation on a property of soil using soil samples labeled J, K and L.



…….
…….
……..

(c) Which soil sample would be suitable for growing paddy rice? (1mk)
……..……

(d) Give a reason for your answer in (c) above (1mk)
……..

20. The following is a list of nutrients: copper, calcium, nitrogen, molybodenum, zinc, phosphorus, carbon, sulphur, iron and magnesium. Which of the above nutrients are;

(a) Macro – nutrients (1mk)
……..

(b) Micro – nutrient (1mk)
……..

(c) Fertilizer elements (1mk)
……..

(d) Liming elements (1mk)

…….

(e) Primary macro nutrients (1mk)

……

SECTION C

Answer any two questions in this section in the spaces provided after question.

21.

(a) Explain five functions of a live fence in a farm. (5mks)

(b) Describe various risks and uncertainties in crop farming (10mks)

(c) State five functions of young farmers clubs in Kenya (5mks)

22.

(a) Explain five factors that should be considered in farm planning (10mks)

(b) Explain the different ways in which each of the following environmental factors influence crop production.

(i) Wind (5mks)

(ii) Temperature (5mks)

23.

(a) Outline the information contained in a purchase order. (5mks)

(b) Describe the harvesting of tea (7mks)

(c) Explain the cultural methods of controlling soil erosion (8mks)

PAPER 2

SECTION A (30MARKS)

Answer all the questions in this section.

1. State two reasons of using farm tools and equipment in the farm. (2mks)

……..

……..

……..

2. State three reasons that would make a farmer opt to rear indigenous cattle breeds instead of exotic cattle breeds. (1 ½ mks)

……..

……..

……..

……..

3. State three characteristics of Bacterian type of camel. (1 ½ mks)

……..

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4. Name four factors that influence the pulse rate of an animal. (2mks)

……..

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5. State three signs of attack by endoparasites a farmer can observe. (1 ½ mks)

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6. State four factors that determine the amount of food given to an animal. (2mks)

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……..

7. Name three reasons that would make a farmer use a machakos dip instead of a plunge dip to control ticks. (1 ½ mks)

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……..
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……..

8. State four factors considered when selecting construction materials. (2mks)

……..
……..
……..
……..
……..

9. Name three methods a farmer can use when selecting livestock for breeding. (1 ½ mks)

……..
……..
……..
……..

10. Mention three signs of heat in a doe. (1 ½ mks)

……..
……..
……..
……..

11. Mention four reasons that would make a farmer carry out identification to his herd. (2mks)

……..
……..
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12. State two diseases that commonly affect bees in bee farming. (2mks)

……..
……..

13. State four methods a farmer can use when preserving fish after harvesting. (2mks)

……..
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……..

14. State four factors that determine the choice of poultry rearing system that a farmer chooses to use. (2mks)

15. State one significance of mobile calf pen in calf rearing. (1mk)

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……..

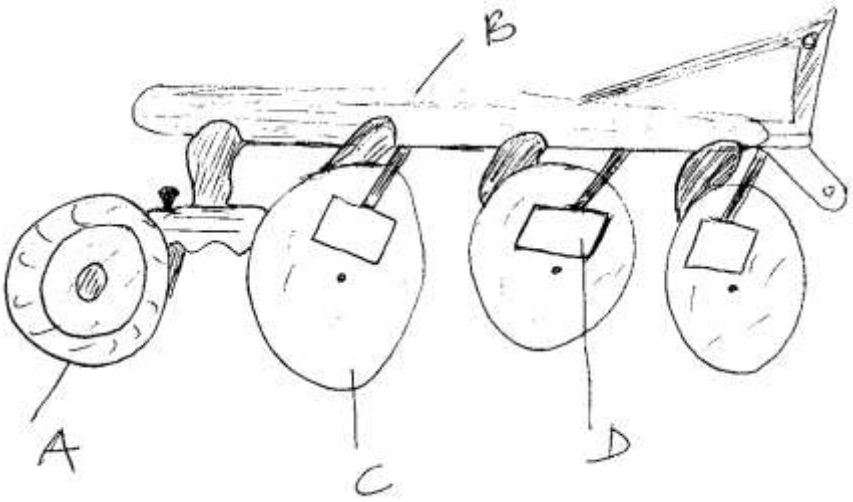
16. State two disadvantages of a two stroke engine. (1mk)
17. State two factors that could cause sudden stopping of a tractor engine. (1mk)
18. State four disadvantages of animal drawn implements over tractor drawn implements. (2mks)

SECTION B (20MARKS)

Answer all questions in this section.

FOR MARKING SCHEMES INBOX 0724351706

19. The diagram below shows a tractor drawn implement. Study it and answer the questions that follow.



a) Name the parts A, B, C and D. (4mks)

……..
……..
……..
……..

b) State two advantages of using the above implement over mould- board plough. (2mks)

……..
……..
……..

c) State the function of the parts labeled. (2mks)

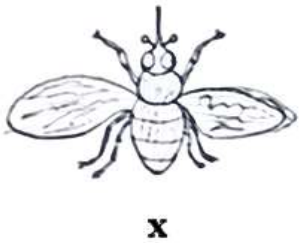
i) A

……..

ii) D

……..

20. The diagram below shows livestock parasites. Study the diagrams and answer the questions that follow.



X



Y

a) Identify the parasites X and Y above. (2mks).
b) State two effects that are caused by the parasite labeled X on the animal's body. (2mks)
c) Name one disease transmitted by parasite labeled X above. (1mk)
d) State three measures taken to control the parasite labeled Y above. (3mks)

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



a) Identify the livestock equipment marked E above. (1mk)
b) State two reasons that make branding be discouraged as a method of livestock identification.

(1mk)

SECTION C (40 MARKS)

Answer any two questions.

22. a) State five factors that predispose livestock to diseases. (10mks)

b) State and explain five factors a farmer will consider when siting beehives in the farm. (10mks)

23. a) Briefly state and explain five equipment a farmer will need when milking and state their uses.

(10mks)

b) Explain five factors to consider when selecting a breeding stock. (10mks)

24. a) State and explain four materials collected by bees. (8mks)

b) State and explain the use of four equipments a honey harvester would require to have when harvesting honey. (8mks)

c) List four main reasons that make fish farming popular. (4mks)

PAPER 1

Section A- 30 Marks; Answer all the questions in this section in the spaces provided

1 .Outline **four** activities that enable agriculture to be classified as a science (2mk)

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……

2. State **four** characteristic of a good site for a nursery bed (2 mks)

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……

3. Give **four** reasons for intercropping (2 mks)

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4. Give **four** reasons why burning of land is discouraged (2 mks)

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……
……

5. State **four** advantages of using certified seeds (2 mks)

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6. List **four** characteristics of extensive farming system (2mk)

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7. State **four** positive effects of wind in crop production (2mk)

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8. State **four** benefits of adding organic manure to an acidic soil (2mk)

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9. State **four** factors that determine the stage at which a crop is harvested. (2mk)
10. State f**our** advantages of applying lime as a measure of improving soil condition (2 mks)
11. State four factors that influence the number of secondary cultivation in seedbed preparation (2 mks)

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12 State **four** negative effects of burning as a method of bush clearing (2mk)

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13. State **four** disadvantages of minimum tillage (2mk)

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14. State **four** factors that increase seed rate in crop production (2mk)

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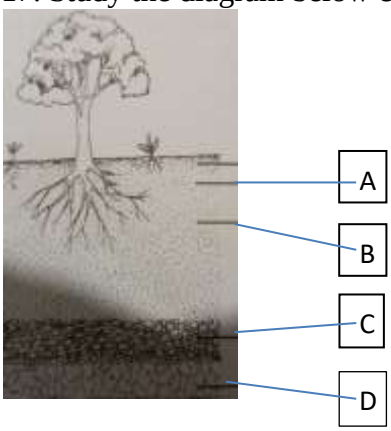
15. State **two** conditions when opportunity cost exists (1mk)

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……
……

16 Differentiate between **nitrogen fixation and phosphorus fixation** as used in agriculture (2mk)

SECTION B-20 MARKS; Answer all questions in this section.

17. Study the diagram below carefully and answer the questions that follow.

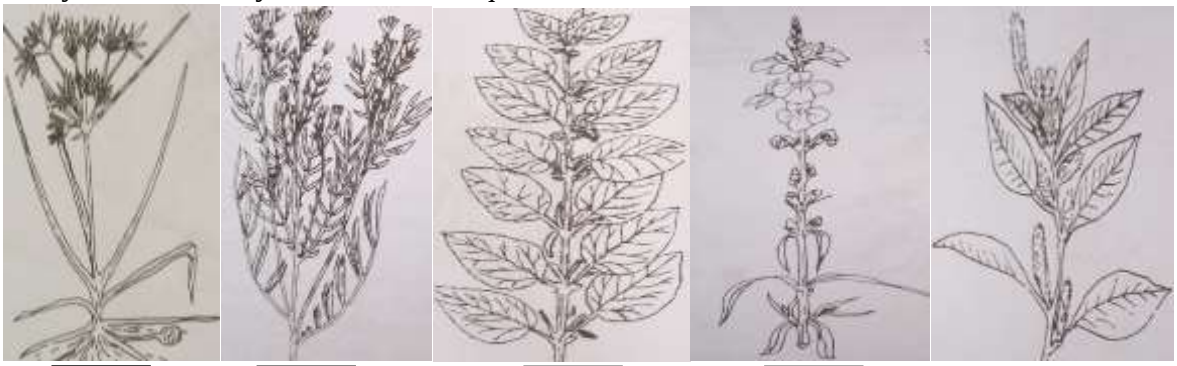


Name the layers labelled A, B, C and D (2 marks)

State four significance of layer labelled A (2 marks)
State how layer B can be improved for better crop production. (1 marks)

……
……
……

18. The diagrams below illustrate common weeds found in cultivated crop fields.
Study them carefully and answer the questions that follow.



F G H I J

i)Name the weeds labelled F, G and H (1 ½ marks)
F- ……
G-……
H-……...

i. State one reason that makes weed F difficult to control (1 mark)
……
……
……

ii. State the one economic importance of each of the weeds (1 ½ marks)
G-
……
……
H-
……
……
J-……

……
State two cultural methods for controlling weed I (1 mark)
……
……
……
……
…….

19. The diagrams below show two types of irrigation please insert type

A



B



a) Name the type of irrigation illustrated (2mks)

A……B……

……

b) State two conditions that promote the use of the type of irrigation illustrated in A (2mks)

c) List two disadvantages of using method A of irrigation over method B (2mks)

……

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……

……

d) Name two other types of irrigation other than those shown above (2mk)

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20. The proprietors of Mareira farm made the following transactions in the year 2020;
Purchase of feeds-2000,Purchase of seeds-1000,Purchase 0f fertilizers -1300,Fuel-1500,Disc plough100, 000,Sale of cabbages-35000,Sale of wheat-40000,Sale of milk-10000,Opening valuation was 120000,Closing valuation was 160000 andDebt receivable of 6000 for firewood delivered to a neighbouring farm.
Using the above information, prepare a profit and loss account for the farm for the year ending December 2020.

Did the farm make a profit or a loss (1 Mark)

SECTION C -40 Marks; Answer any Two Questions in this Section

21. (a) State **five** disadvantages of communal land tenure system answer (5 mks)

(b) State and explain **five** methods of drainage in agricultural land (10mks)

(c) Explain **five** factors considered in a crop rotation program (5mks)

22. (a) State and explain **five** Importance of agriculture in Kenyan economy (10mks)

(b) Describe the agronomic production of tomatoes under the following subheadings;

i) Transplanting of tomato seedlings. (10mks)

ii) Field management practices (5 marks)

……

iii) Describe **five** ways in which biotic factors influence agricultural production (5mks)

23. a)State **five** importance of budgeting in a farming enterprise (5 marks)

b) State **five** ways through which farmers adjust to risks and uncertainties (5 marks)

c) State **five** ways in which labour productivity can be improved in the farm (5 marks)

d)State **five** importance of a title deed to a farmer (5 marks)

PAPER 2

SECTION A(30MARKS) ANSWER ALL THE QUESTIONS .

Q1. State **four** functions of water in the body of livestock animals. **(2marks)**

.....

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.....

.....

Q2. Differentiate between essential and non-essential amino acids. **(1marks)**

.....

.....

Q3. Give **two** reasons for turning eggs regularly during incubation? **(1mk)**

.....
.....

Q4. Name **two** functions of the crop in the digestive system of chicken. **(1mk)**

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.....

Q5. State **four** factors considered when computing a livestock ration. **(2marks)**

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Q6. Why is raddling essential in sheep management? **(1mark)**

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.....

Q7. State **four** advantages of battery cage system of poultry rearing. **(2marks)**

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.....

Q8. Give a reason why the animal should not be released to the pasture when freshly sprayed with accaricide wash. **(1mk)**

.....
.....

Q9. Name **two** major methods of administrating drugs to livestock. **(1mark)**

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.....

Q10. Outline **four** methods used to handle livestock. **(2marks)**

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.....
.....

Q.11. State two ways in which good nutrition help to control diseases in livestock.***(1mark)***

.....
.....

Q.12.Give **two** reasons for flushing in sheep. ***(1mk)***

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.....
.....

Q.13. Give **three** factors that affect the quality of honey. ***(1 ½ mark)***

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.....

Q.14. State **three** conditions that make a cow to withhold milk during milking***.(1 ½ marks)***

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.....

Q.15.Name the most appropriate tools used in the following operations. ***(2marks)***

i. Removing metal chipping on a file.-.....
ii. Cutting wood along the grain.....
iii. Branding.....
iv. Detaching honey combs during honey harvesting.....….

Q.16.State **four** causes of infertility in cows. **(2marks)**

Q.17. List **four** maintenance practices carried out on a disc plough. **(2marks)**

Q. 18. a) Name a protozoan disease that is not transmitted by a vector**.** ***(½ marks)***

.....

b) Name one vector that transmits each of the following diseases. ***(1mark)***

i. Anaplasmosis-**.....**

ii. East coast fever-**.....**

c) Define the term quarantine as used in livestock production. **($^{1}/_{2}$ marks)**

.....

d) What is the effect of petroleum jelly smeared on combs and wattles of birds? ***(1mark)***

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Q.19. List down **four** short term services practices done on a tractor**.** ***(2marks)***

.....

.....

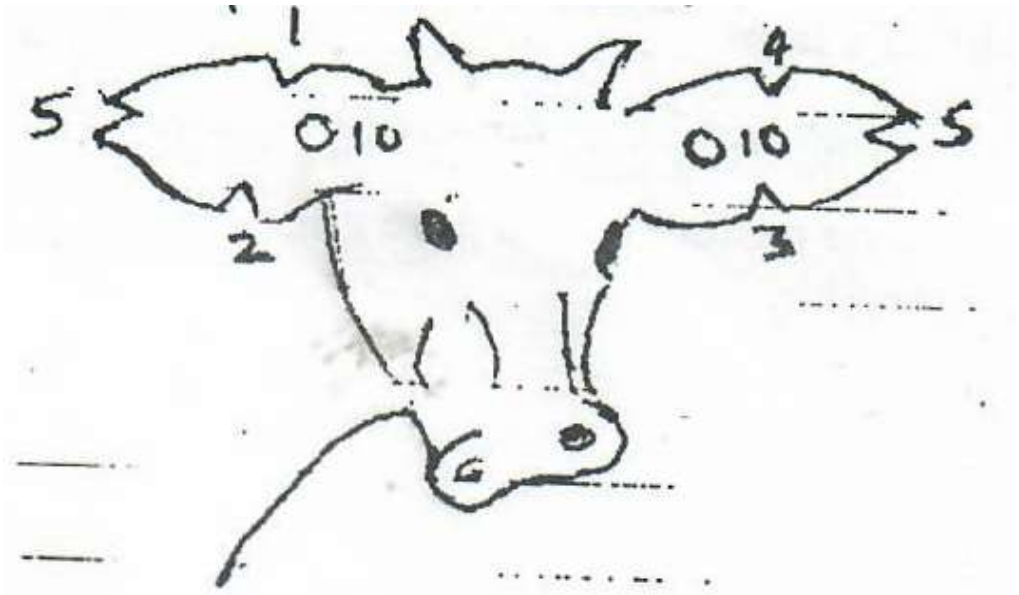
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SECTION B(ANSWER ALL QUESTIONS IN THIS SECTION)

Q. 20 .The diagram illustrates a method of identification in livestock.



a) Name the type of identification illustrated on the diagram. **(1mk)**

.....

.....

b) Give the identification number of the animal illustrated on the diagram. (**1mk)**

c) using diagram, illustrate how you can identify animal numbers 36 and 24.(**2mks)**

Animal No.24	**Animal No. 36**

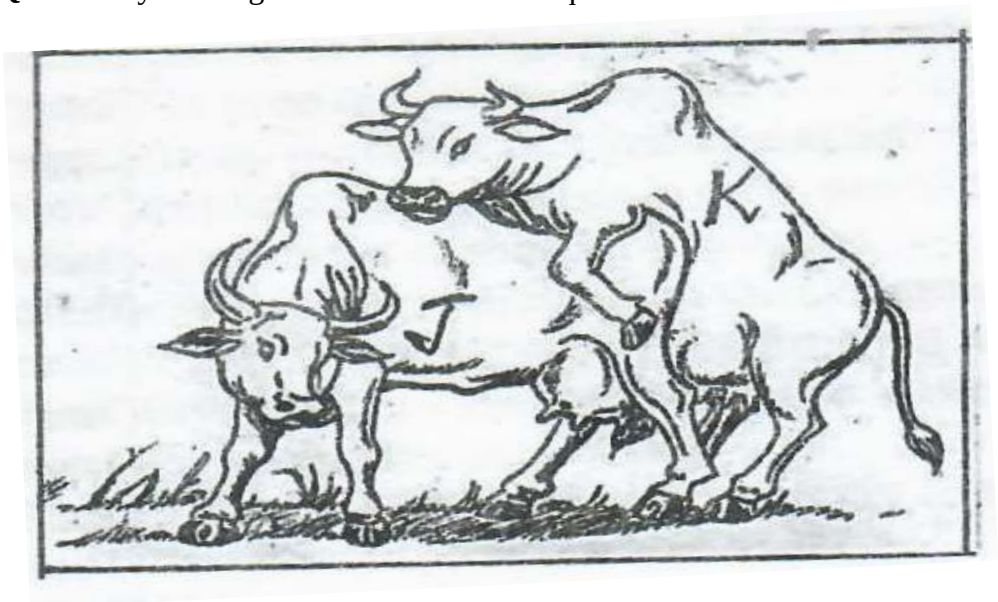
d) Apart from this method of identification, give t**wo other** methods used in livestock to achieve the same purpose.

.....

.....

.....

Q.21. Study the diagram below and answer questions that follow.



a) Which of the above cows shows the signs of heat. **(1mark)**

.....

.....

b) Give **one** reason to confirm your answer (a) above. **(1mark)**

.....

.....

.....

c) State **two** benefits of natural mating system. (**2marks)**

.....

.....

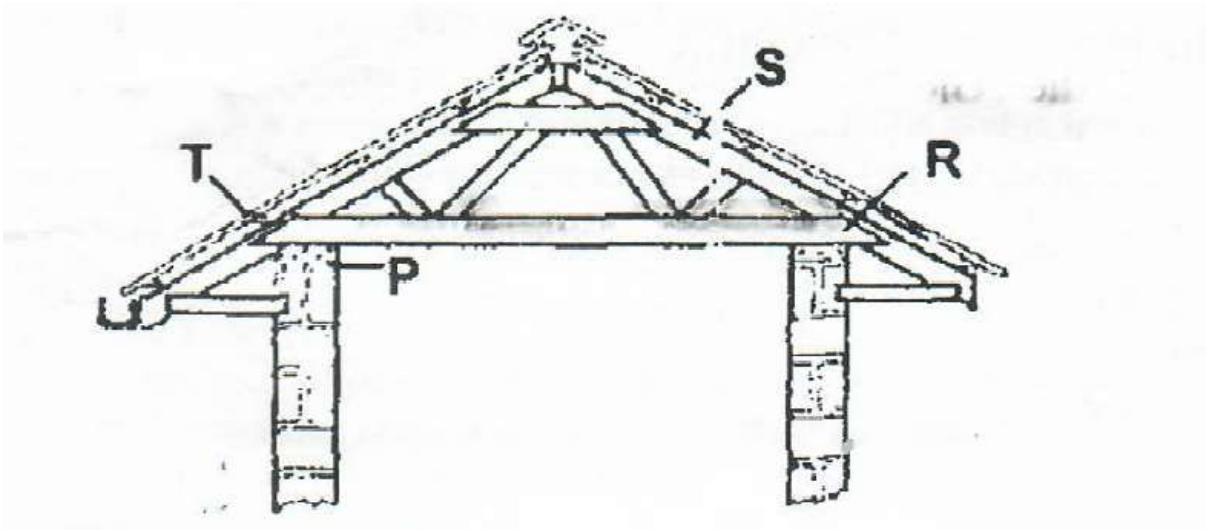
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d) Name a disease that is easily spread by this method of mating. **(1mark)**

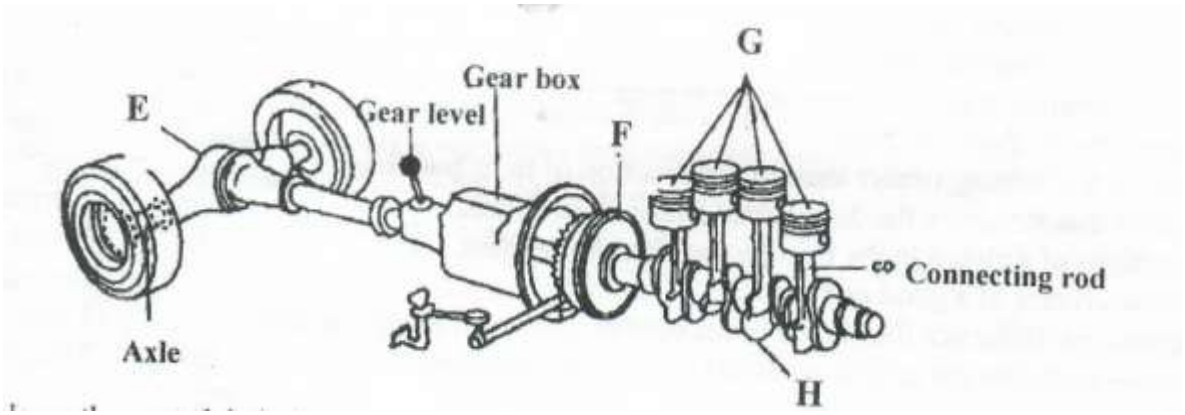
.....

Q.22. The following diagram shows a part of a roof. Study it carefully and answer the questions that follow.



a) Name the parts labelled P, T, R and S. **(2marks)**
b) State the functions of P and T. **(2marks)**
c) Give **two** chemical preservatives for treating timber before use in the construction of farm structures

Q.23. Below is a diagram of power transmission system of a tractor engine study it and answer the questions that follow.



a) Name the parts labeled E, F, G and H. ***(2marks)***
b) State the function of E and H.
E-**.....**
H-**.....**
c) State **two** precautions when handling farm tools and equipment ***(2marks)***

SECTION C -40 MARKS; ANSWER ANY TWO QUESTION IN THIS SECTION

Q24. a) Describe the life cycle of a three host tick. **(8mks)**
b) Give **three** tools used in construction of a wooden fence stating the use of each.**(3mks)**
c) State **five** management practices done on an incubator. (**5mks)**
d) State **four** factors that should be considered when selecting dairy goat for breeding**.(4mks)**
Q25.a) Explain **any four** factors considered in siting farm buildings and structures**.** ***(8marks)***b) Discuss foot-rot disease under the following sub-headings.
i. Predisposing factors **(5marks)**
ii. Symptoms **(3marks)**
iii. Control **(4marks)**
Q26.a) Give **four** functions of a cooling system in a tractor engine. **(4marks)**
b) Describe **five** management practices carried out on piglets immediately after birth**. (5marks)**
c) Explain **five** factors that affect digestibility of feed in livestock **(5marks)**
d) List **six** limitation of animal power as compared to tractor power. **(6marks)**

PAPER 1

1. Give two positive effects of wind in agriculture. 1mk

2. Give a reason why nitrogenous fertilizers should be applied on a wet soil; 1mk

3. State two reasons for drying grains before storage. 1mk

4. State three disadvantages of planting seeds using broadcasting method. 1 ½ mks

5. Differentiate between apiculture and aquaculture. 1mk

6. State two excellent adaptations of weeds to their environment. 1mk

7. Give three reasons as to why earthing up is done in crop production. 1 ½ mks

8. Name four roles played by trees in soil and water conservation. 2mks

9. List three methods applied in clearing land before ploughing. 1 ½ mks

10. State three advantages of using tissue culture in crop production. 1 ½ mks

11. State three factors which influence the efficiency of pesticides. 1/ ½ mks

12. Give four disadvantages of land fragmentation in farming. 2mks

13. List three characteristics that should be met by plants to be used for green manure making. 1 ½ mks

14. State three disadvantages of metallic water pipes. 1 ½ mks

15. Name two ways through which overhead irrigation is carried out in the farm. 1mk

16. Name three diseases that attack tomato plants. 1 ½ mks

17. State three benefits of large scale farming. 1 ½ mks

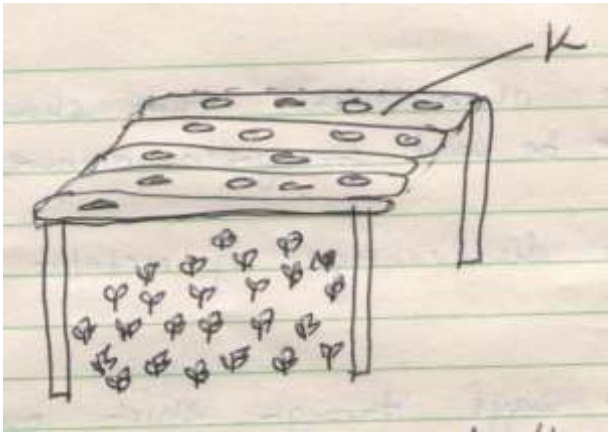
18. List four farm records kept by a dairy cattle farmer. 2mks

19. State three reasons why burning of vegetation is not recommended during land preparation. 3mks

20. Give three conditions that limit the use of mulch in crop production. 1 ½ mks

SECTION B 20 MARKS

21. Below is a diagram of a nursery for raising tomato seedlings.

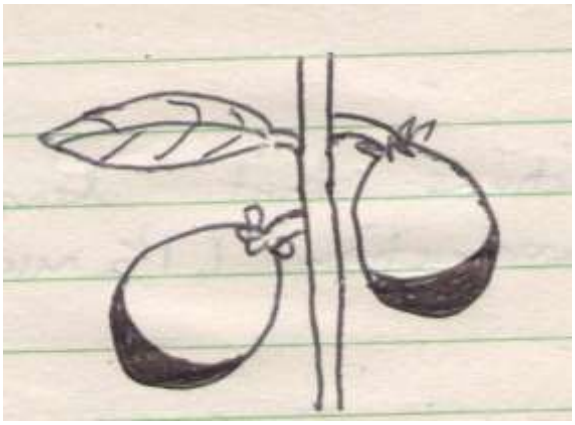


i. Name the part labeled K. 1mk

ii. State two advantages of part labelled K. 2mks

iii. Give three management practices that should be carried on the nursery from the time seedlings emerge to the stage of transplanting. 3mks

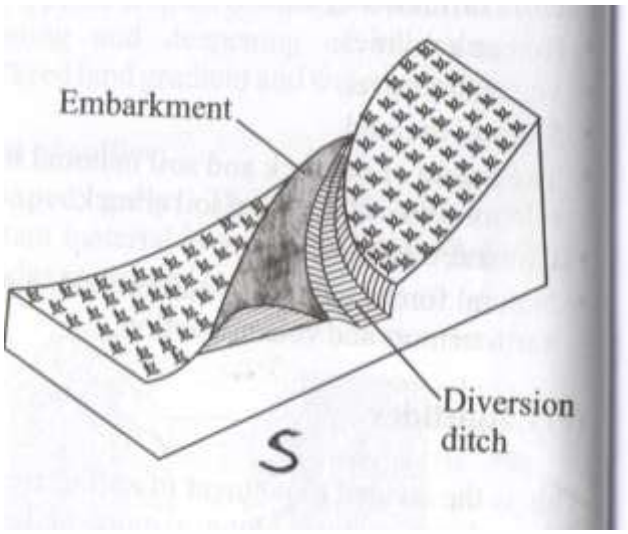
22. The diagram below shows a physiological condition in tomatoes. Use it to answer the questions that follow.

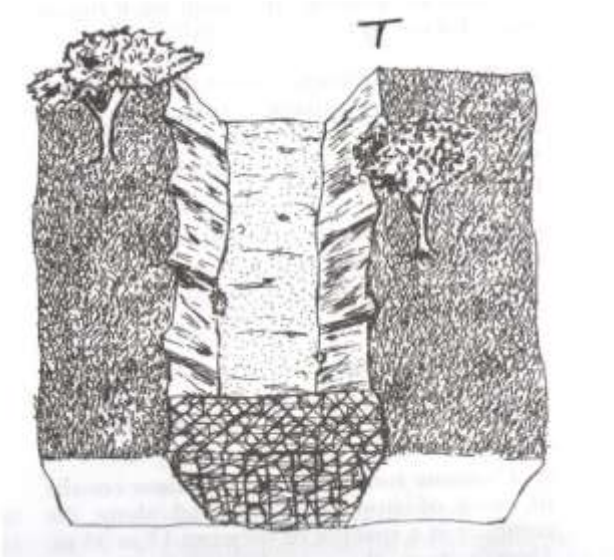


a. Identify the condition. 1mk

b. Give three causes of the condition identified in (a). 3mks

23. The illustrations labelled S and T below show some structural methods used in soil and water conservation.





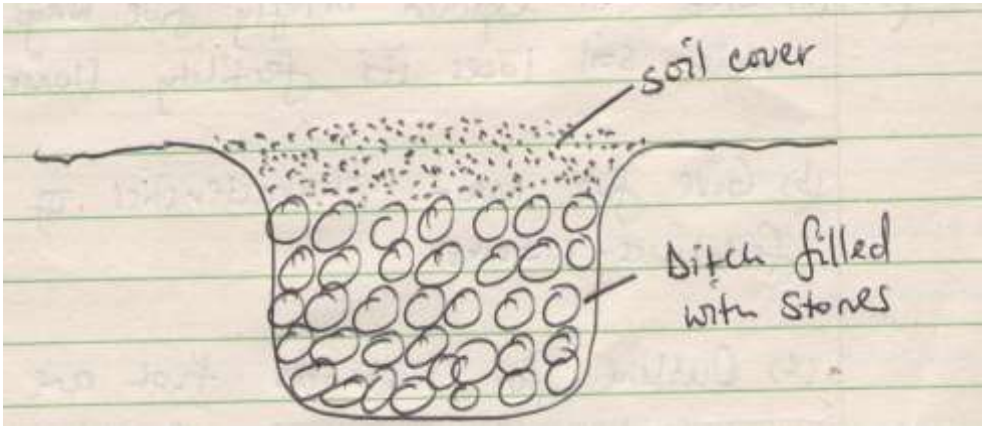
i. Identify the structures S and T. 1mk

ii. State the function of the embarkment in the diagram S. 1mk

iii. State two ways in which structure T help to control soil erosion. 1mk

iv. State four methods of harvesting water on the farms. 2mks

24. The diagram below shows a method of drainage. Study it and answer the questions that follow.



a. Identify the method of drainage shown above. 1mk

b. Other than the method shown in (a, list four other methods used in draining farmland. 2mks
c. Outline four reasons for draining farmland. 2mks

SECTION C - ANSWER ANY TWO QUESTIONS FROM THIS SECION. 40 MARKS

25.a) Discuss maize production under the following sub heading.
i. Seedbed preparation . 3mks

ii. Planting of maize

iii. Field management practices. 6mks

iv. Preparation of maize before storage. 2mks

b. Discuss three methods used to treat seeds in order to break seed dormancy. 6mks

26.a) State and explain briefly five ways through which soil loses its fertility. 10mks

b. Give five main characteristics of nitrogenous fertilizers. 5mks

c. Outline five methods that are used in application of inorganic fertilizer. 5mks

27.a) Discuss the advantages of land consolidation and registration. 8mks

b. Discuss the cultural methods of pest control in crops. 12mks

PAPER 2

SECTION A

1. State four advantages of using artificial incubation when hatching chicks 2mk)
2. State four reasons why livestock should be weighed at weaning stage. 2mk)
3. Outline four factors that affect the digestibility of a feed 2mk)
4. A) Give three practices that can be carried out on wooden fences to make them durable. 1 ½)

   b) Outline three disadvantages of using hedges on the farm. 1 ½)
5. List four safety precautions which should be considered when using farm tools 2mk)
6. Outline four factors that lower the quality of concrete. 2mk)
7. State four factors that would accelerate depreciation of farm machinery. 2mk)
8. Give four products of microbial digestion in the rumen of cattle 2mk)
9. State four factors a farmer should consider when selecting gilt for breeding. 2mjk)
10. Name the breeding system involved in each of the following cases.
    a) A Friesian sire from Kenya mated with a Friesian dam from Holland. 1mk)

    b) A Z ebu sire (father) mated with a Zebu daughter. 1mk)
11. Give the functions of the following hormones in livestock.
    (a) Oxytocin 1mk)

    (b) Stilbesterol 1mk)
12. State four advantages of a spray race over a plunge dip. 2mk)
13. The dressed weight of a beef animal is 450kg and its kill out percentage is 75. Calculate its live weight. 2mk)
14. Give the meaning of the following terms as used in livestock management. 11/2mk)
    (a) Bullock

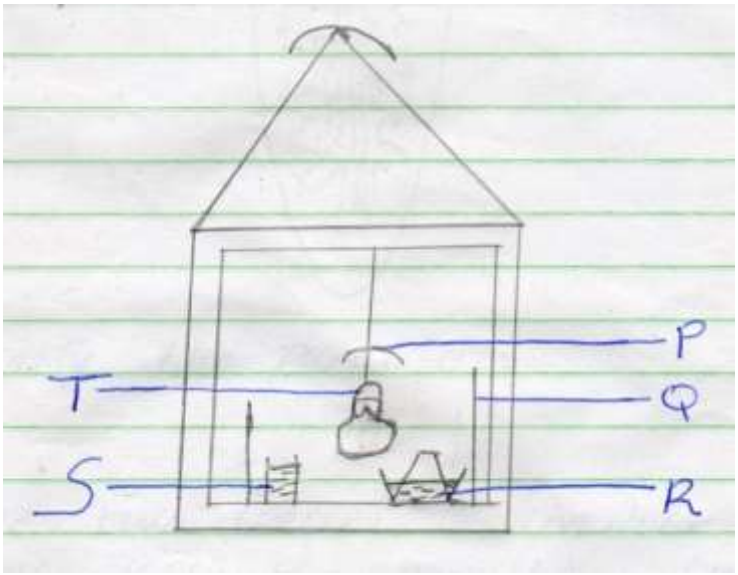
    (b) Pullet

    (c) Sow
15. State three reasons why steaming up is done in dairy cattle. 1 1/2mk

SECTION B

Answer all the questions in the space provided.

16. The diagram below shows a cross section of brooder. Use it to answer the questions that follows



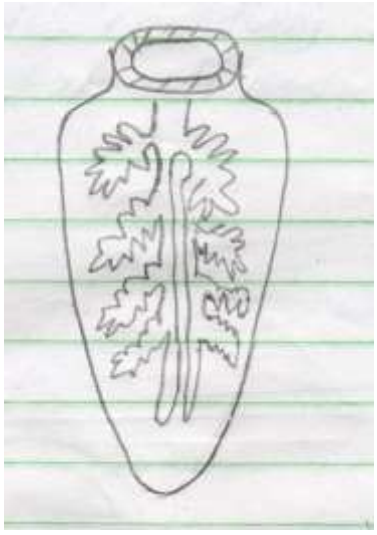
a. Identify the parts labeled P,Q , R, S and T. 2MK)

b. What is the purpose of the part labeled Q . 1mk)

c. State two ways by which temperature in the brooder may be raised. 1mk)

d. Name any material that would be suitable for use as litter in the brooder. (1/2 mk)

17. The diagram below shows a livestock parasite.



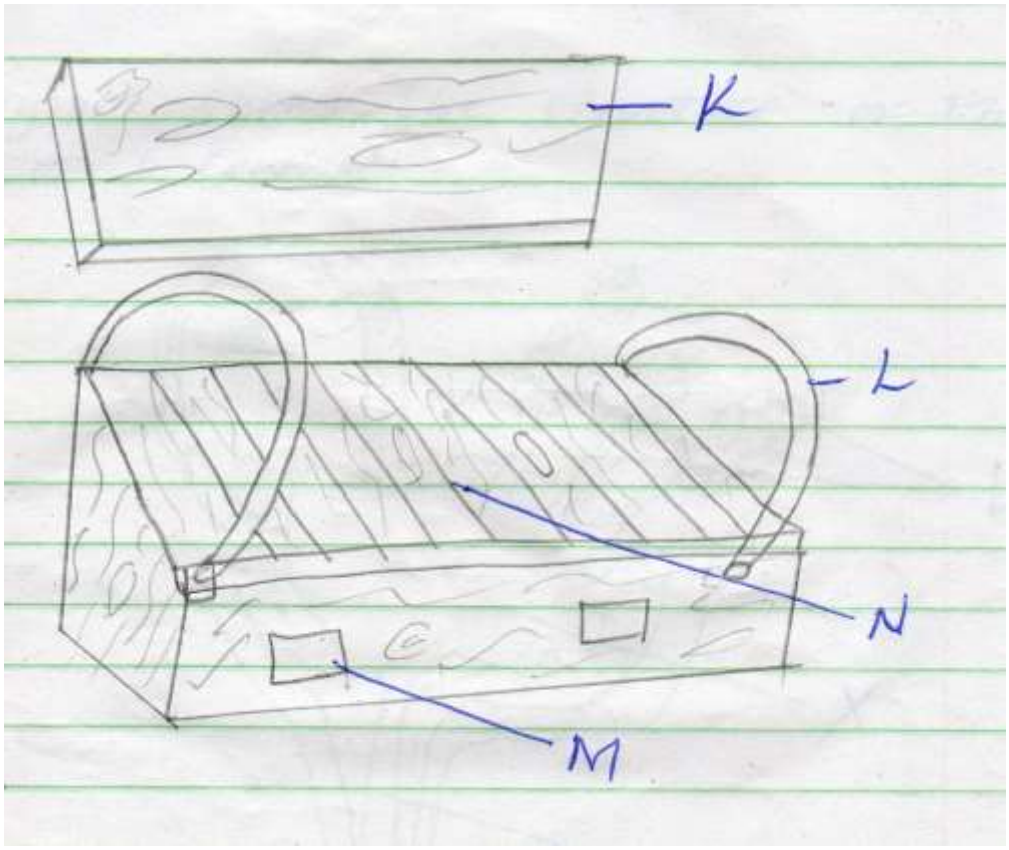
(a) Identify the parasite 1mk)

(b) Name the species of livestock commonly attacked by the parasite. 1mk)

(c) In which organ in the parasite found. 1mk)

(d) Give four symptoms of attack in livestock by the above parasite. 2mk)

18. The diagram below shows a Kenya top bar hive. Study it carefully and answer the questions that follow.



a) Identify the parts labelled L and M.1mk)

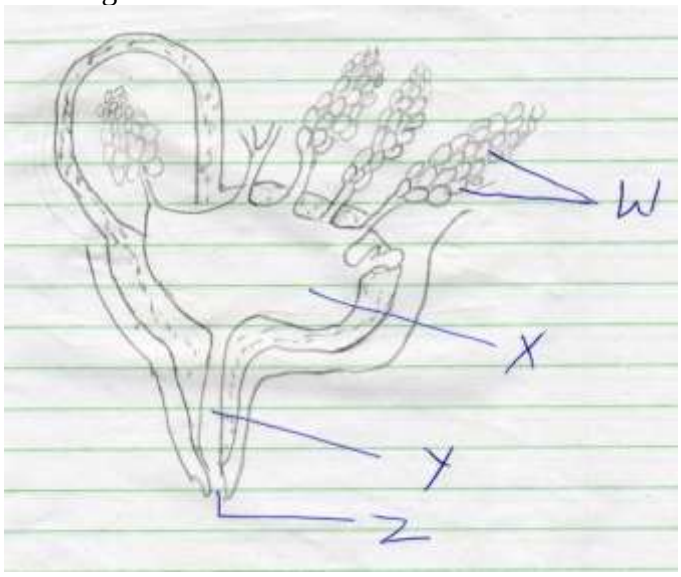
b) State the functions of the parts labelled K, L and N 1 ½mk)

c) Name the tool used to detach honey combs from the hive during honey harvesting. 1/2mk)

d) State two maintenance practices carried out on the hive. 1mk)

e) How can Bees be made to colonize a new hive? 1mk)

19. The diagram shows the structure of the udder of a cow.



a. Name the parts labelled W, X, Y and Z. 2MK)

b. What is milk let down. 1mk)

c. Name two hormones that control milk let down in a dairy cow. 1mk)

d. What is dry cow therapy? 1mk)

SECTION C

Answer all the questions in the space provided.

20. a) Described the use of the various tools required in the construction of a rabbit hutch. 10mk)

b) Describe the advantages of battery cage system of rearing layers. 10mk)

21. a) Outline the methods used to control internal parasites in livestock. 7mk)

b) Discuss contagious abortion (brucellosis) under the following sub headings

i. Animal species attacked. 2mk)

ii. Mode of trans mission 3mk)

iii. Symptoms 4mk)

iv. Control measures.

22. A)Explain the process of egg formation in the reproductive system of poultry. 10 mk

b)describe the maintenance practices carried out on a tractor before it is put to daily use. 10mk)

ALLIANCE GIRLS HIGH SCHOOL

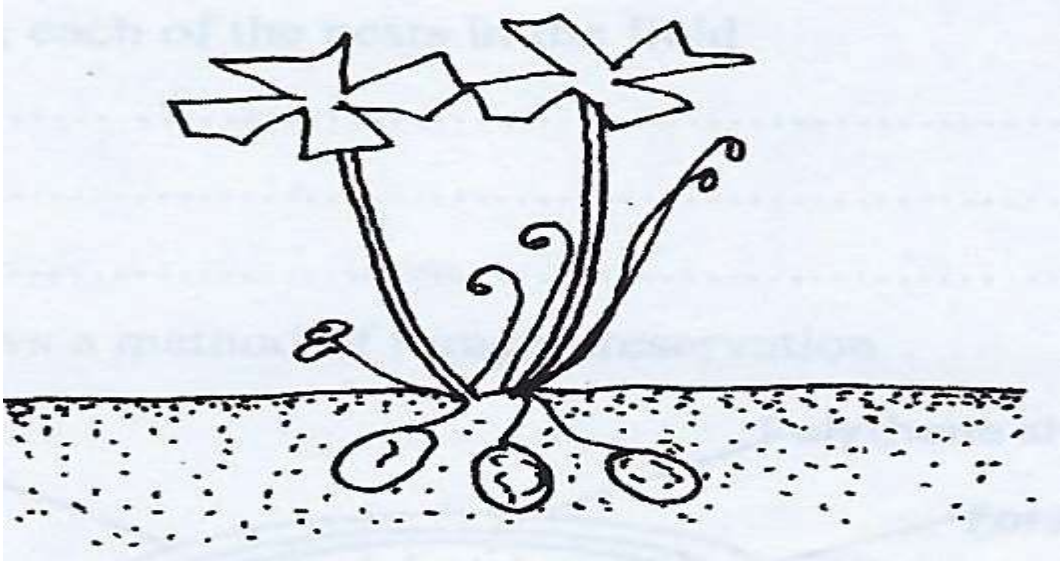
PAPER 1
SECTION A (30 MARKS)
Answer all questions in this section in the spaces provided.

1, State four factors determining farming systems (2 marks)
2. State four advantages of extensive farming system. (2 marks)
3. State four importance of optimum temperature in crop production. (2 marks)
4(a) Name three physical properties of the soil. (1 ½ marks)
b) State three importance of soil structure on production. (1 ½ marks)
c) State four reasons why burning of vegetation as a method of land clearing is discouraged. (2 marks)
5(a) State three factors influencing depth of cultivation. (1 ½ marks)
b)i) What do you understand by the term sub-soiling. (½ marks)
ii) State two reasons for sub-soiling (1 mark)
6. State four features of a productive soil. (2 marks)
7(a) State two deficiency symptoms of iron in crop production. (1 mark)
b) Name two roles played by iron in crop production. (1 mark)
8. State four advantages of using inorganic fertilizers over organic fertilizers. (2 marks)
9(a) Name four sites to avoid when carrying out soil sampling. (2 marks)
b) State four advantages of using vegetative materials for planting. (2 marks)
10. Complete the table below (2 marks)

Plant part used for vegetative propagation material	Crop plant
1.Splits	
2.Bulbils	
3. Suckers	
4.Crowns	

11. (i) State four advantages of using certified seeds in crop production. (2 marks)

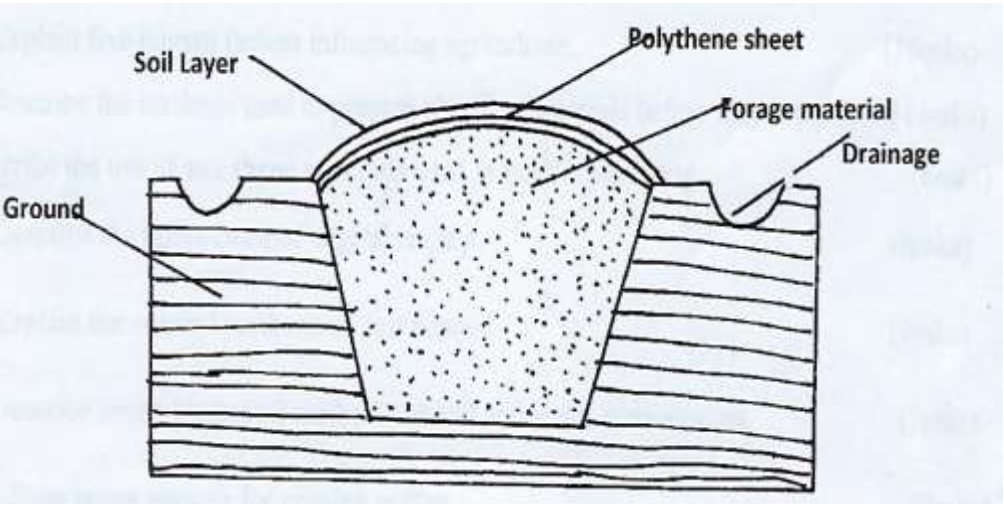
SECTION B (20 marks)
12. Study the diagram below carefully and answer the questions that follows.



(a)Identify the weed above. (1 mark)
b) State two factors which contributes to the competitive ability of the above weed. (2 marks)
c) State two harmful affects of the weed named in (a) above. (2 marks)
d) Name one basis in which weed above is classified (1 mark)
13. Two maize pests are shown in the diagram below. Study them and answer the questions that follow.



a) Identify the pests in the diagrams labelled X and Y. (2 marks)
b).At what stage of maize production does each pest damage the crop. (2 marks)
c). Give two ways of controlling each of the pests in the field. (2 marks)
14. (a) The diagram below shows a method of forage preservation. (1 mark)



a.), Identify the structure above. (1 mark)
(b).State the form in which the forage is preserved as illustrated above. (1 mark)
(c), Name two other method of forage preservation apart from above. (2 marks)
15.(i) Define the following terms as used in agroforestry
a) coppicing (1 mark)
b).Pollarding (1 mark)
ii). Name any two forms of agroforestry (2 marks)

SECTION C. 40 MARKS

Answer any two questions from this section in the spaces provided after question 15.

16a) Explain five human factors influencing agriculture. (10 marks)
b). Describe the methods used to prepare planting materials before they are planted. (4 marks)
c) Describe the use of any three materials used in budding/grafting. (6 marks)

17a) Describe the importance of vegetable crop. (6 marks)
(b).Explain the cultural methods of pest control. (7 marks)
(c). Describe seven biological methods of soil and water conservation. (7 marks)

1 8(a) State seven reasons for pruning coffee . (7 marks)
(b) Highlight seven effects of land fragmentation (7 marks)
(c)Explain the basic concepts of economics. (6 marks)

PAPER 2
SECTION A (30 Marks)
Answer all the questions in this section in the spaces provided.

1, Give two reasons why docking is an important practice in sheep management. (1 mark)
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2(a) Name the camel breed that is adapted to cooler regions and has wooly body covering. (½ mk)
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(b) Give one reason why Fresian's milk is more whitish while jersey milk is yellowish . (½ mk)
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(c), Give any two uses of litter materials in a poultry house. (1 mark)
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3. Give four advantages of using stones as construction materials. (2 marks)
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4. Outline three methods of stocking a bee hive. (1½ mk)
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5. List four ways in which vaccines are administered to an animal. (2 marks)
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6. Give four predisposing factors to livestock diseases. (2 marks)

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7. Give four functions of proteins in the body of an animal. (2 marks)

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8, Name the tool used together with each of the following tools. (1 mark)
(a),Canula(b) Brace

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9. Differentiate between flushing and steaming up in livestock management. (2 marks)

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10. State two roles of drones in a bee colony. (1 mark)

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11. State two microbial activities that occur in the rumen. (1 mark)

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12. Name three pests bees (1½ mk**)**

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13. Name four mineral deficiency livestock disorders. (2 marks)

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14. What do you understand by the term raddling as used in sheep management. (1 mark)

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15. Name one intermediate host in life cycle of a liver fluke. (1 mark)

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16. Give any three maintenance practices in a green house. (1½ mk**)**

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17, Give two faults of ignition system, (1 mark)

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18. Give four conditions that the animal structure should meet in order to help in controlling livestock disease.
(2 marks)

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19. Give six signs to show that a cow is on heat. (3 marks)

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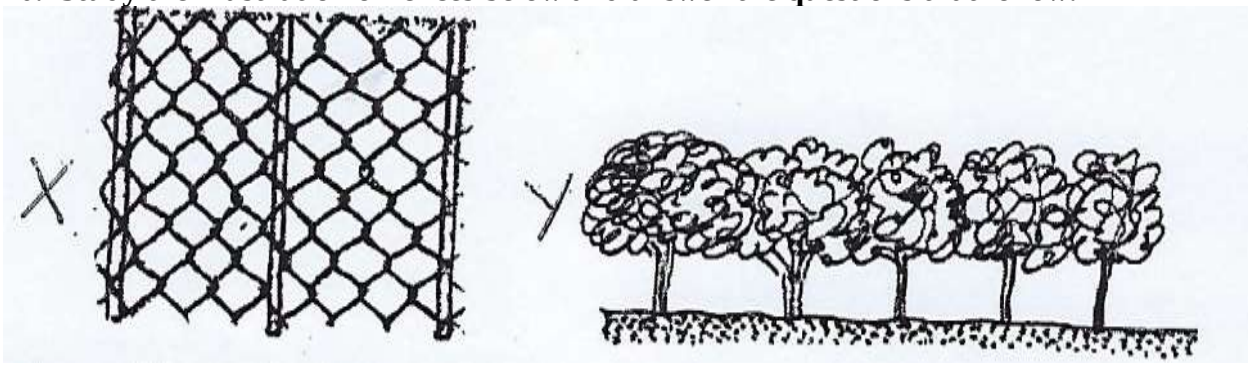
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SECTION B (20 MARKS)

Answer all the questions in this section in the spaces provided.

20. Study the illustration of fences below and answer the questions that follow.



(a.) Name the type of fences illustrated above. (2 marks)

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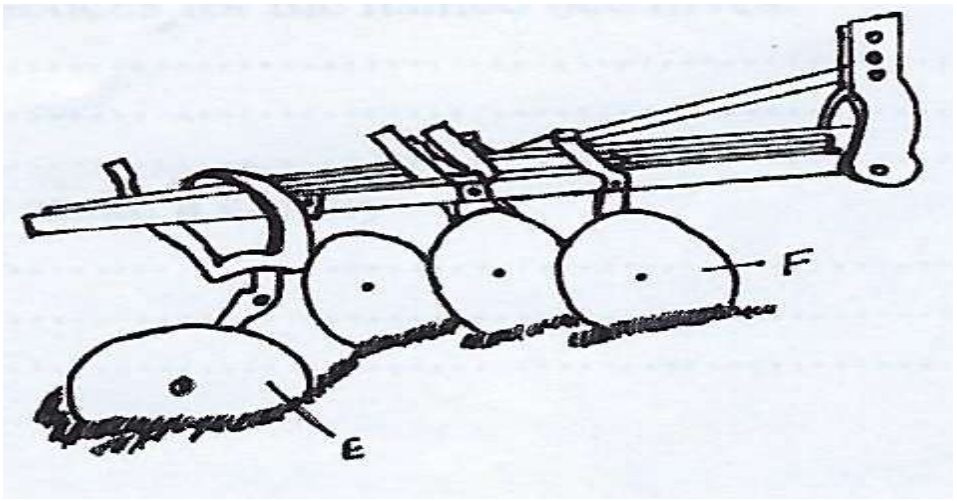
b) Name the correct tool used in maintenance of fence Y. (1 mark)

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c). State three advantages that fence Y may have over fence X. (3 marks)

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21, The diagram below represents an implement



i.) Identify the implement. (1 mark)

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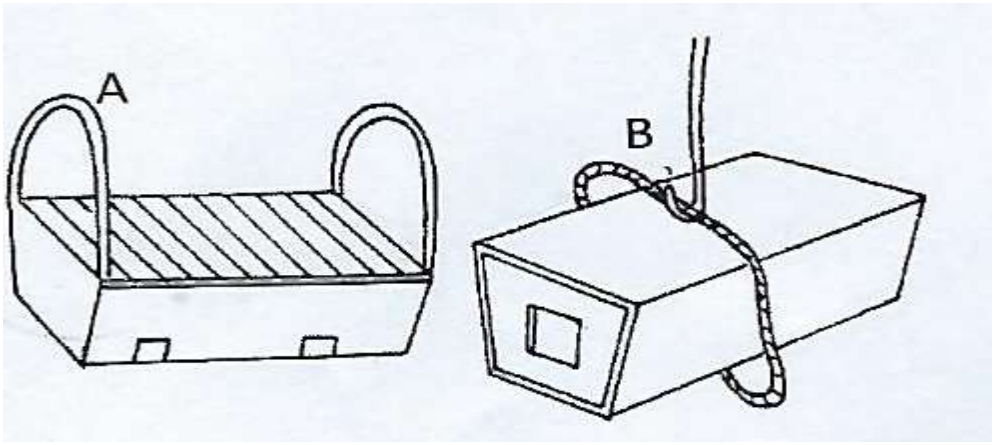
ii). Name the parts labelled E and F give one function of each. (2 marks)

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iii) State four maintenance practices carried out on the implement shown in the diagram. (4 marks)

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22. The diagram labelled A and B below shows two types of bee hives. Study them carefully and answer the questions



(i).Identify the types of beehives A and B. **(2 marks)**

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(ii). State two advantages of A over B. **(2 marks)**

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(iii) Give two maintenance practices for the named bee hives. **(2 marks)**

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(iv) Give one type of bee that make a colony. **(1 mark)**

SECTION C (40 marks)

Answer any two questions from this section in the spaces provided.

23. (a) Describe eight difference between petrol and diesel tractor engines. **(8 marks)**

(b) Describe the principle of a four stroke (four –cycle) petrol engine. **(12 marks)**

24. (a). Write short notes on foot and mouth disease under the following sub-headings.

(i) Casual organism **(1 mark)**

(ii) Mode of transmission **(1 mark)**

(iii) Symptoms of attack **(4 marks)**

(iv) Control measures **(4 marks)**

(b). State five importance of keeping livestock healthy **(5 marks)**

(c) State five general method of disease control **(5 marks)**

25. (a) Describe the procedure of establishing a fish pond. **(10 marks)**

(b) Describe the life cycle of a three host-tick **(5 marks)**

(c) State five factors affecting digestibility **(5 marks)**

PAPER 1

SECTION A (30 MARKS)

(Answer all the questions from this section)

1. State **two** causes of hard pan in the farm. (1 mark)

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2. State **four** information contained in a delivery note. (2 marks)

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3. Give **four** advantages of using certified seeds in crop production. (2 marks)

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4. Give **four** disadvantages of minimum tillage. (2 marks)

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5. State **four** conditions under which shifting cultivation is practiced. (2 marks)

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6. Give **four** importance of sub-soiling. (2 marks)

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7. State **three** conditions under which opportunity cost is zero. ($1^1/_2$ marks)

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8. State **four** methods of harvesting water on the farm. (2 marks)

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9. Name **three** basis on which the classification of fertilizers is done. ($1^1/_2$ narks)
10. Outline **four** advantages of land reforms in Kenya. (2 marks)

11. State **two** causes of forking in carrots. (1 mark)

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12. (a). State **three** types of capital. ($1^1/_2$ marks)

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(b). Apart from capital, state other **three** factors of production. ($1^1/_2$ marks)

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13. State **four** reasons for conserving forage. (2 marks)

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14. State **four** factors that affect the efficiency of herbicides. (2 marks)

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15. Give **four** scientific aspects of agriculture. (2 marks)

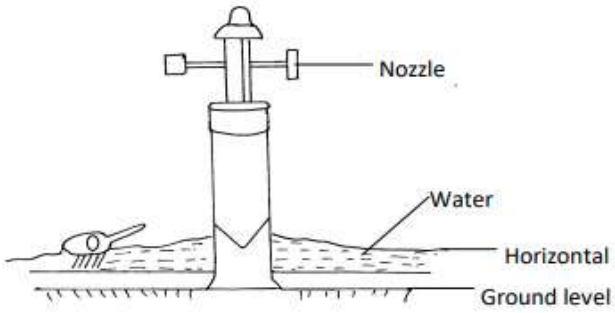
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16. Name **four** methods of harvesting trees in agroforestry. (2 marks)

SECTION B (20 MARKS)

***(Answer all the questions from this section*)**

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



a) Name the method of irrigation illustrated above. (1 mark)

……

b) State **two** advantages of this method of irrigation. (2 marks)

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c) Give **four** factors which determine the choice of type of irrigation to use. (2 marks)

18. The diagram below shows a common weed in the farm. Study it and answer the questions that follow.



a) Identify the weed shown above. (1 mark)
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b) State one harmful effect of the weed to cereals. (1 marks)
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c) Give **three** ways that can be used to control the weed. (3 marks)
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19. The diagram below shows irish tubers after being subjected to some conditions before transplanting. Study them carefully and answer the questions that follow.



(a). Name the process of potato treatment illustrated above. (1 mark)
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(b). State **two** conditions necessary for the above process. (2 marks)
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(c). Give **two** reasons for carrying out the above practice. (2 marks)
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20. Students were to apply a compound fertilizer 5:20:10 on their agriculture plot measuring 3 m by 4 m, at the rate of 200kg per hectare.

(a). Calculate the amount of fertilizer they would require for each plot. (Show your working). (2 marks)

(b). What do figures 20 and 10 in the fertilizer stand for? (2 marks)

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(c) Give two methods of soil sampling. (1 mark)
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SECTION C (40 MARKS)

(Answer any two questions from this section)

21. (a) Describe ways in which cultural measures control crop diseases (8mks)
(b) Describe seven nursery practices carried out while seedlings are still growing. (7marks)
(c) State the qualities of a good farm manager. (5 marks)

22. a) Describe the field production of bulb onions under the following sub headings.
i. Ecological requirements. (4 marks)
…Planting. (3 marks)
ii. Harvesting. (3 marks)
(b). Discuss six reasons for pruning in coffee. (6 marks)
acteristics of plants used as green manure. (4 marks)

23. (a). Briefly explain **six** factors influencing mass wasting. (6 marks)
(b). Describe the procedure of harvesting sugar cane. (6 marks)
(c). Describe four ways in which soil depth influences crop production. (8 marks)

PAPER 2

SECTION A (30 MARKS)

(Answer all the questions in this section in the spaces provided)

1. Name **two** kinds of livestock which can be castrated using a rubber ring. (1mark)
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2. Define the term "breach of birth" as used in livestock production. (1 mark)
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3. a) Name the camel breed that is adapted to cooler regions and has a wooly body covering. ($\frac{1}{2}$ mark)
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b) Give **three** ways used to improve production in indigenous cattle. ($1\frac{1}{2}$ mark)
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4. Give **four** methods of administering vaccines to livestock. (2 marks)
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5. State **two** uses of bedding materials in a poultry house in deep litter system. (1mark)
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6. Give any **two** pairs of livestock tools which are always used together. (1 mark)

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7. List **two** types of feed additives. (1 mark)
8. State **three** factors that may lead to dip wash being exhausted or weakened while in the dip tank. ($1\frac{1}{2}$ marks)

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9. State **four** practices which are carried out to control mastitis in lactating cows. (2 marks)

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10. Give **two** signs of heat in rabbits. (1 mark)

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11. State **four** maintenance practices carried out on the water-cooling system of a tractor (2 marks)

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12. State **four** observations on the behavior of chicks which would indicate that the temperature in the brooder is too high. (2 marks)

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13. Highlights **four** desirable characteristics that should be considered when selecting a heifer for milk production. (2 marks)

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14. Give **four** functions of calcium in dairy cows. (2 marks)

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15. Name **two** notifiable diseases in cattle. (1 mark)

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16. State any **two** channels through which beef is marketed in Kenya. (1 mark)

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17. State **four** factors that may influence the pulse rate of a sheep. (2 marks)

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18. List **three** properties of concrete that make it suitable for constructing farm building. ($1\frac{1}{2}$ mark)

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19. Give **four** reasons why breeding boar may be culled. (2 marks)

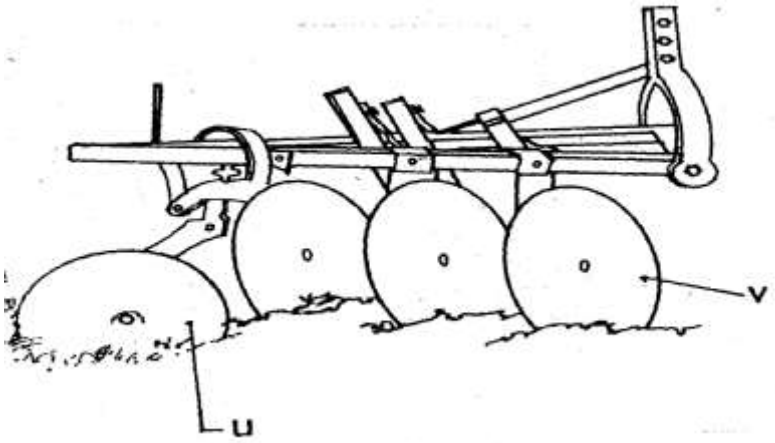
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20. Give **two** functions of a footbath in a plunge cattle dip. (1 mark)

SECTION B (20 MARKS)

(Answer all the questions in this section in the spaces provided)

21. The diagram below represents an implement.



(i) Identify the implement. (1 mark)

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(ii) Name the parts labelled U and V and give one function of each. (2 marks)

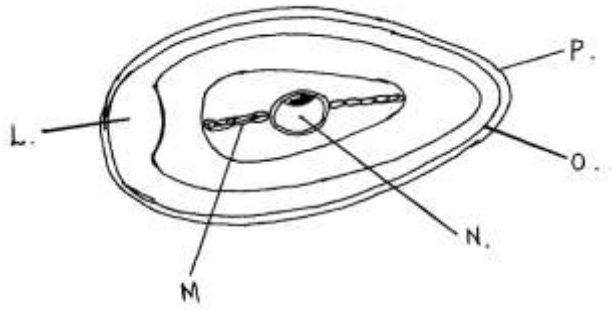
U……

V……

(iii) State two ways of adjusting the depth of ploughing when using the implement. (2 marks)

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22. Study the diagram of an egg below and answer the questions that follow.



i) Name the parts labeled O, and P (2 marks)

O ……

P ……

ii) State the functions of the parts M and L. (2 marks)

M

……

……

L

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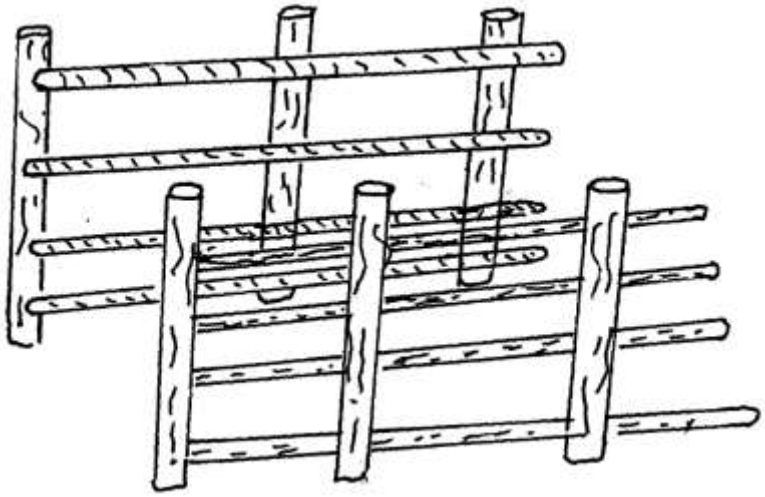
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iii) Why should the egg be turned during incubation. (1 mark)

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23. Below is an illustration of a farm structure.



a) Identify the structure above. (1 mark)

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b) State **Six** livestock routine practices which may be carried out in the structure above (3 marks)

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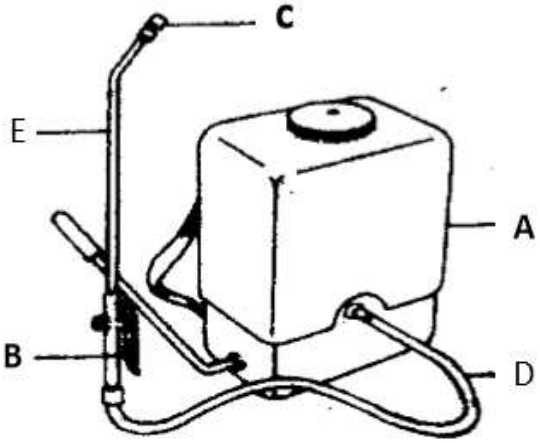
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c) Give **Two** maintenance practices which should be carried out in the structure above. (1 mark)

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24. The diagram below shows the farm equipment. Study it carefully and use it to answer the questions that follow.



(a) Name the parts labeled A, B and C (3 marks)

A……
B……
C……

(b) State the use of the equipment shown above. (1 mark)

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(c) Give one maintenance practice carried out on the equipment. (1 mark)

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SECTION C

(Answer any two questions in this section on the spaces provided)

25. a) Describe the live cycle of a named tapeworm (*Taenia spp*). (10 marks)

b) Describe the management practices that would ensure maximum yield of fish in a fish pond. (5 marks)

c) Explain **five** functions of water in nutrition. (5 marks)

26. (a) Discuss the management of layers from one day old to the start of laying in a deep litter system. (l0 marks)

(b) State any **five** advantages of using animal power in the farm. (5 marks)

(c) Describe **five** importance of keeping animals healthy. (5 marks)

27. Discuss mastitis disease under the following subheading:

(i) Causal organism (1 mark)
(ii) Predisposing factors (4 marks)
(iii) Symptoms (4 marks)
(iv) Control and treatment (3 marks)

b) Explain **eight** factors that affect milk composition in dairy farming. (8 marks)

PAPER 1
SECTION A 30 MARKS

1. Name **two** physical agents of weathering (1 marks)

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2. Outline **three** methods of breaking seed dormancy (1 ½ marks)

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3. List **two** signs shown by crops when they are attacked by nematodes (1 marks)

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4. Distinguish between soil structure and soil texture (2 marks)

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5. State any **three** examples of working capital (1 ½ marks)

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6. What is Land reform: (1 mark)

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(b) State any **four** methods of land reform (2 marks)

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7. Mention **four** ways in which losses may be incurred during hay making. (2marks)

8. Give **two** precautions taken to ensure good crop establishment during planting. (1mark)

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9.(a) Define inventory records. (1mark)

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b). State **four** pieces of information that is contained in health records. (2marks)

10**)a.** List **four** problems associated with nomadic pastoralism in Kenya. (2marks)

(b) Name **four** factors of production in agriculture. (2marks)

11. List **two** farming practices that can be carried out to increase the amount of light harnessed by crops. (2marks)

12 State **four** reasons why land is prepared before planting (2marks)

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13. Give **one** reason in each case why the following tertiary operations are important. (3marks)

i) Ridging

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ii) Rolling

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iii) Leveling

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14. Distinguish the following terms as used in pasture management. (2marks)

a. Intensity of defoliation

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b. Frequency of defoliation

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15. What does the term 'close season' in crop production mean? (1mark)

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SECTION B ANSWER ALL QUESTION

16. Use the following crops to answer the questions that follow.





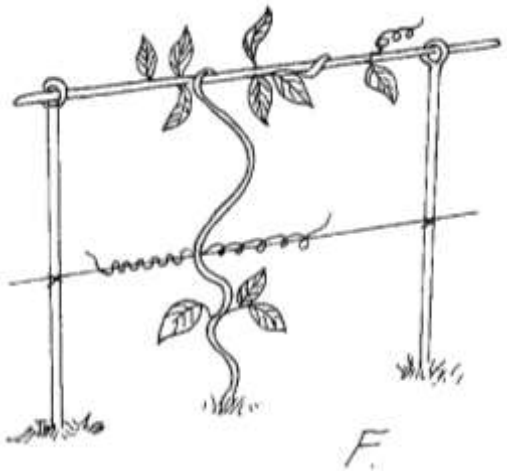
D E

a) Name the crops labelled D and E above. (2mark)
D……...
E……...

b) Why is crop D rarely destroyed by pests in the stores? (1mark)
……

c) Name any **two** diseases that affect crop E. (2marks)

17. The diagram F, below illustrates a method of training in crops.



i) Identify the method shown in F above. (1mark)

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ii) Name **two** other methods used in training in crop production. (1mark)

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iii) State **two** advantages of training in crop production. (2mark)
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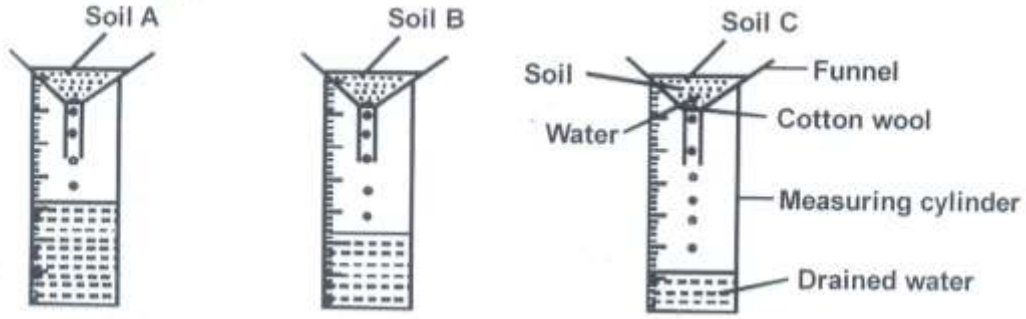
iv) List **two** crops that require training. (1mark)
……

……

18**.a)** Describe the procedure which should be followed in spraying a crop of tomatoes using a fungicide in powder form, water and knapsack sprayer. (3 marks)
……
……
……
……
……
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……

(b) State **two** safety measures that should be taken while spraying the crop with fungicide (2 marks)

19. The diagram below illustrate an experiment on soil



a) State the aim of the experiment (1 mark)

……

b) If the volume of water illustrated in the measuring cylinder was observed after one hour.
Identify the soil sample A and B

Soil A……..
(1 mark)

Soil B……
(1 mark)

c) State **two** ways in which the soil structure of the sample labelled c above can be improved.
(2 marks)

SECTION C 40 MARKS
ANSWER ONLY TWO QUESTIONS

20. a) Giving one example in each case, identify **three** classes of crop diseases. (6marks)
b) Describe the physical measures of disease control in crops. (10marks)
c) Identify the factors affecting the efficiency of pesticides (4marks)

21).Describe the production of tomatoes (Lycoperiscon esculentum) under the following subheadings.

(a) Ecological requirements (4marks)
(b) Nursery establishment (4marks)
(c) Transplanting (4marks)
(d) Seed bed preparation (4marks)
(e) Field management practices (4marks)

22. a) State and explain **five** agricultural services available to farmers. (10marks)
b) Explain the ways in which labour efficiency can be increased in the farm (5marks)
c) State any **five** measures which are taken to minimize water pollution In the farm.

PAPER 2
ANSWER ALL THE QUESTIONS IN THIS SECTION IN THE SPACE PROVIDED.

1. Name one breed of livestock under each of the following categories.
(2mks)
   a) Dairy cattle breeds.
   ……
   b) Dual purpose sheep breeds.
   ……
   c) Dual purpose cattle breeds.
   ……
   d) Hair goat.
   ……
2. State two importance of litter in a poultry house.
(1mk)

……
……

3. State one way of connecting a trailer to a tractor.
(1mk)
……

4. State two functions of the crop in the digestive system of poultry.
(1mk)
……
……

5. State the functional differences between the following.
(2mks)
a) Cross cut saw and rip saw.
……
……
b) Wood chisel and cold chisel.
……
……

6. State four functions of the worker bees in a bee colony. (2mks)
……
……
……

7. State four maintenance practices carried out on a fish pond. (2mks)
……
……
……

8. Give the meaning of the following terms as used in livestock breeding.
a) Close breeding. (2mks)
……
b) Line breeding
……
c) Out crossing.
……
d) Cross breeding.
……

9. State four egg abornomalities observed during egg candling. (2mks)
……
……
……

10. Give four reasons why an animal may be culled. (2mks)
……
……
……

11. Give the meaning of the following terms as used in livestock health. (2mks)
a) Predisposing factors.
……
b) Incubation period.
……

12. Name two appropriate hand tools needed to finish the handle of a jembe. (1mk)
……
……

13. State four ways of controlling lice in poultry. (2mks)

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……
……

14. State four limitations of a tractor as a source of power on the farm. (2mks)
15. State four reasons for feeding a lamb on colostrum. (2mks)

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……

16. State four disadvantages of fold systems in poultry rearing. (2mks)

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……

17. State four ways in which disease causing organism can gain access into an animal. (2mks)

……
……
……

SECTION B (20 MARKS)

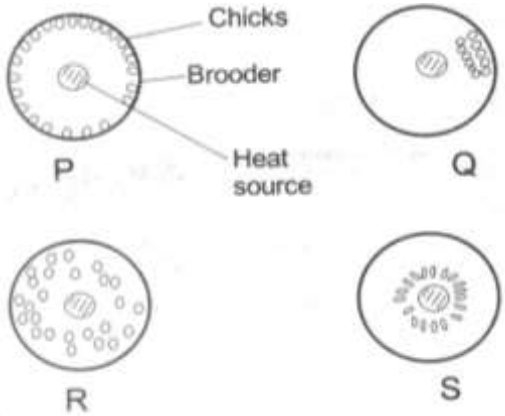
ANSWER ALL THE QUESTIONS IN THE SPACAES PROVIDED .

18. a) A farmer is required to prepare 200kg of dairy meal containing 16% DCP. Using the pearson's square method, Calculate the quantity of sunflower seed cake (28% DCP) and maize germ (8 % DCP) the farmer requires for the dairy meal. (Show your working). (4mks)

    b) Apart from the method used above, name the other method used in computation of feed rations. (1mk)

    ……

19. The diagrams below illustrate behavior of chicks in a brooder.



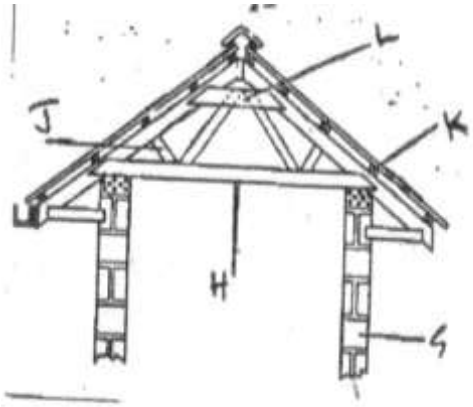
a) Describe the behavior of chicks in brooders labeled Q,R and S. (3mks)

……
……
……

b) State two other observable behavior of chicks in brooder labeled P other than the behavior shown above. (2mks)

……
……

20. The diagram below represents part of a roof. Study the diagram and answer the questions that follow

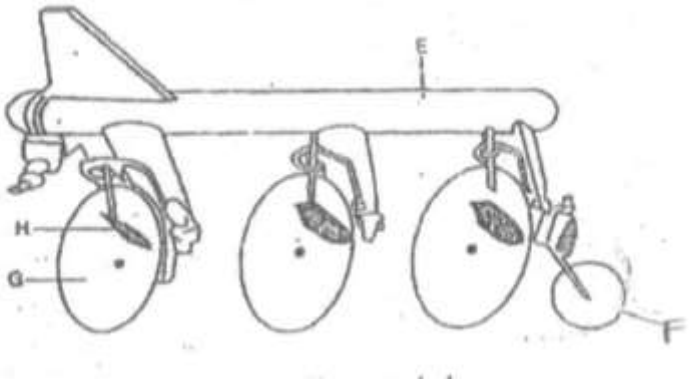


a) Name the parts G, H, J and K. (2mks)
G……
H ……..
J …….
K …….

b) State two functions of the roof illustrated above. (1mk)
……
……

c) Give the collective term for the parts labeled H, J and L. (1mk)

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



a) Identify the implement illustrated above. (1mk)
……

b) Name the part labeled E,F,G and H. (2mks)

c) State two ways in which the depth of ploughing can be increased when using the implement above. (2mks)

SECTION C (40 MARKS)

ANSWER ANY TWO QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED.

22. a) Outline the daily maintenance practices that should be carried out on a farm tractor. (10mks)
b) Describe the body conformation features of a dairy cattle. (5mks)
c) State five reasons for maintaining livestock healthy. (5mks

23. a) Describe how a four stroke cycle petrol engine works. (8mks)
b) State and explain any six factors that should be considered when sitting farm structures. (12mks)

24. a) Describe mastitis in dairy cattle under the following subheadings.
i. Predisposing factor. (4mks)
ii. Symptoms of attack. (3mks)
b) Outline eight symptoms of tape worm infestation in cattle. (8mks)
c) State five ways of stimulating a cow for milk let down. (5mks)

PAPER 1

SECTION A (30 marks)

Answer all the questions in this section in the spaces provided.

1. State **four** characteristics of shifting cultivation (2 marks)

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……

2. Give **four** reasons why a well drained soil is suitable for crop production (2 marks)

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……
……

3. State **four** factors which determine the depth of ploughing (2 marks)

……
……
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……

4. State **three** advantages of overhead irrigation over surface irrigation ($1^1/_2$ marks)

……
……
……
……

5. a)State the law of demand (1 mark)

……
……
……

b) State **four** factors that determine the demand of a commodity in a free Market economy (2 marks)

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……

6. state **four** ways in which plant nutrients may be lost from the soil (2 marks)

……
……
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……

7. a)**Differentiate** between macro nutrients and micro nutrients (1 mark)

……
……
……

b) State **four** functions of calcium in plant growth and development (2 marks)

……
……
……
……
……
……

8. **Explain** the following terms as used in farm account (4 marks)

i. Cash account

……
……
……

ii. Ledger

……
……
……

iii. Balance sheet

……
……
……

iv. Purchase order

……
……
……

9. State **four** factors that influence spacing when planting a pure stand maize (2 marks)

……
……
……
……
……
……

10. State **four** reasons for pruning fruit crop (2 marks)

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……
……
……
……
……

11. State **four** ways by which a farmer can make efficient use of pasture crop (2 marks)

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……
……
……
……

12. List **four** characteristics of a good root stock for grafting (2 marks)
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13. Give **four** factors to consider when grading tomatoes for fresh market (2 marks)
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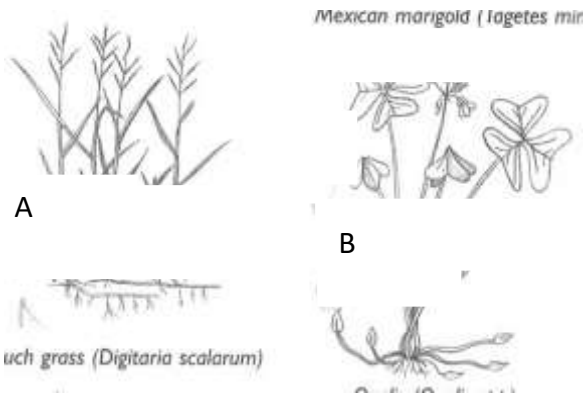
14. Give **three** ways through which checkdams control soil erosion ($1^1/_2$ marks)
……
……
……
……
……
……

15. State **two** uses of gross margin analysis in farm business (1 mark)
……
……
……

SECTION B

Answer all the questions in the spaces provided

16. The diagrams illustrated below shows arable weeds. Study them carefully and answer the questions that follow

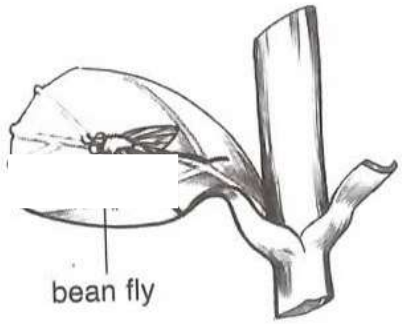


a) Identify the weeds A and B (2 marks)
A……
……B……
……

b) Why is it difficult to control weeds A and B (2 marks)
A……
……B……
……

c) List **three** economic importance of the weeds illustrated above (3 marks)

17. The diagram shows a pest that attacks beans in the field. Study it carefully and answer the questions that follow.

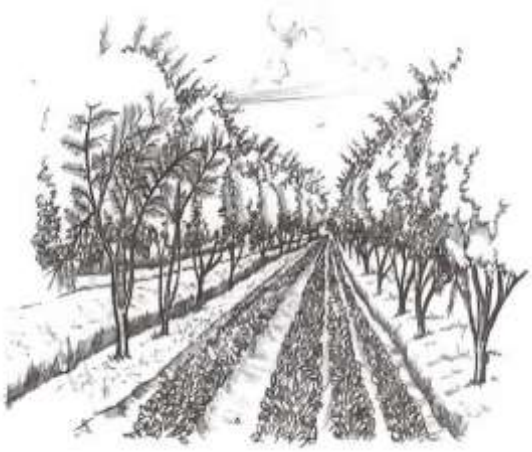


a) Identify the pest illustrated above (1 mark)
……
……

b) List **three** cultural methods of controlling the pest illustrated above (3 marks)
……
……
……
……

c) State **two** other pest that attack beans in the field (2 marks)
……
……
……

18. The diagram below illustrates an agroforetsry practice. Study it carefully and answer the questions that follow.



a) Identify the agroforestry practice illustrated above (1 mark)
……
……

b) List **three** benefits of the above agroforestry practice (3 marks)
……
……
……
……..

c) State **three** sites for agroforestry trees (3 marks)

SECTION C

Answer ONLY two questions in this section in the spaces provided after the questions

19. a) Give **four** examples of joint products in livestock production (4 marks)
    b) List **four** variable inputs in poultry production (4 marks)
    c) A farmer can combine dairy meal and homemade feeds as shown below

Dairy meal (Kg)	Homemade feed (Kg)	Marginal rate of substitution
1	48	O
2	39	V
3	32	7
4	27	W
5	23	4
6	21	X
7	20	1
8	19	Y

    i. Given the above information calculate the marginal rate of substitution and give values of V,W,X and V (4 marks)
    ii. Given that of homemade feeds is Ksh 800 per kilogram and that of homemade feeds is Ksh 200 per kilogram. Calculate the least cost combination(4 marks)

    d) Outline **four** activities that may be undertaken in organic farming (4 marks)

20. a)State and explain **five** roles of agriculture in economic development of Kenya (5 marks)
    b) Describe measures which should be taken to minimize water pollution on a farm (10 marks)
    c) State and **explain** the various land tenure systems practiced in Kenya (5 marks)

21. a) Outline **six** management practices that should be carried out on a vegetable nursery after sowing seeds until the seedlings are ready for transplanting (6 marks)
    b) Explain **four** precautions that should be observed when harvesting cotton (4 marks)
    c) Explain **five** ways in which the Kenyan government can improve maize production to ensure food security in the country (10 marks)

PAPER 2

SECTION A (30MKS)

1. State **three** management practices that should be carried out in wheel barrow. (1 ½ mks)

---

2. Outline **two** cultural importances of livestock. (1 mk)

---

3. Give **four** reasons why a dairy farmer would prefer to keep jersey cattle breed to Friesian breed? 2mks)

---

4. Give the distinguishing color for each of the following breeds of livestock.(1mk)

i) Duroc jersey pig----------

iv) Saanen----------

5. State any **two** prophylactic measures used in livestock health. (1mks)

6. Give the nutritional disorder that results from deficiency of the following minerals. (1 mk)
a) copper----------
b) iodine ----------
7. State **two** precaution measures that should be taken when handling vaccines. (1mk)

---
8. Which **two** hormones are responsible for milk let down? (1mk)

---
9. Give **two** disadvantages of water power as a source of farm power. (1 mk)

---
10. Give **two** advantages of complete milking. (1mk)

---
11. Using pearsons square method compute 250kg ration with 25% DCP from cotton seed cake which contains 18%DCP and from wheat bran which contains 36% DCP.(3mks)

12. State **two** use of a donkey in the farm.(1mk)

13Why is a calf pen raised 50cm above the ground level? (1mk)

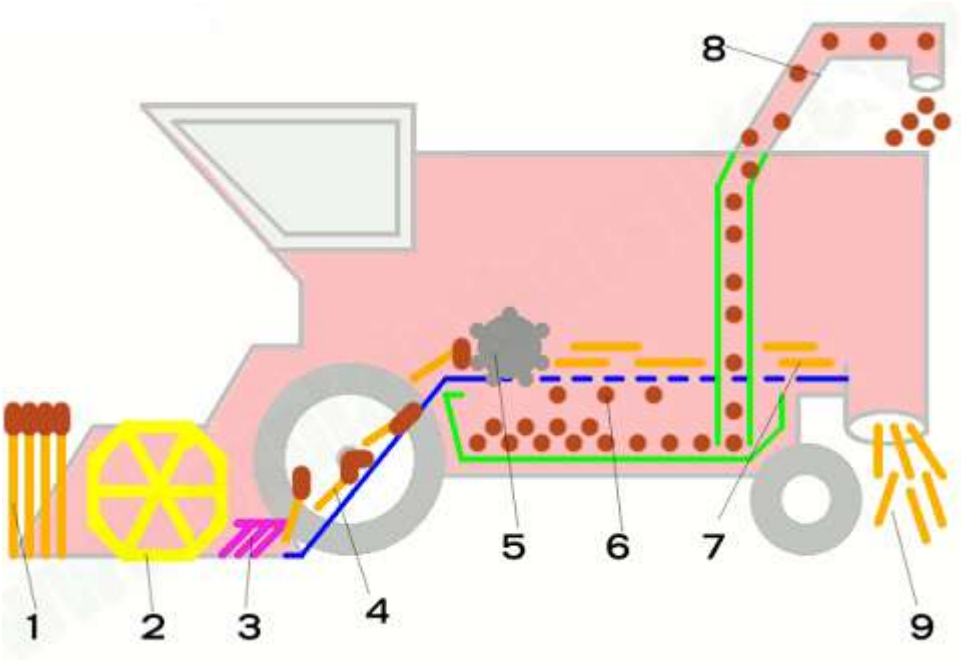
---
14. State **two** reasons of tailing in sheep. (1mk)

---
15. Give **two** uses of a gearbox in a tractor. (1mk)

---
16. Name the rabbit breed that give high quality fur. (1/2 mk)

---
17. Give **one** reason as to why animals suffering from milk fever should never be given medicine through the mouth. (2mks)

SECTION B (20MKS)
18. Below is diagram of a farm implement. Study it answer questions that follow.



a) Identify the implement.(1mk)

---

b) Name parts labeled . (2 mks)

1----------

2----------

5----------

8----------

c) Give a function of each of the parts you have named above. (2mks)

1---------- ----------

2---------- ----------

3---------- ----------

8---------- ----------

---

d) Give the main function of the machinery illustrated above. (1mk)

19. The diagram below represents an external parasite.



a))Identify the parasite. (1mk)

---------- ----------

b) Discuss the parasite under the following subheadings
i) Main animal affected. (1mk)
ii) Harmful effects (2mks)
iii) Control measures (2mks)
20. The diagram below represents a livestock management practice.





a) Name the livestock identification method illustrated above. (2mks)
X----------
Y—----------
b) Give an example of an animal where each of the practice is done. (2mks)
X----------
Y----------c)
Name the tool used to carry out practice labeled (1mk)
X----------
Y----------

SECTION C (40MKS)
Select any **two** questions.
21.a) Explain **five** reasons for maintaining tools and equipments. (5mks)
b) Describe the physical signs of good health in an animal. (4mks)
c) State **six** functions of water in an animal's diet. (6mks)
d) Give the procedure of preparing artificial colostrums. (5mks)
22.a) Discuss **six** factors that should be considered when selecting construction materials. (6mks)

b) Explain the life cycle of two host tick.(6 mks)
c) Explain **four** conditions that should be met by all livestock housing structures.(4mks)

d) Explain **three** differences between ruminants and non ruminants.(3mks)

23.a) state **six** control measures of egg eating in poultry management.(6mks)

b) Discuss the functions of materials and equipments that are needed in milking. (7mks)
c)compare characteristics of indigenous cattle to those of exotic breeds of cattle. (7mks)

PAPER 1

SECTION A (30marks).
Answer all Questions in this section.

1. a) State four characteristics of extensive farming system. (2mks)

……
……
……
……
……

b) List two disadvantages of small scale farming. (2mks)

……
……
……

2. Name two ways in which predators affect agricultural production. (1mk)

……
……
……

3. List down four factors that influence formation of soil. (2mks)

……
……
……
……

4. State two farming practices that bring about minimum tillage. (1mk)

……
……
……

5. Name the function of each of the following chemicals in water treatment.
a) Alum (1mk)

……
……

b) Soda ash (1mk)

……
……

6. State two importance of organic matter in the soil. (1mk)

……
……

7. State three reasons why green manure is not commonly used in the farms. (1 ½ mks)

……
……
……
……

8. State four uses of farm records. (2mks)

……
……
……
……
……

9. List three importance of phosphorous in crop growth. (1 ½ mks)

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……
……

10. Name four significance of using seeds as planting materials. (2mks)

……
……
……
……

11. List two importance of tissue culture in propagating crops. (1mk)

……
……
……

12. State the difference between the following terms. (2mks)
a) Rogueing

……
……

b) Gapping

……
……

13. State four effects of applying too much nitrogenous fertilizer to crops. (2mks)

……
……
……
……
……

14. Name four disadvantages of communal land tenure system. (2mkS)

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……
……

15. State four precautions farmers should observe when using agro-chemical for their safety and for environmental safety. (2mks)

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16. State three harmful effects of pests on crops. (1 ½ mks)

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17. State three qualities of a good manager in a farm setting. (1 ½ mks)

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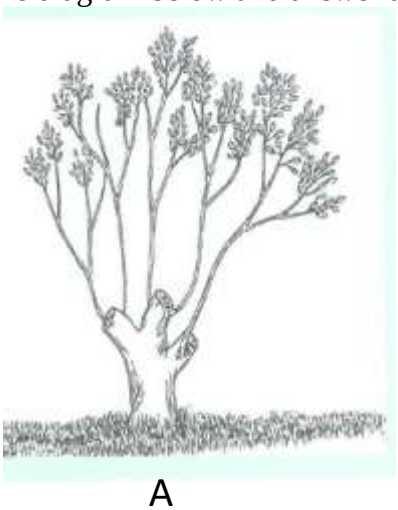
18. State two factors that influence the demand of a commodity. (1mk)

……
……

SECTION B (20 MARKS)

Answer all questions in this section.

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



A



B

a) Identify the three harvesting methods shown in the diagrams above. (2mks)

……

……

……

……

b) Name four sites for agroforestry trees in the farm. (2mks)

……

……

……

……

20. The document below was obtained from one of the books of accounts in kimko's farm. Study the document and answer the questions that follow.

DAIRY CATTLE							
DR							**CR**
Date	**Particulars**	**Folio**	**Amount Sh cts.**	**Date 2003**	**Particulars**	**Folio**	**Amount Sh cts.**
Feb 20th Feb 30th	Bought 2 bags of dairy meal	1	18,000.00	Feb 10th	Sold 2 heifers	1	12,000.00

a) Identify the book from which the above document was obtained. (1mk)

……

……

b) State four importance of keeping proper farm account records. (2mks)

……

……

……

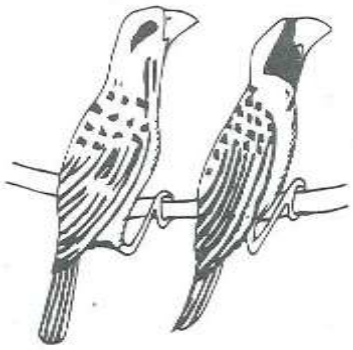
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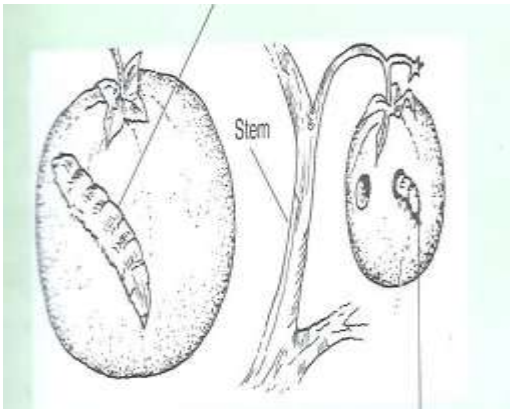
21. The diagram below shows pests that affect crops when in the field. Study the diagrams and answer the questions that follow.

K L

J







a) Identify the pest J, K and L. (3mks)

……

……

……

b) State two ways of controlling the pest labeled L above. (2mks)

……

……

……

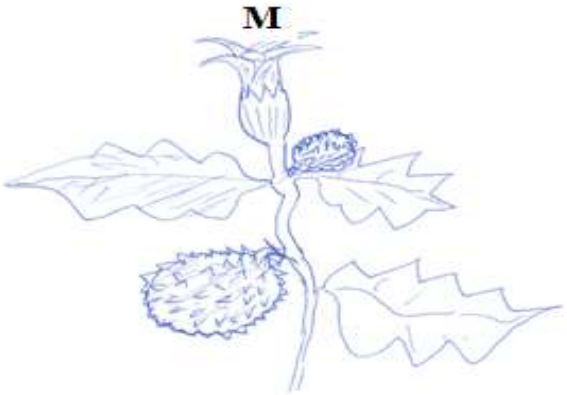
c) State one crop attacked by the pest labeled J and K above. (2mks)

……

……

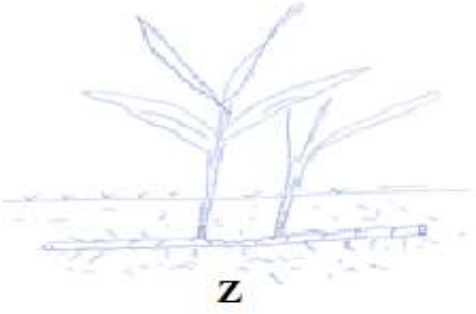
……

22. The Following weeds were found growing on a maize farm by a form four student. Study the weeds and answer the questions that follow.









a) Name the weeds labeled X, Y and Z above. (3mks)

……

……

……

……

b) State one reason that makes each of the following weeds difficult to control. (2mks)

(i) X

……

……

(ii) Z

……

……

c) State one reason why the weed labeled M should not be allowed to grow in the farm. (1mk)

SECTION C (40 marks)

Answer only two questions in this section

23. a) Explain five cultural methods a farmer can use to control weeds. (10mks)
b) State and explain five factors considered when establishing nursery bed site. (10mks)

24. a) Describe five ways in which a farmer may adjust to uncertainty and risks in the farm. (10mks)
b) Explain five physical methods used to control crop pests in a crop land. (10mks)

25. a) State five types of information contained in a tittle deed. (5mks)
b) State five methods used to control soil and water pollution. (5mks)
c) State and explain five ways an entrepreneur can use to improve labour productivity in a farm.

PAPER 2

SECTION A (30MARKS)

Answer all the questions in this section.

1. State two reasons of using farm tools and equipment in the farm. (2mks)

……..

……..

……..

2. State three reasons that would make a farmer opt to rear indigenous cattle breeds instead of exotic cattle breeds. (1 ½ mks)

……..

……..

……..

……..

3. State three characteristics of Bacterian type of camel. (1 ½ mks)

……..

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……..

……..

4. Name four factors that influence the pulse rate of an animal. (2mks)

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……..

5. State three signs of attack by endoparasites a farmer can observe. (1 ½ mks)

……..

……..

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……..

6. State four factors that determine the amount of food given to an animal. (2mks)
7. Name three reasons that would make a farmer use a machakos dip instead of a plunge dip to control ticks. (1 ½ mks)

……..
……..
……..
……..

8. State four factors considered when selecting construction materials. (2mks)

……..
……..
……..
……..
……..

9. Name three methods a farmer can use when selecting livestock for breeding. (1 ½ mks)

……..
……..
……..
……..

10. Mention three signs of heat in a doe. (1 ½ mks)

……..
……..
……..
……..

11. Mention four reasons that would make a farmer carry out identification to his herd. (2mks)

……..
……..
……..
……..
……..

12. State two diseases that commonly affect bees in bee farming. (2mks)

……..
……..

13. State four methods a farmer can use when preserving fish after harvesting. (2mks)

……..
……..
……..
……..

14. State four factors that determine the choice of poultry rearing system that a farmer chooses to use. (2mks)

……..
……..
……..
……..
……..

15. State one significance of mobile calf pen in calf rearing. (1mk)

……..
……..

16. State two disadvantages of a two stroke engine. (1mk)

……..
……..
……..

17. State two factors that could cause sudden stopping of a tractor engine. (1mk)

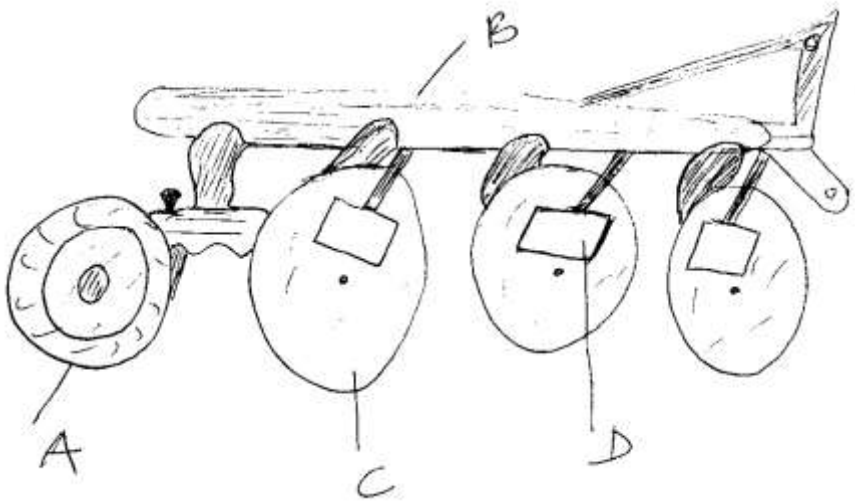
……..
……..
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……..

18. State four disadvantages of animal drawn implements over tractor drawn implements. (2mks)

SECTION B (20MARKS)

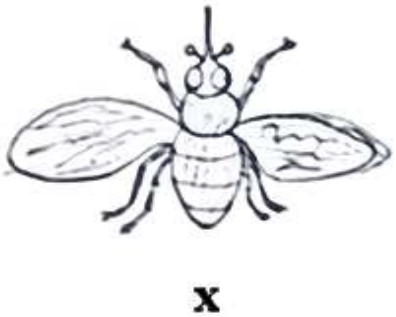
Answer all questions in this section.

19. The diagram below shows a tractor drawn implement. Study it and answer the questions that follow.



a) Name the parts A, B, C and D. (4mks)
b) State two advantages of using the above implement over mould- board plough. (2mks)
c) State the function of the parts labeled. (2mks)
   i) A
   ii) D

20. The diagram below shows livestock parasites. Study the diagrams and answer the questions that follow.



X



Y

a) Identify the parasites X and Y above. (2mks)
b) State two effects that are caused by the parasite labeled X on the animal's body. (2mks)
c) Name one disease transmitted by parasite labeled X above. (1mk)
d) State three measures taken to control the parasite labeled Y above. (3mks)

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



a) Identify the livestock equipment marked E above. (1mk)
b) State two reasons that make branding be discouraged as a method of livestock identification. (1mk)

SECTION C (40 MARKS)

Answer any two questions.

22. a) State five factors that predispose livestock to diseases. (10mks)
b) State and explain five factors a farmer will consider when siting beehives in the farm. (10mks)

23. a) Briefly state and explain five equipment a farmer will need when milking and state their uses. (10mks)
b) Explain five factors to consider when selecting a breeding stock. (10mks)

24. a) State and explain four materials collected by bees. (8mks)
b) State and explain the use of four equipments a honey harvester would require to have when harvesting honey. (8mks)
c) List four main reasons that make fish farming popular. (4mks)