

KCSE AGRICULTURE REPLICA SERIES

SEPTEMBER-DECEMBER 2022.

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KCSE REPLICA EXAMS

1-10

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KCSE REPLICA 1

PAPER 1

SECTION A (30 marks)

ANSWER ALL QUESTIONS IN THIS SECTION

1. State **four** reasons for practicing grafting in citrus production (2mks)

2. Mention **four** types of soil erosion by water (2mks)

3. Differentiate between coppicing and pinching out (2mks)

4. Give **four** benefits of possessing certificate of land ownership (2mks)

5. Give **one** reason why each of the following nursery management practices are carried out. (2mks)
 - (i) Hardening off

 - (ii) Watering before transporting seedlings from the nursery bed

6. Name **four** effects of excessive nitrogenous fertilizer application on tomatoes (2mks)

7. State **four** early maturing varieties of cabbages (2mks)

8. State **four** ways by which Agriculture contributes to national development (2mks)

9. List **four** methods of land acquisition (2mks)

10. State **four** roles of trees in soil and water conservation (2mks)

11. State any **four** types of livestock farming (2mks)

12. a) State **two** ways by which a soil of pH 3 can be raised to pH 5 (1 mk)

- b) Name any **two** types of soil structures (1mk)

13. State four factors that determine the number of secondary cultivation to be done on a seedbed (2mks)

14. Mention any **four** factors that should be considered when selecting site for making compost manure (2mks)

15. a) Define the following terms:
 i) Opportunity cost (1/2 mk)

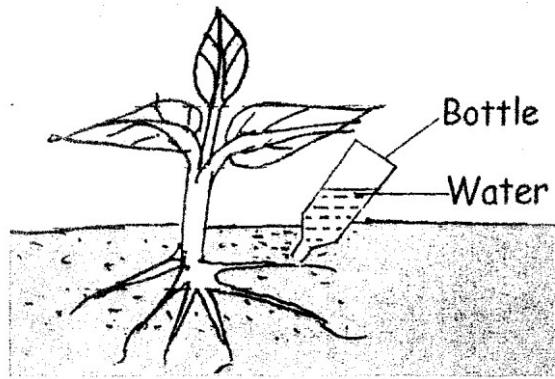
- ii) Agricultural economics (1/2mk)

- b) Give **two** types of farm records that a large scale farmer should keep (1mk)

SECTION B (20 marks)

ANSWER ALL QUESTIONS IN THIS SECTION

16. The diagram below shows a method of irrigation



a) Identify the method (1 mark)

.....

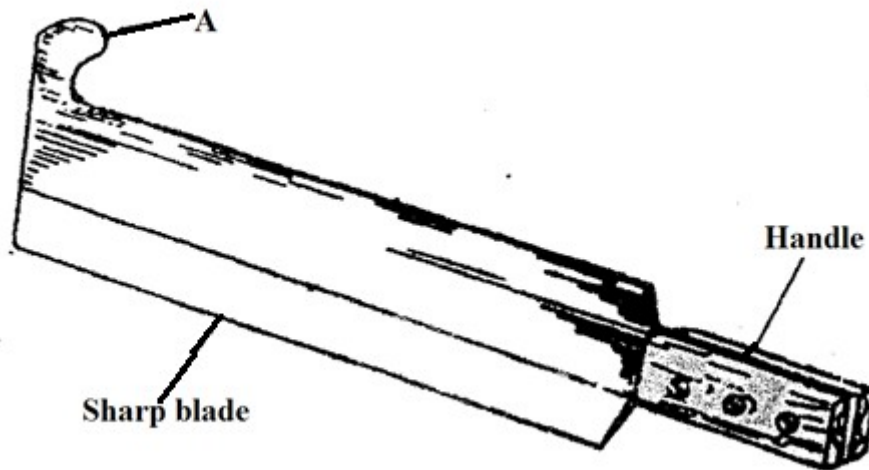
b) State **two** advantages of the irrigation system named in (a) above. (2mks)

.....

c) State any **two** factors to be considered when choosing the method of irrigation to use in an area (2mks)

.....

17. The diagram below is a tool used to harvest crops in the farm. Use it to answer the questions that follow



a) Identify the tool represented above (1 mark)

.....

b) Name the crop harvested by use of the tool above. (1 mark)

.....

c) Name the part labeled A on the tool (1 mark)

.....

d) Give **one** reason why the crop named in (b) above should be cut at ground level (1 mark)

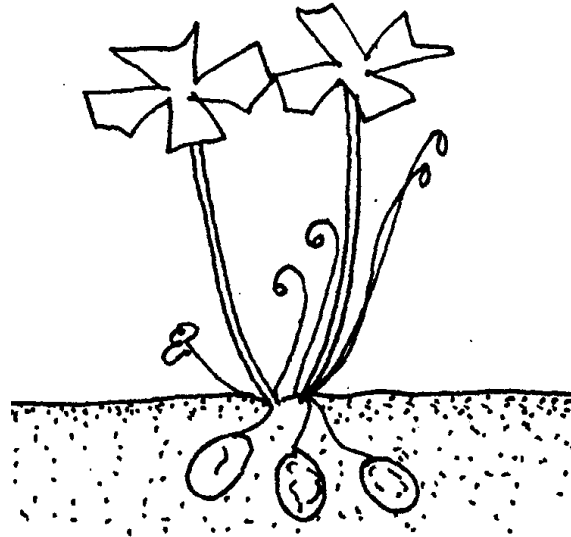
.....

e) Give a reason why the leaves of the crop should be removed after cutting (1 mark)

.....

18. An agronomist recommends application of 130kg N, 55kg P₂O₅ and 65kg K₂O after testing a soil sample. Calculate the amount of urea (46%N), Single super phosphate (20% P₂O₅) and Potassium chloride (50% K₂O) that should be applied on the land.
(5mks)

19. The diagram below illustrates a weed



- a) Identify the weed (1 mark)
- b) State one competitive ability of the weed illustrated above. (1 mark)
- c) State two mechanical control measures for the weed above (2mks)
- d) Classify the weed above according to plant morphology (1 mark)

SECTION C (40 MARKS)

ATTEMPT ANY TWO QUESTIONS IN THE SPACE PROVIDED

- 20. a) Describe five qualities of mother plant that should be considered when selecting vegetative materials for planting (5 marks)
- b) List seven benefits of using organic matter for mulching (7 marks)
- c) Describe the field production of nappier grass under the following sub-headings
 - i) Planting (3 marks)
 - ii) Fertilizer and manure application (3 marks)
 - iii) Utilization (2marks)
- 21. a) Describe the procedure of silage making (8 marks)
- b) State and explain four factors that determine the depth of planting (8 marks)
- c) Outline four roles of Agriculture in Kenya's economy (4 marks)
- 22. a) Outline seven effects of land fragmentation and subdivision (7 marks)
- b) State and explain three methods of pruning (6 marks)
- c) Describe the establishment of vegetative propagation nurseries (7 marks)

PAPER 2

SECTION A (30MARKS)
ANSWER ALL QUESTIONS IN THIS SECTION

1. Name the breed of goat kept for hair production (1mk)
.....
2. State **two** ways in which barbed wire fence may be reinforced in the farm 1mk
.....
3. Broadly classify two causes of infertility in a herd of cattle (1mk)
.....
4. Name the tool that is used together with the following as a pair (1mk)
 - a) Hypodermic needle
 - b) Elastrator
5. Name **four** signs of anthrax observed in carcass of cattle (2mks)
.....
6. Name **four** ways by which cannibalism in poultry could be avoided (2mks)
.....
7. Name the intermediate host of the following parasites (1mk)
 - a) Tapeworm
 - b) Liver fluke
8.
 - a) List down two groups of cattle that are susceptible to milk fever (1mk)
.....
 - b) Give **two** situations which may necessitate the preparation of artificial colostrum (1mk)
.....
 - c) Give **two** uses of gears in a tractor. (1mk)
.....
9.
 - a) List **two** tools used for laying concrete blocks when constructing a wall (1mk)
.....
 - b) List **four** characteristics of clean, high quality milk (2mks)
.....
10.
 - a) What is the cause of grass staggers in animals (1mk)
.....

-
- b) Give the meaning of the following terms as used in livestock health (2mks)
- i) Incubation period
-
- ii) Mortality rate
-

11. a) Write down two common examples of chemical causes of diseases among livestock (2mks)

.....

b) Name **two** main parts of a farm buildings (1mk)

.....

c) Name the breed rabbit with black nose, ears and tail but the body is white (1mk)

.....

12. a) State **two** uses of a footbath in a cattle dip (1 mk)

.....

b) What is hybrid vigour or heterosis in breeding? (1mk)

.....

13. a) What is the difference between a tenon and crosscut saw (1mk)

.....

b) State **two** qualities of marketable size eggs (1mk)

.....

14. a) Give **one** reason for housing calves singly (1mk)

.....

b) State **two** uses of a drawbar in a tractor (1mk)

.....

15. State **two** functions of corner posts in barbed wire fences (1mk)

.....

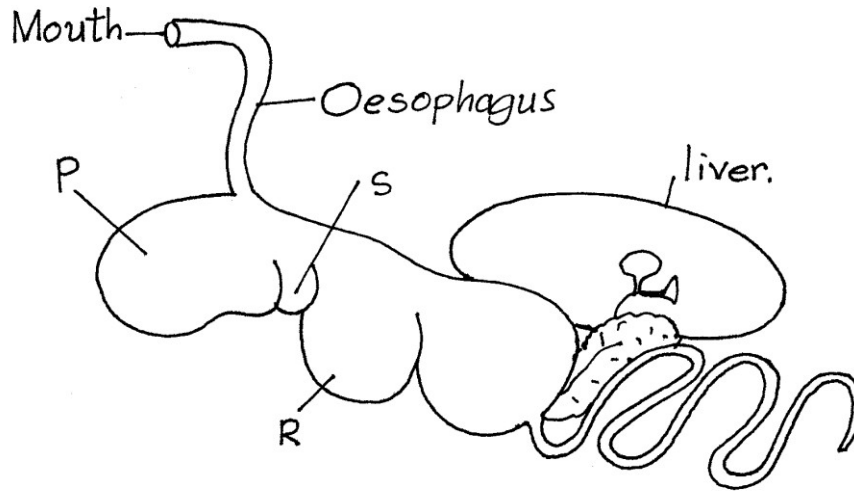
16. State the difference between crutching and raddling (1mk)

.....

SECTION B (20MKS)

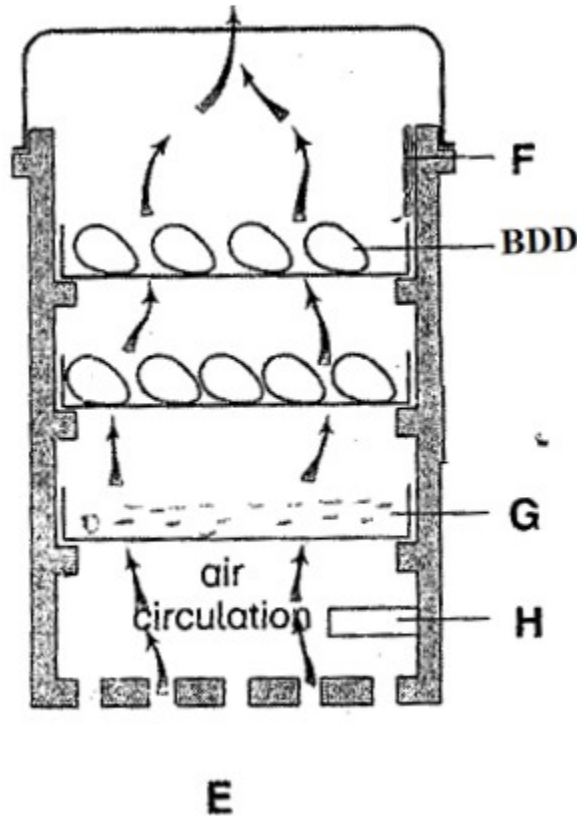
ANSWER ALL QUESTIONS IN THIS SECTION

17. The illustration below shows part of the digestive system of a cow. Study it carefully and answer the questions that follow.



- b) Identify the part labelled R on the diagram (1 mark)
-
- b) Which of the parts labelled is also referred to as:
- i) The “book” or “many plies” (1/2mk)
-
-
- ii) The “honey comb” (1/2mk)
-
-
- c) State **two** microbial activities that take place in the chamber labeled P? (2mks)
-
-
- d) State the role of esophageal groove in ruminants (1mk)
-
-

18. The diagram E below illustrates an activity carried out by a farmer. Study the diagram and answer the questions that follow.



b) Identify the activity carried out in the structure labelled E above (1 mark)

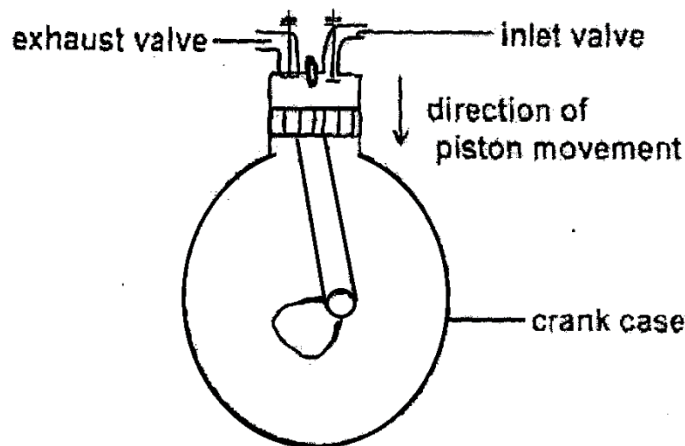
b) Name the parts labelled F and H in the structure E above (2mks)

F.....

H.....

c) State **two** conditions apart from air circulation in E above which are necessary for a successful activity being carried out (2mks)

19. The diagram below illustrates a stroke in a four stroke cycle engine. Study it then answer the questions that follow. The arrows show the direction of motion of the piston



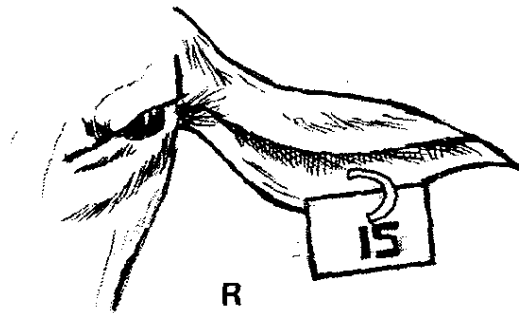
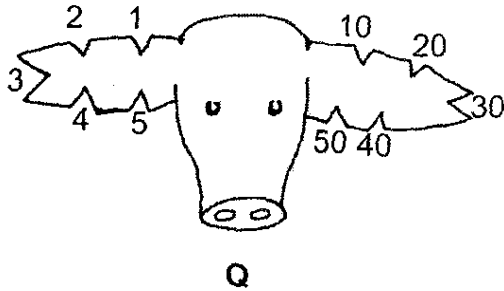
c) Identify the stroke illustrated by the diagram (1 mark)

d) Identify the type of tractor engine illustrated in the diagram on the basis of type of fuel it uses (1 mark)

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

d) Name in the correct order the next two strokes which follow the one illustrated above (2mks)

20. Diagram Q and R below illustrates a practice carried out on livestock. Study the diagrams and answer the questions that follow:



- a) Identify the practice in Q and R (1mk)
- b) Name the method carried out in Q and R (1mk)
- c) State **one** advantage of R over Q (1mk)
- d) Give **two** reasons of carrying out the practice Q and R (2mks)

SECTION C (40 MARKS) ATTEMPT ANY TWO QUESTIONS IN THE SPACE PROVIDED

- 21. a) Discuss the general methods of controlling livestock diseases (10mks)
- b) Give **five** advantages of four-stroke cycle engines (5 marks)
- c) State **five** disadvantages of natural mating (5 marks)
- 22. a) Explain **five** factors to be considered when selecting a breeding stock (10mks)
- b) Describe the essentials of clean milk production in dairy farming (5 marks)
- c) Outline the disease predisposing factors in livestock (5 marks)
- 23. a) State **five** symptoms of East Coast Fever (5 marks)
- b) Give **five** advantages of using animal power (5 marks)
- c) Give **five** characteristics of beef cattle breed (5 marks)
- d) Describe the reasons why bees may abscond from a beehive (5 marks)

**KCSE REPLICA 2
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)

.....
.....
.....

14. Give four advantages of practicing crop rotation. (2mks)

.....
.....
.....

15. Name four methods of controlling pests. (2mks)

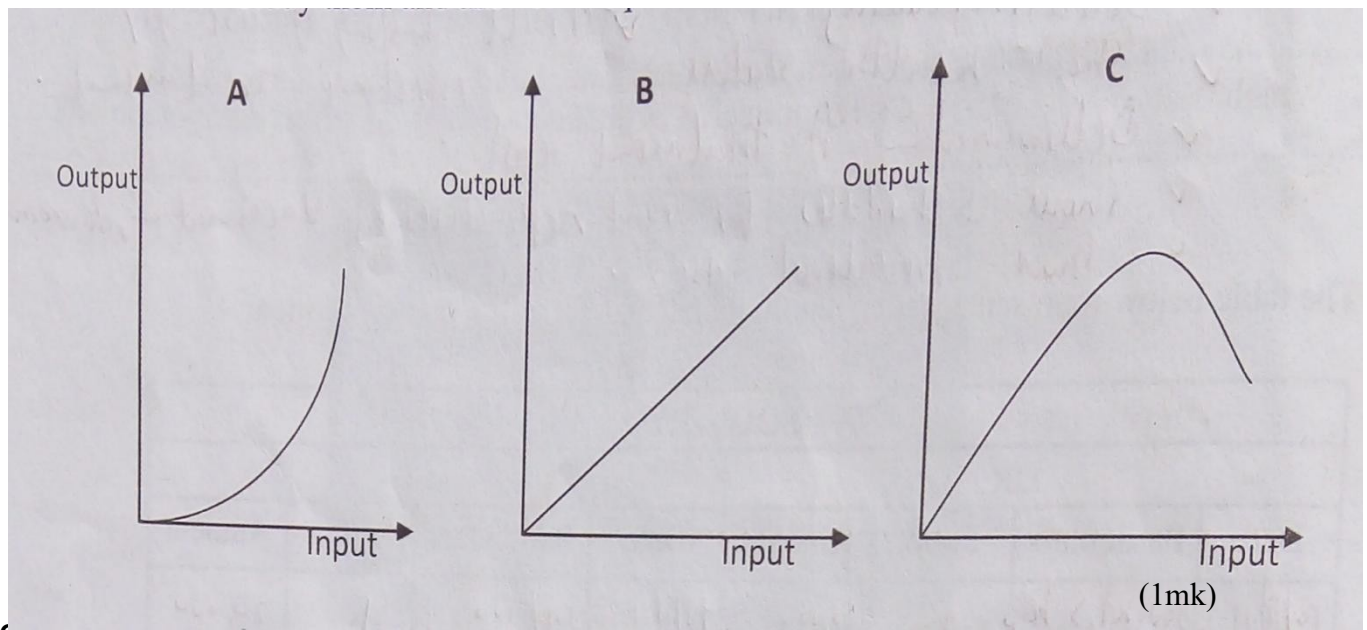
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16. Distinguish between intensive hedgerow and border planting forms of agroforestry (2mk)

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;



(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)

.....

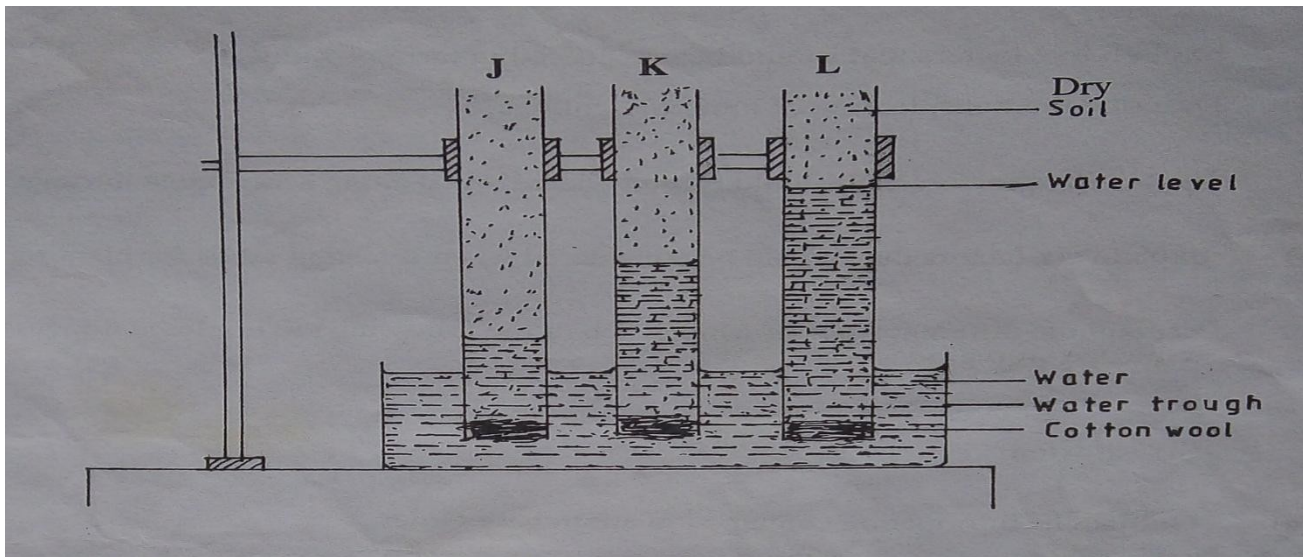
(c) Give a reason for your answer in (b) above (1mk)

.....

(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, molybdenum, 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 30 MARKS

ANSWER ALL THE QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED

1. Name **four** beef breeds of cattle. (2 marks)

.....

2. Name the most appropriate tools used in the following operations(1 1/2marks)

a) Removing metal chipping in files

.....

b) Cutting wood along the grains

.....

c) Branding

.....

3. Give **four** practices carried out on fish before preservation. (2 marks)

.....

4. Outline **four** reasons for steaming up a gestating a cow. (2 marks)

.....

5. List **four** factors considered when selecting eggs for marketing. (2 marks)

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6.State **three** qualities of a good livestock ration. (1½marks)

7.Sate **four** advantages of carrying out raddling in sheep management. (2 marks)

8.State **four** disadvantages of using a spray race in the farm. (2 marks)

9.List **four** causes of sterility in dairy cows. (2 marks)

10.List **four** effects of ticks on livestock bodies. (2marks)

11.State **four** factors that influence selection of construction materials. (2 marks)

12.Name **three** farm implements operated by the tractor’s P.T.O shaft. (1½marks)

13.State **four** reasons for debeaking in poultry production. (2 marks)

14.Name **three** breeding diseases controlled through the use of artificial insemination. (1½marks)

.....
.....
.....

15. Give **four** characteristics of a good vaccine. (2 marks)

.....
.....
.....
.....

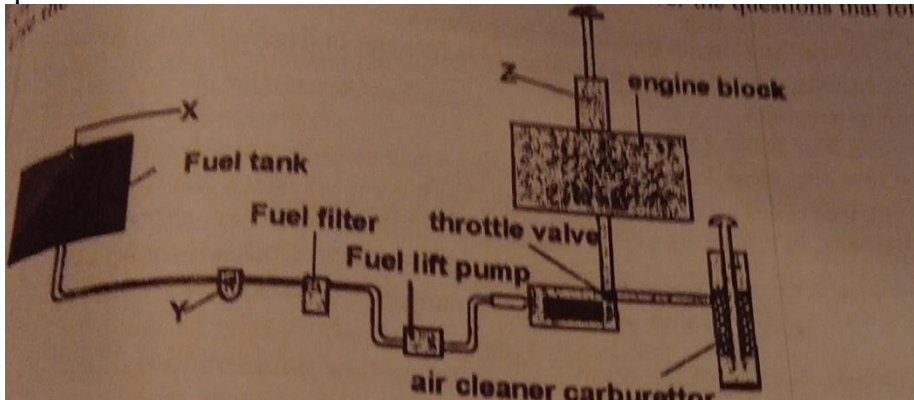
16. State **four** advantages of Kenya top bar hive in bee keeping. (2 marks)

.....
.....
.....
.....

SECTION B 20 MARKS

ANSWER ALL THE QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED

17. The diagram illustrated below shows a petrol engine fuel system. Study it carefully and answer the questions that follow.



a) Name the parts labelled X, Y and Z. (3 marks)

X.....
Y.....Z.....

b) State the maintenance practice of the following parts;(2 marks)

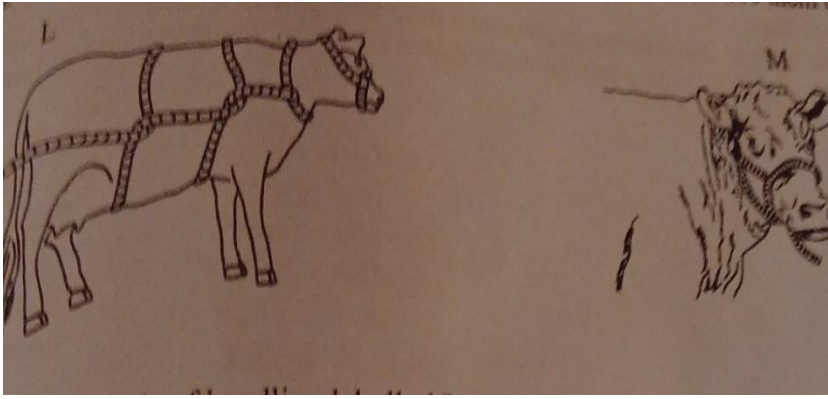
i) Fuel tank cap

.....
.....

ii) The carburetor

.....
.....

18. The diagram below shows two methods of handling livestock in the farm. Study them and answer the questions that follow.



a) Identify the methods of handling livestock labelled L and M. (1 marks)

L.....
 M.....

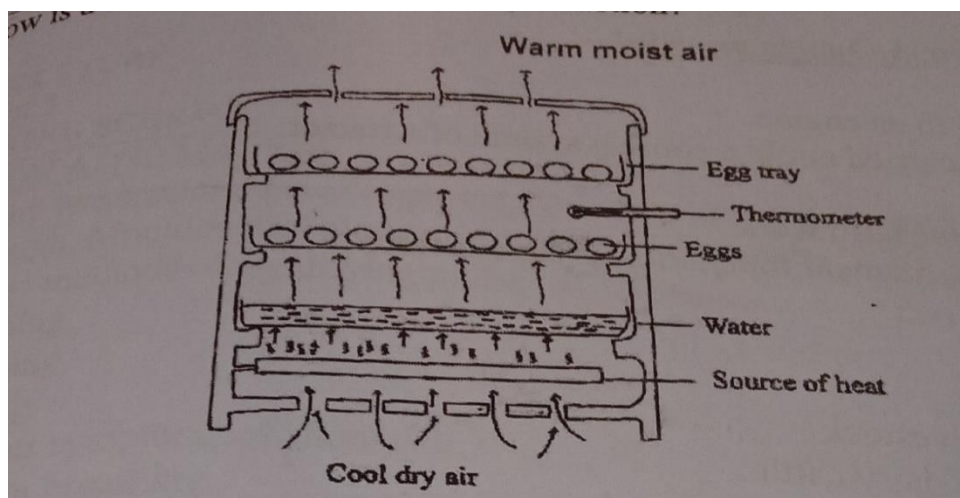
b) Give **two** occasions when it may be necessary to carry out the practice labelled L above. (2 marks)

.....

c) Give **two** animal conditions under which method L above cannot be used. (2 marks)

.....

19. Below is structure used in poultry production. Use it to answer the questions that follow.



a) Identify the structure illustrated above. (1 mark)

.....

b) State the main function of the structure illustrated above. (1 mark)

.....

c) Give the main function of the following in the structure (3 marks)

i) Water

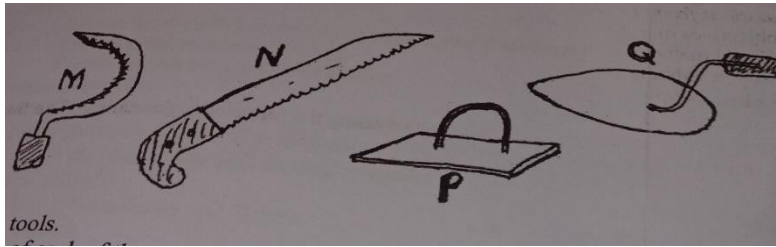
.....

 ii)Source of heat

.....

 iii) Thermometer

.....
 20.The diagrams illustrated below shows tools used in the farm. Study the carefully and answer the questions that follow.



a) Identify the tools labelled P and Q. (2 marks)

P.....

Q.....

b) State the use of the tools labelled M and N. (2 marks)

M.....

N.....

c)Give **two** ways in which the tools illustrated above depreciate in value. (1 mark)

.....

SECTION C 40 MARKS

ANSWER ONLY TWO QUESTIONS IN THIS SECTION IN THE SPACES PROVIDE AFTER THE QUESTIONS

21.a) Explain **ten** advantages of battery cage system in poultry rearing. (10 marks)

b) Outline the procedure of training a calf for bucket feeding. (5 marks)

c) Outline **five** signs of tapeworm infestation. (5marks)

22.a) Explain the functional differences between a disc plough and a mould board plough. (8 marks)

b) Explain **eight** factors considered when siting farm structures. (8 marks)

c)Outline **four** ways in which infectious diseases can spread in livestock production. (4 marks)

23.a) Describe foot rot under the following sub-heading;

i)Animals affected (1 mark)

ii)causal organism (1mark)

iii)Symptoms of attack (4marks)

iv)Control measures (4marks)

b) Describe the function of various parts of a plunge dip.(10 marks)

**KCSE REPLICA 3
PAPER 1**

SECTION A 30 MARKS

ANSWER ALL THE QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED

1.State **three** ways in which crop rotation improves soil fertility. (1½marks)

.....

2.List **four** methods of farming. (2 marks)

.....

3.Give **four** importance of cost as used in agricultural economics. (2 marks)

.....

4.List **four** factors a farmer considers when siting a nursery bed. (2 marks)

.....

5. State **four** ways in which government policy contributes to agriculture. (2 marks)

.....

6.State **four** disadvantages of concession land tenure. (2 marks)

.....

7.Give **four** reasons why cereal grains should be dried before storage. (2 marks)

.....

8.State **three** importance of cutting back in pyrethrum. (1½marks)

.....

9. Outline **four** observable indicators of economic growth of a country. (2 marks)

.....

10. State **four** solutions that can help solve the problem of perishability in horticultural crops. (2 marks)

.....

11. Give **four** disadvantages of using organic manures in crop production. (2 marks)

.....

12. State **four** ways in which chemical kills the weeds in the crop field. (2 marks)

.....

13. State **four** management practices that promote high herbage yields in pasture production. (2 marks)

.....

14. Distinguish between seed dressing and seed inoculation. (2marks)

.....

15. State **four** agriculture support services available to a crop farmer (2 marks)

.....

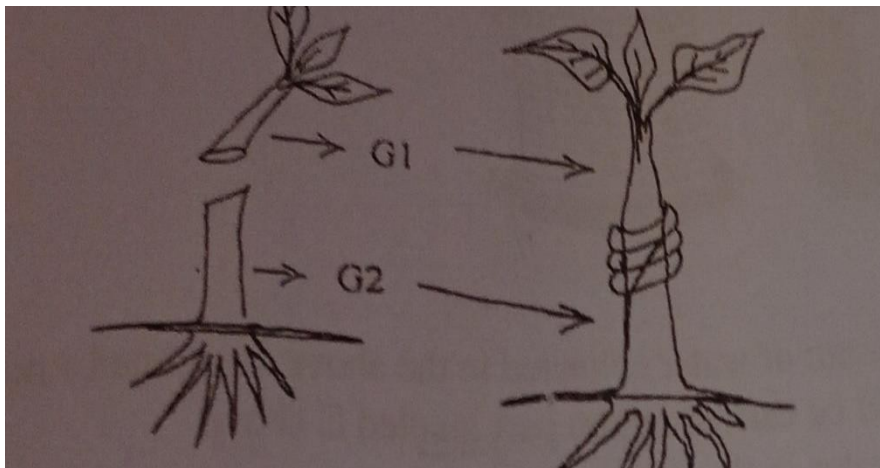
16. State **two** precautions to be taken when harvesting cotton. (1 mark)

.....

SECTION B 20 MARKS

ANSWER ALL THE QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED

17. The diagram illustrated below shows a method of grafting. Study it carefully and answer the questions that follow.



a) Identify the type of grafting illustrated above. (1 mark)

.....

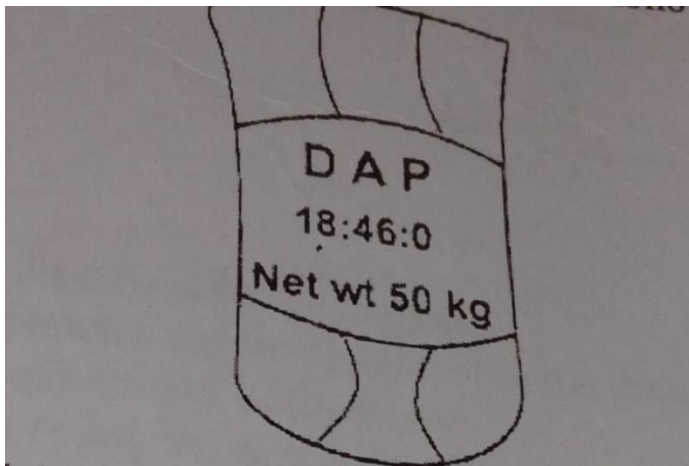
b) Name the parts named G1 and G2. (1 mark)

G1.....
 G2.....

c) State **three** advantages of grafting in agroforestry. (3 marks)

.....

18. The diagram illustrated below shows a DAP fertilizer bag. Study it carefully and answer the questions that follow.



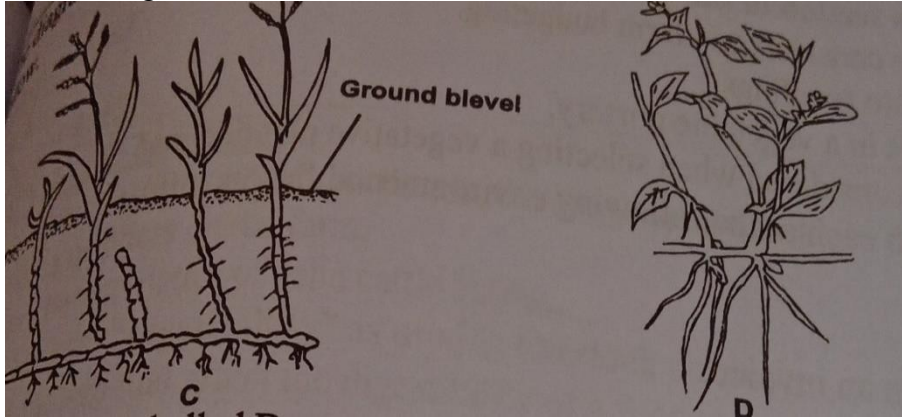
a) What do the figures labelled on the diagram stand for. (1 mark)

.....

b) With a reason name the class of inorganic fertilizer that DAP belong. (2 marks)

c) Calculate the amount of filler material in 200 kg of DAP with a fertilizer grade of 18:46:0. (2 marks)

19. The diagrams illustrated below shows common weeds. Use them to answer the questions that follow.



a) Identify the weeds labelled C and D. (2 marks)

C.....

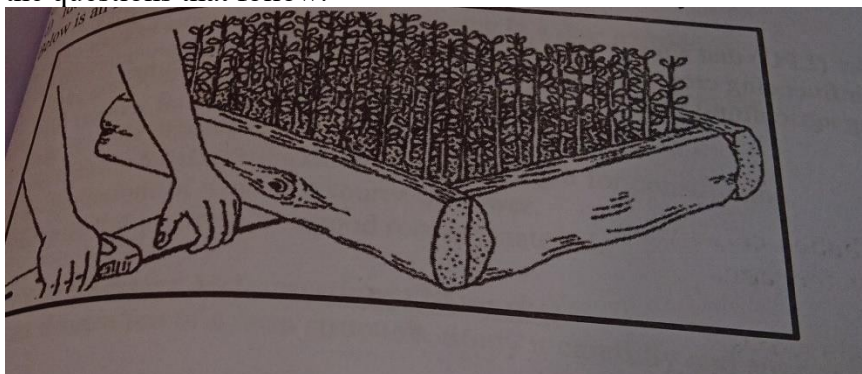
D.....

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

c) Give **one** reason why it is difficult to control the weed labelled D. (1 mark)

d) Name the appropriate category of herbicide used to control weed labeled C. (1 mark)

20. The diagram illustrated below shows an activity carried out in agroforestry. Study it carefully and answer the questions that follow.



a) Identify the activity illustrated above. (1 mark)

b) State **two** reasons for carrying out the activity identified above. (2 marks)

c) Name **two** tools that may be used to carry out the activity illustrated above. (2 marks)

.....

SECTION C 40 MARKS

ANSWER ONLY TWO QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED AFTER THE QUESTIONS

21. a) The following information was found in Mr. Kamau’s farm record for the year ending December 2014. Study it carefully and answer the questions that follow.

Bought goats	4,000
Bought poultry	15,000
Bought dairy meal	25,000
Bought pasture seeds	50,000
Transportation of farm produce	15,000
Paid casual workers	12,000
Hired an ox-plough	10,000
Opening valuation	150,000
Sale of mohair	75,000
Sale of rabbits	36,000
Sold dairy cow	70,000
Received cash from the sale of wheat	100,000
Sold cabbages	20,000
Received money from the sale of eggs	15,000
Closing valuation	200,000

i) Prepare a profit and loss account for Mr. kamau’s farm. (7 marks)

ii) Did he make a profit or loss. (1 mark)

iii) Calculate the percentage profit or loss that Mr. Kamau made. (2 marks)

b) Outline **five** functions of Kenya National Federation of producers in Kenya. (5 marks)

c) Explain **five** effects of solifluction. (5 marks)

22.a) Explain **eight** factors that influence the type of irrigation to be used in a farm. (8 marks)

b) Outline **five** importance of draining agricultural land. (5 marks)

c) Explain **seven** safety precautions observed when spraying herbicides. (7 marks)

23a) Explain **ten** functions of marketing. (10 marks)

b) Explain **five** factors that should be considered when deciding the depth of planting seeds. (5 marks)

c) Outline **five** characteristics of a green manure crop. (5 marks)

PAPER 2

SECTION A (30 MARKS)

Answer ALL questions in this section.

1. List four tools that are used in plumbing. (2mks)

.....

.....

.....

.....

2. State four requirements of artificial colostrum. (2mks)

.....

.....

.....

.....

3. Name two notifiable diseases in cattle. (1mk)

.....

.....

4. Give two reasons for using litter in a poultry house. (2mks)

-
-
5. State two functions for each of the following members of a bee colony. (1mk)
- a) Queen
-
-
-
- b) Drone (1mk)
-
-
6. Give four effects of external parasites that are harmful to livestock. (2mks)
-
-
-
-
7. State two functions of the crop in poultry digestive system. (1mk)
-
-
8. Distinguish between the following terms as used in livestock health. (1mk)
- a) Isolation and quarantine (1mk)
-
-
-
- b) Curative drug and prophylactic drug. (1mk)
-
-
-
9. State two functions of lubrication system on a tractor. (2mks)
-
-
-
-
10. State four factors to consider when siting a fish pond. (2mks)
-
-
-
-
11. Give four ways of stimulating milk let down in dairy cow. (2mks)
-
-
-
-
12. State four factors that would determine the amount of concentrate fed to dairy cattle. (2mks)
-
-
-
-
13. Outline four features of housing that help to control livestock diseases. (1mk)
-
-
-
-

.....

14. Name three parts of a truss. (1 1/2mks)

.....

15. State the functional difference between the following

a) Ring spanner and adjustable spanner. (1mk)

.....

b) Bolus gun and drenching gun. (1mk)

.....

16. Outline three methods of selection in livestock production. (1 1/2mks)

.....

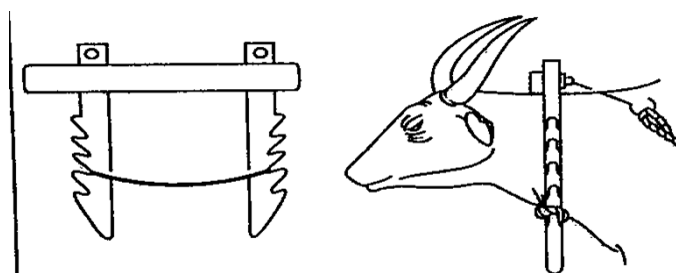
17. State four features of a good laying nest. (2mks)

.....

SECTION B (20 MARKS)

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

18. The diagram shows power harnessing on the farm. Study it and answer the questions that follow.



a) Identify the equipment. (1mk)

.....

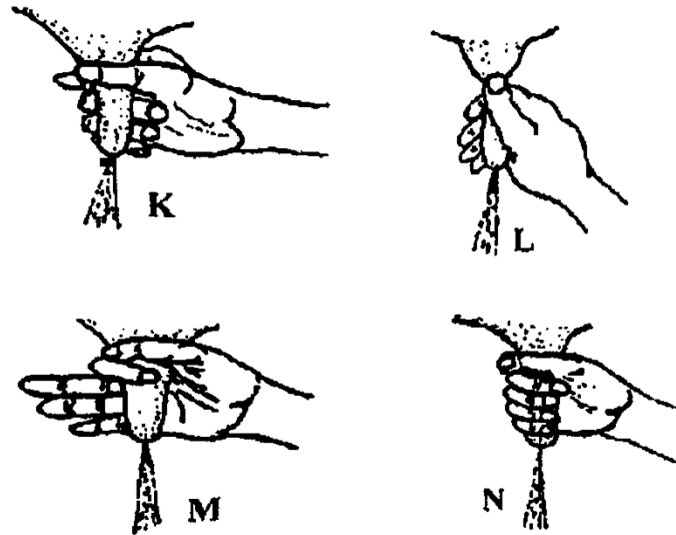
b) Name two animals used in the above diagram. (2mks)

.....

c) State two disadvantages of this source of power. (2mks)

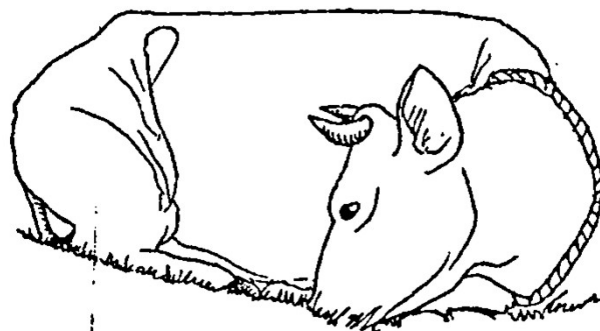
.....

19. The diagram labelled 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? (1mk)
- c) How would a milk man ensure no milk remains in the udder at the end of milking? (1mk)
- d) State any two post milking practices that should be carried out on milk. (2mks)

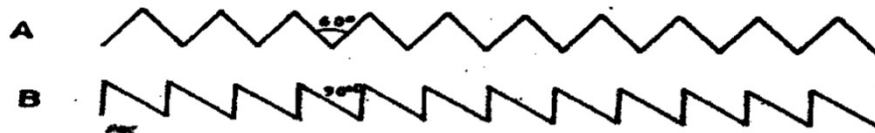
20. Below is an illustration of a farm animal suffering from a livestock disease. Study it carefully and answer the questions that follow.



- a) Identify the disease. (1mk)

- b) Apart from the animal in the illustration name other two types of animals that are attacked by the same disease. (2mks)
- c) Name the category in which the above identified disease belongs. (1mk)
- d) Name the main cause of the disease that you have identified in (i) above. (1mk)

21. The diagrams below labeled A and B below show teeth arrangements in hand workshop tools.



- a) Identify the tools represented by the teeth arrangements. (1mk)
 - A
 - B
- b) State one functional difference between tools represented by the teeth arrangements A and B. (2mks)

.....

.....

.....
- c) Give two maintenance practices for the tools represented by the teeth arrangement shown above. (1mk)

.....

.....

.....

SECTION C (40 MARKS)

Answer any two questions in this section.

- 22. (a) Explain five advantages of the Kenya Top Bar bee hive in rearing bees. (10mks)
- (b) Describe ten signs of ill health in livestock. (10mks)
- 23. (a) Describe the process of egg formation in the reproductive system of a hen. (10mks)
- (b) state five benefits of using biogas as a source of energy. (5mks)
- (c) Outline five key reasons for maintaining farm tools and equipment. (5mks)
- 24. (a) Describe the management of one day chicks in a brooder until eight weeks old. (10mks)
- (b) State five operational differences between a disc plough and mouldboard plough. (5mks)
- (c) Describe the signs of infestation by tape worm on an animal. (5mks)

KCSE REPLICA 4

PAPER 1

SECTION A: ((30 MKS)

1. State two ways in which Agriculture promotes industrialization. (1mk)

2. a) Define the term Sub-Soiling. (1mk)

b) State any two advantages of sub-soiling in a crop field. (1mk)

3. State two characteristics of good pastures. (1mk)

4. Give four symptoms of potassium deficiency in crops. (2mks)

5. State four factors that determine the quality of farm yard manure. (2mks)

6. a) What is opportunity cost? (1mk)

b) State two circumstances under which opportunity cost exists. (1mk)

7. In each of the following nursery practices give the importance:- (2mks)

i) Hardening off-

ii) Pricking out –

8. Name two diseases that affect beans during establishment. (1mk)

9. List four types of grafting. (2mks)

10. State four advantages of organic farming. (2mks)

11. State four field conditions that would necessitate the use of fork jembe instead of an ordinary jembe. (2mks)

12. State four advantages of using fertilizers instead of manures in crop nutrition. (2mks)

13. Give three precautions to be observed when harvesting cotton. (1 ½mks)

14. Differentiate between over sowing and under sowing during pasture establishment. (1mk)

15. What is “equilibrium price” as used in agricultural marketing? (1mk)

16. Outline four ways in which mulching helps in soil and water conservation. (2mks)

17. List any four financial documents used in farm accounting. (2mks)

18. State three factors considered when siting a compost pit. (1 ½ mks)

SECTION B: (20MKS)

19. A soil sample weighing 120 grams was heated in an oven 105⁰c. The dry soil was weighed and the weight recorded as 112 grams. the sample was then heated strongly after which it was recorded as 106 grams.

i) Calculate the percentage content of water in the initial soil sample. (2mks)

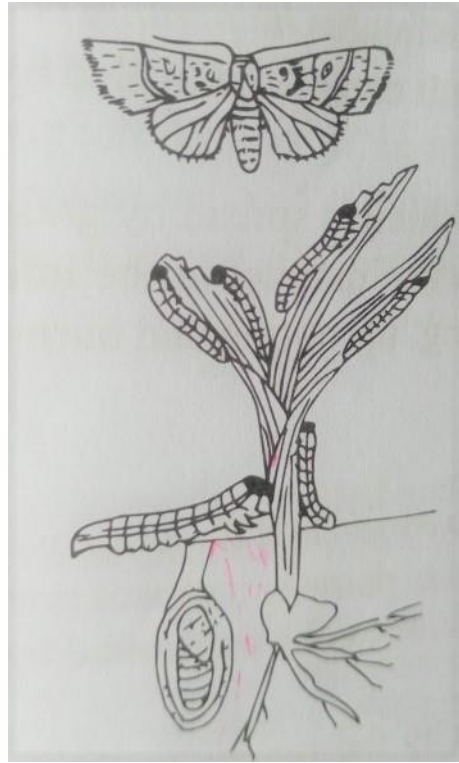
ii) Why was the soil not heated strongly initially? (1mk)

iii) Calculate the amount of humus in the soil sample. (1mk)

iv)

v) Find the percentage content of humus in the soil sample. (1mk)

20. Study the maize plant below and answer questions that follow:

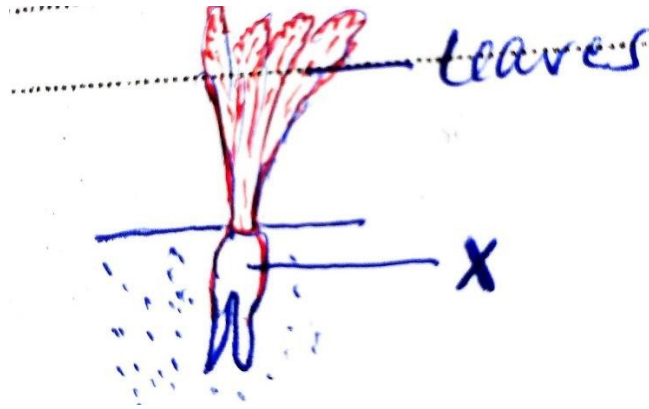


- i) Identify the pest. _____ (1mk)
- ii) Describe the damage caused by the pest in the diagram. (1mk)

- iii) At what stage of attack is the pest said to have reached economic injury level. (1mk)

- iv) Give one control measure of the pest illustrated above. (1mk)

21. Below is a diagram showing a carrot plant;



- i) Name the abnormal condition in part labeled x. (1mk)
- ii) State the category of the crop on the basis of the utilizable part. (1mk)

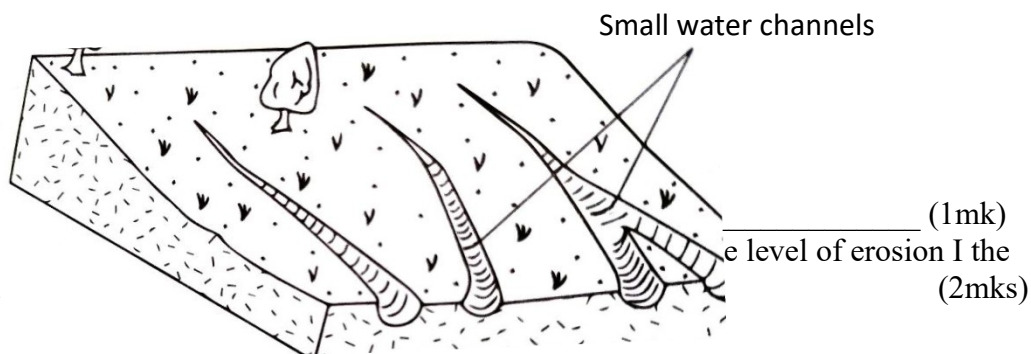
- iii) Give two causes of the condition identified in (i) above. (2mks)

22. The following are cash transactions of Undugu Farm in the month of January 2022:

- 6/1/22- Sale of 2 bags of kales @ 500/=
- 10/1/22- Bought 5 kgs of DSP fertilizer @ 100/-
- 14/1/22- Purchase of 2 slashers @ 250/-
- 15/1/22- Sale of 4 trays of eggs @ 300/-
- 19/1/22- Sale of 10 chicken @600/-
- 24/1/22- Bought 10 jembes @ 300/-

Prepare a cash account for Undugu Farm in the month of January. (4mks)

23. Below is one of the types of water erosion in a crop field.



- i) N (1mk)
- ii) G (2mks)
- di

SECTION C. (40MKS)

24. a) Describe the production of tomatoes (*Lycopersicon esculentum*) under the following sub-headings.

- i) Transplanting process (5mks)
- ii) Field management practices (5mks)
- iii) Disease control. (4mks)

b) State the possible short comings of communal land tenure system. (6mks)

25. a) Describe the practices that a farmer should carry out to ensure uniform germination of seeds. (8mks)

b) Explain six cultural methods of weed control. (12mks)

26. a) Outline seven advantages of budgeting. (7mks)

b) Explain five factors that should be considered when designing a crop rotation programme. (10mks)

c) Outline 3 disadvantages of sub-surface irrigation. (3mks)

PAPER 2

SECTION A (30 MARKS)

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

1. (a) What is a notifiable disease (1mk)

.....

(b) Name **two** notifiable diseases of cattle (1mks)

.....

2. Give **four** faults in the eggs that are detected during egg candling (2mks)

.....

.....

3. Give **two** reasons for maintaining farm tools (1mk)

.....

4 (a) Give **two** roles of litter in a deep litter poultry house (1mk)

.....

(b) State **one** role of footbath in a poultry house (½ mk)

.....

5. Mention **four** advantages of embryo transplant (2mks)

.....

.....

6. Give functional difference between the following tools (2mks)

(a) Stock and die and pipe cutter

.....

(b) Ball pein hammer and claw hammer

.....

7. State **four** features of an ideal calf pen (2mks)

.....

.....

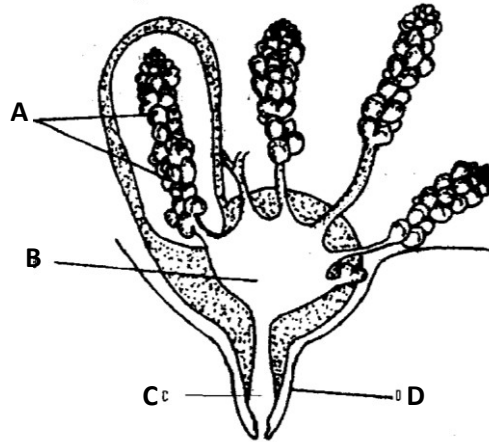
8. State **four** signs of furrowing observed in pigs (2mks)

-
-
-
-
-
9. State **three** methods of restraining cattle (1 ½ mk)
-
-
-
-
-
10. Give **four** ways of stimulating milk let down in a dairy cow (2mks)
-
-
-
-
-
11. Differentiate between cropping and harvesting in fish keeping. (1 mark)
-
12. Name the dairy breed of cattle which (1mk)
- (a) Produces the highest yield of milk
-
- (b) Produces milk with the highest butterfat content
-
13. State **four** pre-disposing factors of mastitis (2mks)
-
-
-
-
-
14. Name any **two** renewable sources of power in the farm (1mk)
-
-
-
-
-
15. State **four** factors considered when computing a ration for livestock on the farm(2mks)
-
-
-
-
-
-
16. State **two** ways in which digestion of food in pigs differs from that in Ruminants(2mks.)
-
-
-
-
-
17. State **two** conditions which would make it necessary to feed bees (1mk)
-
-
-
-
-
18. State **two ways of** caponization in poultry (2mks)
-
-
-
-
-
-

SECTION B (20 MARKS)

Answer all questions in this section in the spaces provided

19. The diagram below is a cross section of part of a cow's udder.



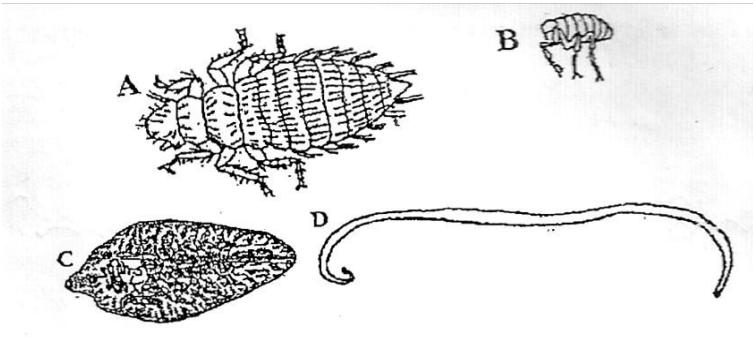
a) Label the parts marked A,B,C and D
(2mks)

- A.....
- B.....
- C.....
- D.....

b) Name **two** hormones that control milk - let down in a dairy cow. (2mks)
.....
.....

c) What is a dry cow therapy (1mk)
.....

20.(a) Identify each of the parasites of livestock shown below. (2marks)

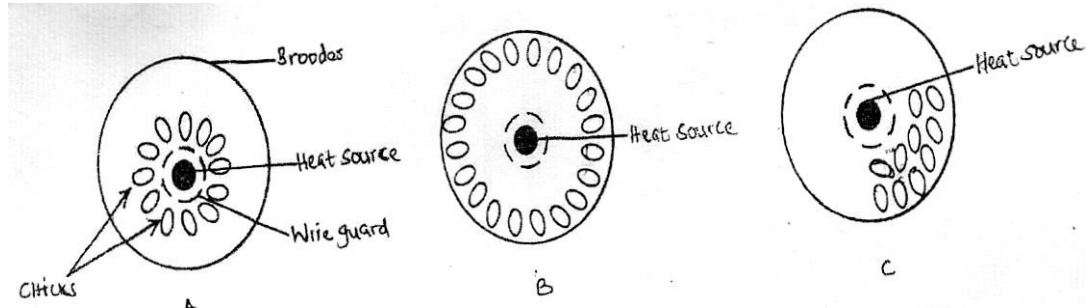


- A.....
- B.....
- C.....
- D.....

(b) What is the difference between parasites A and B and parasites C and D? (1mark)
.....
.....

(c) Suggest an effective control measure of the parasites labelled C (1mark)

21. Below are illustrations showing the behavior of chicks in various brooders. Study the diagrams and answer the questions that follow.



(i) State the environmental problem in each brooder as illustrated by the behavior of the chicks (3marks)

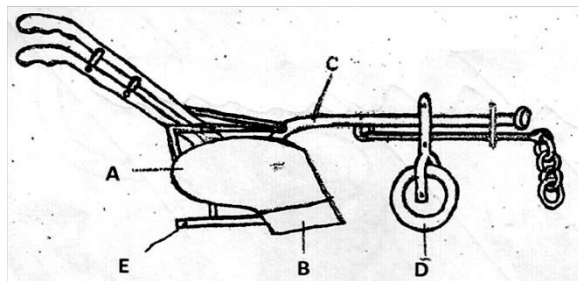
- A.....
- B.....
- C.....

(ii) State two ways of overcoming the problem in B (2marks)

-
-

(iii) Why brooder is recommended to be round in shape (1mks)

22. Below is a diagram of a farm implement



(a) Identify the implement (½ mark)

(b) Label the parts marked A, B, C, D and E. (2 ½ marks)

(c) State the functions of the parts labelled C and E (2mks)

SECTION C (40 mks)

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

- 23. (a) Discuss the management of layers from one day old to the start of laying in a deep litter System. (14mks)
- (b) Explain management practices that would improve fish production. (6mks)
- 24 (a) State the daily maintenance and servicing of a tractor (10marks)
- (b) Describe the structural requirement to be considered when constructing a calf pen (10marks)
- 25 a) Explain four factors that affect digestibility of food in livestock. (8mks)
- b) Explain the essentials of clean milk production (7mks)
- c) State five disadvantages of natural method of mating. (5mks)

**KCSE REPLICA 5
PAPER 1**

SECTION A (30 MARKS)

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

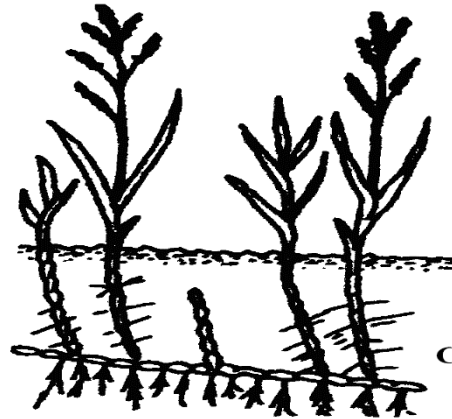
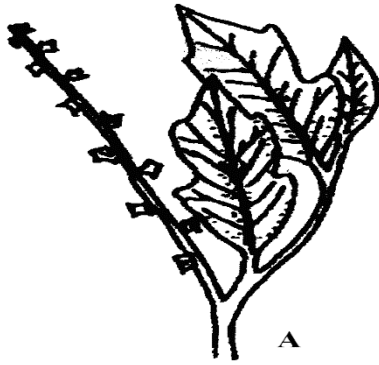
1. State **two** ways in which agriculture contributes directly to the development of industries. (1mk)
.....
.....
2. What is a micro catchment ? (½ mk)
.....
.....
3. State any three details contained in a delivery note. (2mks)
.....
.....
4. Outline any four problems farmers face when marketing their products. (2mks)
.....
.....
.....
5. Name three sites for agro forestry trees. (1 ½ mks)
.....
.....
6. State **two** ways in which land consolidation improves farm management. (1mk)
.....
.....
b) State four advantages confers to a farmer with land title deed (2mks)
.....
.....
.....
7. Give four reasons for earthing up some crops. (2mks)
.....
.....
.....
8. Give two reasons for testing soil in the farm. (1mk).
.....
.....
9. List **four** examples of variable inputs in maize production. (2mks)
.....
.....
.....
10. Name four books of account kept by a farmer (2 mks)
.....
.....

-
-
11. Give **two** functions of the Agricultural Finance corporation (AFC) (2mks)
-
12. State **two** common symptoms of viral infection in crop (1mk)
-
13. State four conditions under which opportunity cost equals to zero (2mks)
-
-
14. Name **four** factors that may affect the selectivity and effectiveness of herbicides. (2mks)
-
-
15. Give **two** means by which water can be conveyed from the place of storage to where it is needed on the farm. (1mk)
-
16. List **four** pieces of information likely to be found in a field operation record. (2mks)
-
-
17. Give **four** qualities of good silage. (2mks)
-
-
18. A farmer was advised to apply 200kg of CAN/ha, while top dressing bean crop. CAN contains 21% N. Calculate the amount of CAN applied per hectare. (2mks)
-
-

SECTION B (20 MARKS)

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

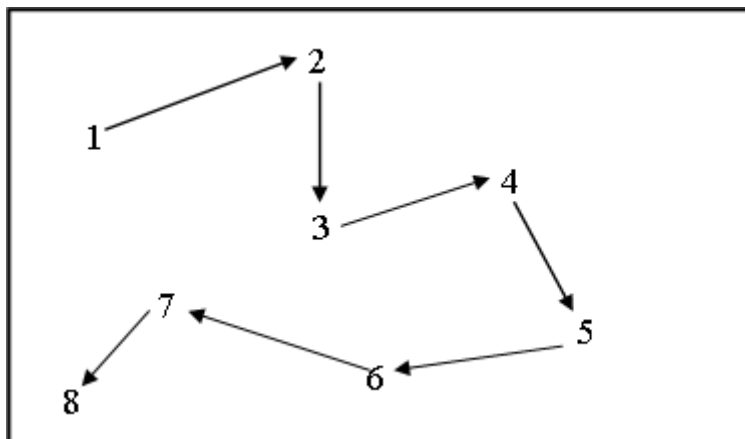
19. Below are diagrams of common weeds on the farm. Use them to answer the questions that follow.



- a) Identify the weeds A, B, C and D (1mks)
 A.....
 B.....
- b) Give **one** negative effect of weed labeled B in livestock. (1mk)

- c) Suggest the most appropriate method of controlling weed labeled D (1mk)

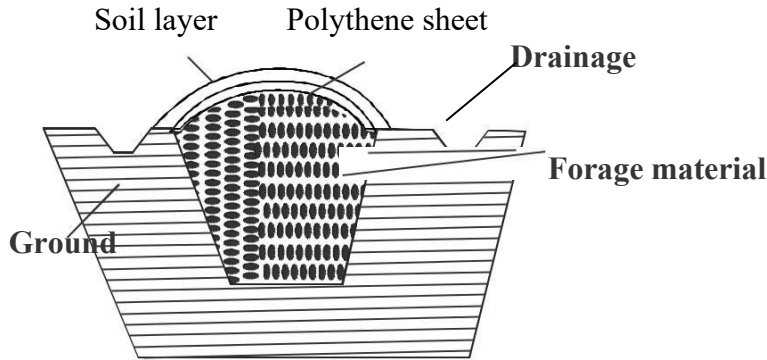
20. The diagram below illustrates a method of collecting soil samples from a field



- a) Identify the method illustrated above. (1mk)

- b) Describe four steps that should be followed when collecting soil samples. (2mks)
- i).....
- ii).....
- iii).....
- iv).....
- c) State **two** precautions a farmer should take when collecting a representative soil sample from the field for testing. (1mk)

21. The diagram below shows a method of forage preservation

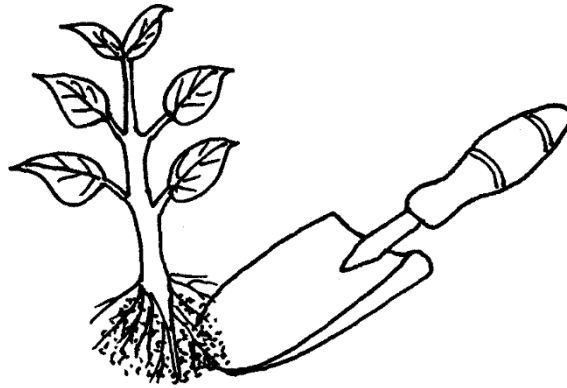


- a) Identify the structure above (1 mk)
- b) State the form in which the forage is preserved as illustrated above (1 mk)
- c) Give the role played by each of the following in the structure above
- i) Polythene sheet (1 mk)
- ii) Drainage (1 mk)
- d) Name two other methods of forage conservation (1 mk)
22. The document shown below is a sample of a delivery note. Study it carefully and answer the questions that follow:

DELIVERY NOTE		
NO.1236		
Date.....		
FROM.....		
TO.....		
Please receive the following goods		
Item	A	B
1.	Chick mash	20 bags
2.	Dairy Meal	10 bags
3.	CAN fertilizer	4 bags (50kg)
Received the above goods in good condition and order.		
Delivered by.....		
Received by.....		

- a) Name the column labeled A and B (1mk)
 A.....
 B.....
- b) What is the purpose of this document in business transaction? (1mk)
- c) Outline **four** details that the document should contain for it to be complete. (2mks)

23. Study the illustration in the diagram below and answer questions that follow.



- a) Identify the practice being illustrated above. (1mk)

- b) State **three** activities that should be carried out for successful results in the practice shown above. (3mks)

SECTION C (40 MARKS)

Answer any two questions from this section in the spaces provided after question 26.

- 24. a. Explain the terms risks and uncertainties in farming (2 mks)
- b. State the various risks and uncertainties farmers face in fanning (12 mks)
- c. Explain various ways in which farmers adjust to risks and uncertainties in farming (6mks)
- 25. a) Describe the characteristics of ideal agroforestry tree species (10mks)
- b) Explain **five** physical methods of pest control (10mks)
- 26. a) The following information was extracted from Bidii farm’s book records as at 31st December 2022. The farm had borrowed a long term loan of 1 million from the co-operative bank and owed Ksh.10,000 to the co-operative society shop for coffee sprays and cattle feeds. The farm is owed Ksh.10,000 for milk delivered to New KCC. Salaries amounting to Ksh.9,500 had not been paid. The valuations of the farm were as follows.

<u>Item</u>	<u>Ksh.</u>
Cattle	125,000
Goats	19,000
Poultry	35,000
Coffee trees	95,000
Equipment	40,000
Farm buildings	145,000
Stored cattle feed	4,000
Stored cattle spray	21000
Money in cash box	2,000
Land valued at	600,000

- i) Prepare a balance sheet for Bidii farm as at 31st December, 2022 (7mks)

- ii) Show whether Bidii farm was solvent or insolvent (1mk)
- iii) Explain your answer in (ii) above. (1mk)
- (b) Explain principles governing formation of cooperatives (8mks)
- (c) Describe three advantages of mixed stand of pastures. (3mks)

PAPER 2

SECTION A [30 MARKS]

Answer All The Questions in The Spaces Provided.

1. State two factors that may cause ewes not to conceive after service. [1 mark]
 - (i)
 - (ii)
 - (iii)
2. State three signs of anthrax infection disease observed in the carcass of cattle [1 1/2 mark]
 - (i)
 - (ii)
 - (iii)
3. State three adjustment that should be carried out on a tractor-mounted moldboard plough in preparation for ploughing. [1 1/2 mark]
 - (i)
 - (ii)
 - (iii)
4. Outline two main characteristics of the Bactrian camel breed. (1 mark)
 - (i)
 - (ii)
5. State four construction features necessary in a fish pond. [2 marks]
 - (i)
 - (ii)
 - (iii)
 - (iv)
6. State four conditions that would encourage hens to eat eggs in poultry production.[2 marks]
 - (i)
 - (ii)
 - (iii)
 - (iv)
7. What is the reason for turning eggs regularly during incubation? (1 mark)
 - (i)
 - (ii)
8. State four practices that should be carried out on wooden fencing posts to make them last long. [2 marks]
 - (i)
 - (ii)
 - (iii)
 - (iv)
9. Name four structures which would assist in the control of livestock parasites on a farm. [2 marks]
 - (i)
 - (ii)
 - (iii)
 - (iv)
10. Give two benefits of providing enough nutrients to livestock for proper health. [1 mark]
 - (i)

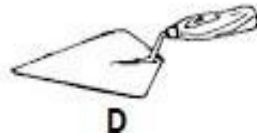
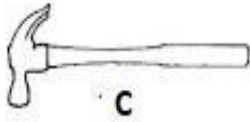
- (ii)
11. Give two harmful effects of ticks in sheep. [2 marks]
 (i)
 (ii)
12. State four roles of worker bees in a colony. [2 marks]
 (i)
 (ii)
 (iii)
 (iv)
13. State the role of the crop in digestive system of a hen. [2 marks]
 (i)
 (ii)
14. State four reasons for castration in pig production. [2 marks]
 (i)
 (ii)
 (iii)
 (iv)
15. State two benefits of guard rails to piglets in a farrowing pen? [1 mark]
 (i)
 (ii)
16. State the role of a foot bath in a cattle Dip. (1 mark)
 (i)
 (ii)
17. Distinguish between the following practices as used in livestock production.
 (a). Crutching and ringing in sheep production. (2 marks)

 (b). Cropping and harvesting in fish farming. (2 marks) State two
 characteristics of a poor layer in poultry production. (1 mark)

SECTION B [20 MARKS]

Answer all questions in this section in the spaces provided.

18. A pig farmer in sugoi is required to prepare 100kg of sow and weaner meal containing 20% digestible crudeprotein (D.C.P). Calculate the quantity of soya bean (50% D.C.P) and rice (16% D.C.P) the farmer requires for the meal. Use the Pearson’s square method. (4 marks)
19. The diagram below represent farm tools and equipment. Study them and answer the questions that follow.



(a). Identify the tool/equipment labelled B and C. (1 mark)

B -

C -

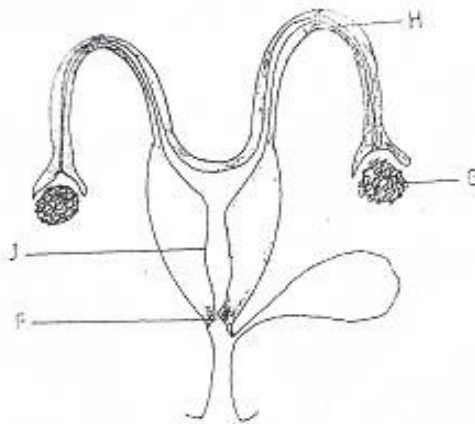
(b). State the role of C and D (2 marks)

(c). Give two maintenance practices for the equipment labelled A. (1 mark)

(i)

(ii)

20. The diagram below shows the reproductive system of a cow study it carefully and answer the questions that follow.



(a). Name the parts labelled J and G. (2 marks)

(b). Give two functions of the part labelled F. (2 marks)

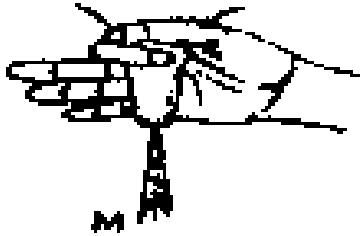
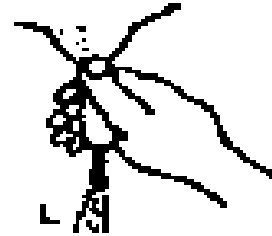
(i)

(ii)

(c). Give the role of the part labelled H. (1 mark)

(i)

21. 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. (1 mark)

- (b). How long should I take to milk a cow from the start to the end of milking. (1 mark)

- (c). How would a milkman ensure that no milk remains in the udder at the end of milking? (1 mark)
 (i)
- (d). State two disadvantages of using wrong milking method. (2 marks)
 (i).....
 (ii)

22. Below is a table showing names given various livestock animals at various stages of growth. Fill in the Blank spaces. (2 marks)

Stage	Name		
	Pigs	Cattle	Poultry
Mature male for breeding			cock
Young female before first parturition	Gilt		Pullet
Young one from birth/hatching to meaning		calf	chick

SECTION C. (40 MARKS)

Answer any two questions in this section in space provided at the back..

24. (a). Describe the management of growers up to the point of lay. (10 marks)
- (b). Describe ten management practices carried out on cattle during parturition. (10 marks)
25. (a). Name the strokes in a four stroke engine and describe how each operates. (12 marks)
- (b). Describe the functions of the gear box in a tractor. (8 marks)
26. (a). Name and describe the features of an ideal calf pen. (8 marks)
- (b). Discuss pneumonia in calves under the following sub-headings: (i). predisposing factors (4 marks)
- (ii). symptoms (5 marks)
- (iii). Control measures. (3 marks)

**KCSE REPLICA 6
PAPER 1**

SECTION A (30 MARKS)

Answer All the Questions in This Section in the Spaces Provided

1. State **four** farming activities that may improve soil structure. (2 marks)

.....

2. Name **three** types of legume trees used as fodder. (1½ marks)

.....

3. State **three** effects of low temperature on crop production. (1½ marks)

.....

4. Give **three** reasons for drying grains to 21% moisture content after harvesting. (2 marks)

.....

5. State **four** parameters of national economic development. (2 marks)

.....

6. Outline **two** conditions that favors nomadic pastoralism in Kenya. (2 marks)

.....

7. State **three** factors that determine the depth of planting seeds. (1½ marks)

.....

8. State **three** factors that will determine the selectivity of herbicide in chemical weed control. (1 ½ mark)

.....

9. Outline **four** factors that affect the quality of farmyard manure. (2 marks)

.....

10. Name **three** basic concepts of economics (1½ marks)

.....

11. State **four** importance of tissue culture. (2 marks)

.....

12. Give **two** methods used to drain farmland. (1 mark)

.....

13. State **four** factors to consider when designing a sound farm plan. (2 marks)

.....

14. Name **four** improper farming methods that increase the rate of soil erosion. (2 marks)

.....

15. Outline **four** pieces of information contained in a land title deed. (2 marks)

.....

16. Differentiate between a nursery bed and a seedbed. (1 mark)

.....

17. Name **three** macro nutrients whose deficiency symptoms is chlorosis. (1½ marks)

.....

18. Define Agriculture. (½ mark)

.....

19. Give **two** reasons for sub soiling (1 mark)

.....

SECTION B (20 MARKS)

Answer All the Questions in the Spaces Provided

20. After soil sampling and testing a farmer was advised to apply 200kg of nitrogen per hectare in his 2 hectare farm. If the farmer has only diammonium phosphate (D.A.P) 18:46:0 at his disposal;

(a) Calculate the amount of D.A.P he would require (1½ marks)

(b) Calculate the amount of P2O5 he will have applied per hectare. (1½ marks)

(c) State **two** symptoms the farmer would have observed on the maize crops if he applied excess nitrogen. (2 marks)

.....

21. The diagram below shows a common weed plant.



(a) Identify the weed.....(1 mark)

(b) Why is it difficult to eradicate the above weed? (1 mark)

.....

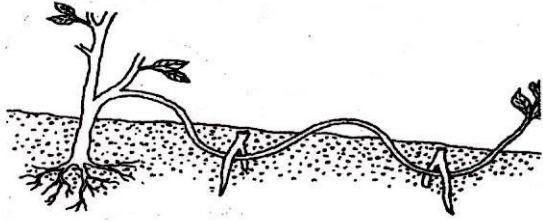
(c) Name **two** biological weed control methods. (2 marks)

.....

(c) Name **one** economic importance of the above weed. (1 mark)

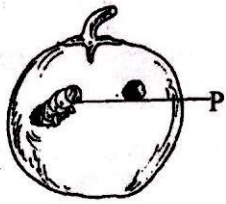
.....

22. The diagram below show a method of crop propagation. Study it and answer the question that follows:



- (a) Identify the method. (1 mark)
-
- (b) State **one** advantage of the above method over the other methods of crop propagation. (2 marks)
-
-
- (c) State **three** factors which influence the rooting of cutting in vegetable propagation (3 marks)
-
-
-

23. The diagram below shows a tomato fruit affected by a pest. Study it carefully then answer the questions that follow.



- (a) Identify the pest labeled P. (1 mark)
-
- (b) State **two** methods used to control the pest. (2 marks)
-
-
- (c) State any **two** factors to consider when selecting tomato fruits for marketing. (2 marks)
-
-

SECTION C (40 MARKS)

Answer Any Two Questions From This Section In The Spaces Provided.

- 24. (a) Outline the various uses of water in a mixed farm. (10 marks)
- (b) Describe **five** methods of draining water from a marshy land. (10 marks)
- 25. (a) Describe **five** field management practices carried out in tomatoes production. (10 marks)
- (b) Describe **five** cultural practices used in soil and water conservation (10 marks)
- 26. (a) Explain **five** factors that would influence the spacing of a particular crop in the field. (10 marks)
- (b) Describe **five** practices that a farmer should carry out to ensure uniform germination of seeds (5 marks)
- (c) State **five** factors that determine the stages of harvesting crops. (5 marks)

PAPER 2

SECTION A: (30 MARKS) Answer ALL questions in this section

1. (a) Name **three** factors that dictate distribution of livestock in Kenya. (1½ mks)

.....

(b) Name a breed of goats that is brown in colour with two white stripes running from the eyes to the nose. (½ mks)

.....

2. (a) Give **two** reasons why proper storage of tools is important. (1mk)

.....

(b) Name **two** tools that are recommended for layout and marking. (1mk)

.....

3. (a) **How** does a vaccine work? (1mk)

.....

(b) What **causes** the following conditions in livestock?

(i) Osteomalacia (½ mk)

.....

(ii) Parturient paresis (milk fever) (1/2 mk)

.....

4. Name **four** tick borne diseases in livestock. (2mks)

.....

5. (a) What is the function of esophageal groove in a ruminant (1mk)

.....

(b) List **two** methods of ration computation. (2mks)

.....
.....

6. State **four** advantages of using contemporary comparison as a method of selection in livestock. (2mks)

.....
.....
.....
.....

7. (a) What is a notifiable disease? (1/2mks)

.....

(b) List **three** examples of notifiable diseases. (1 1/2mks)

.....
.....
.....

8. Give **four** causes of high mortality in Piglets. (2mks)

.....
.....
.....
.....

9. (a) State **two** disadvantages of using metal frames in construction of farm building. (1mk)

.....
.....

(b) List any **two** wood preservatives. (1mk)

.....
.....

10. (a) State **four** factors to consider when selecting eggs for incubation. (2mks)

.....
.....
.....
.....

(b) State **four** functions of the egg shell. (2mks)

.....
.....
.....
.....

11. (a) State **four** qualities of colostrum which make it suitable for feeding newly born calf. (2mks)

.....
.....
.....
.....

(b) What is **dry cow therapy**? (1mk)

.....
.....
.....

12. (a) State **four** field conditions under which a disc plough is preferred instead of mouldboard plough. (2mks)

.....
.....
.....
.....

(b) Name **four** implements that are operated by the power take off (P.T.O) shaft. (2mks)

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.....
.....
.....

SECTION B (20 MARKS)
Answer ALL questions in this section

13. The diagram below shows an auger bit. Use it to answer questions that follow:



(a) Name the part labelled X and Y. (2mks)

X:.....

Y:.....

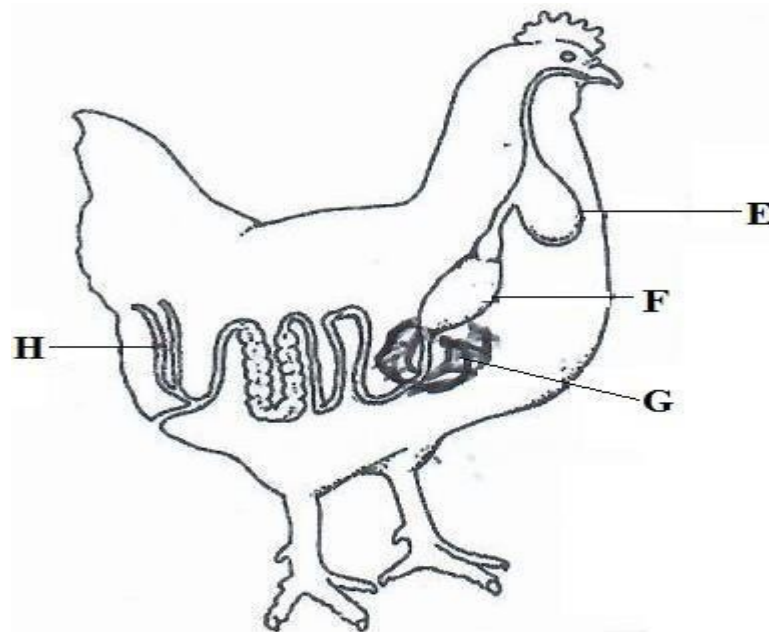
(b) Give the function of the part labelled N. (1mk)

N:.....

(c) List two other bits other than the one shown above. (2mks)

.....

14. The diagram below shows the digestive system in poultry. Use it to answer the following questions.



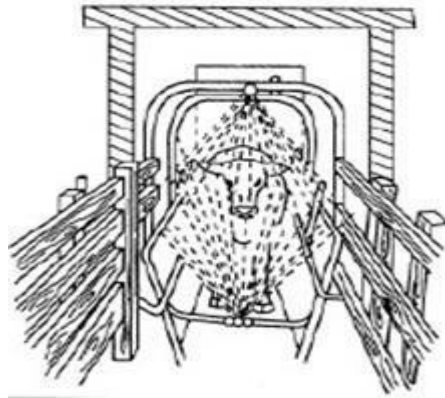
(a) Name the parts labelled E and H. (2mks)

E:..... H:.....

(b) Give the function of part F. (1mk)

(c) State **two** ways in which the part labelled G is adapted to its function. (2mks)

15. The diagram below shows a routine practice being carried out on an animal. Study it and answer the questions that follow.



(a) Identify the practice. (1mk)

.....

(b) Name the structure in which the practice is being carried out. (1mk)

.....

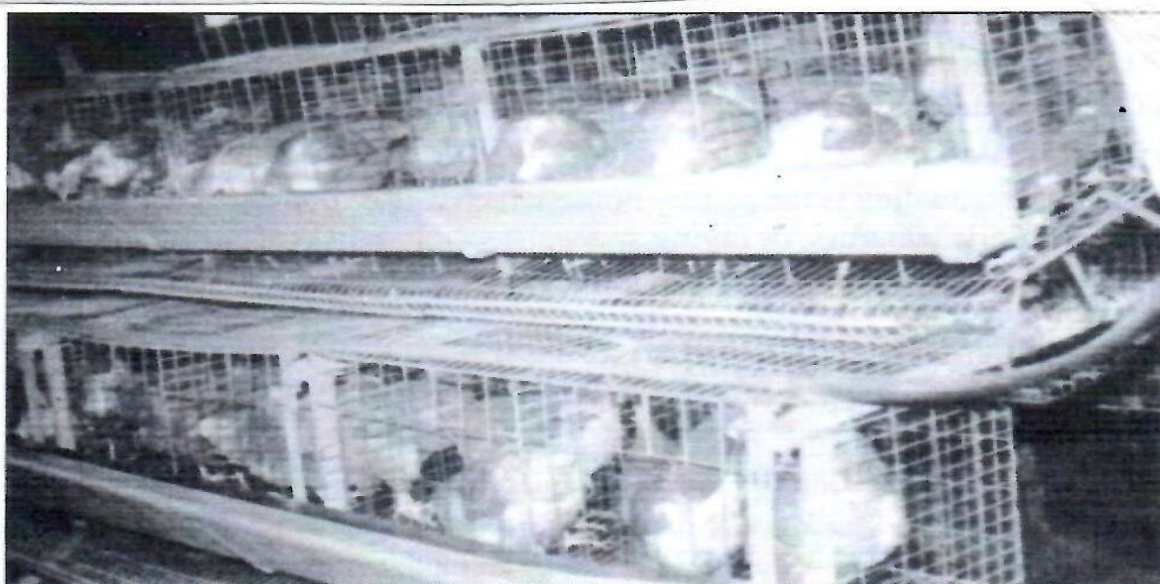
(c) State three advantages of using the above structure instead of plunge dip. (3mks)

.....

.....

.....

16. Study the picture of the system of rearing poultry and use it to answer questions that follow:



(a) Identify the system of poultry rearing shown above. (1mk)

.....
 (b) Name two other systems of rearing poultry apart from the one shown above. (2mks)

.....
 (c) State two advantages of using the above system. (2mks)

SECTION C (40 MARKS)

Answer ANY TWO questions from this section

17. (a) Describe gumboro disease under the following sub-headings
- (i) Animals affected (1mk)
 - (ii) Causal organism (1mk)
 - (iii) Incubation (1mk)
 - (iv) Symptoms of attack (5mks)
 - (v) Control (2mks)
- (b) Describe **five** characteristic of Romney marsh dual purpose sheep. (5mks)
- (c) State **five** functions of the lubrication system. (5mks)
18. (a) Describe how natural incubation is carried out and managed. (8mks)
- (b) Explain seven mechanical methods of controlling ticks. (7mks)
- (c) State **five** advantages of embryo transplant. (5mks)
19. (a) Describe the procedure of training a calf for bucket feeding. (7mks)
- (b) Describe **Eight** measures to be observed when handling bees. (8mks)
- (c) State **five** signs of ill-health observed on the animal's skin and coat. (5mks).

**KCSE REPLICA 7
PAPER 1**

SECTION A (30MKS)

Answer **ALL** the questions in this section.

1. Give four reasons why ranching is important in the arid and the semi-arid areas of Kenya. (2mks)

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.....
.....
.....

2. Explain three ways on how good transport and communication net-work improves agricultural production. (1½mks)

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.....

3. (a) A maize farmer at Lumakanda ploughed his land twice using a tractor-drawn displough. What name do we give to the second ploughing. (½mk)

.....

(b) State three reasons why rolling of land is recommended before planting some crops. (1½mks)

.....
.....
.....

4. Define the following terms as used in agriculture. (2mks) (a)
Drainage

.....
.....
.....

(b) Pumping of water

.....
.....
.....

(c) Piping of water

.....
.....

.....
(d) Irrigation

.....
.....
.....

5. What is soil fertility? (1/2mk)

.....
.....
.....

6. (a) A farmer at Bulimbo would obtain Kshs.240,000, if he grew beans, Kshs.200,000 for maize and kshs.300,000 if he grew sugarcane on his 2 acres piece of land. He chooses to grow sugarcane. What was the opportunity cost? (1mk)

.....
.....
.....
.....
.....
.....
.....
.....
.....

(b) Give two conditions under which opportunity cost exists. (1mk)

.....
.....

7. (a) What is elasticity of demand? (1mk)

.....
.....
.....

(b) State two conditions that exists for a market to be purely competitive. (1mk)

.....
.....

8. Maize is grown in a plot measuring 4m x 3m at spacing of 7cm x 30cm, 2 seeds per hole. The outer rows begins 35cm all ground the width of the plot.

(i) Calculate the number of rows falling on the width side of the plot. (1mk)

.....
.....
.....
.....

(ii) Calculate the number of plants per row. (1mk)

.....
.....
.....

9. Give two activities carried out during hardening off of tomato seedlings. (1mk)

.....
.....

10. (a) State three disadvantages of traditional stores. (1½mks)

.....
.....
.....

(b) Give the meaning of the following practices in crop production. (1½mks) (i)
Changing of cycle

.....

(ii) Training

.....

(iii) Tipping

.....

11. (a) Name three early maturing cabbage varieties. (½mk)

.....
.....
.....

(b) Give a reason why well rotten manure is not recommended in production of carrots. (½mk)

.....
.....
.....

.....
12. (a) Explain two ways how trees help in soil and water conservation. (1mk)

.....
.....

(b) Differentiate between level and graded terraces. (1mk)

.....
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.....
.....

13. Distinguish between the intensity of defoliation and frequency of defoliation in pasture management. (1mk)

.....
.....
.....

14. (a) List two signs shown by crops when they are attacked by nematodes. (1mk)

.....
.....

(b) Define the term “economic injury level” (EIL) of a crop. (1mk)

.....
.....
.....

15. Give two reasons why a bean plant growing in a carrot crop field may be treated as a weed. (1mk)

.....
.....

16. Fill in the missing blanks in the table below. (2mks)

Fixed factor land (Ha)	Variable input NCK fertilizer (kg)	Total product maize (90kg bag)	Marginal product maize (90kg bag)	Average products maize (90kg bag)
1	30	10	10	(c)
1	60	27	(a)	13.5
1	90	42	15	14
1	120	56	(b)	(d)

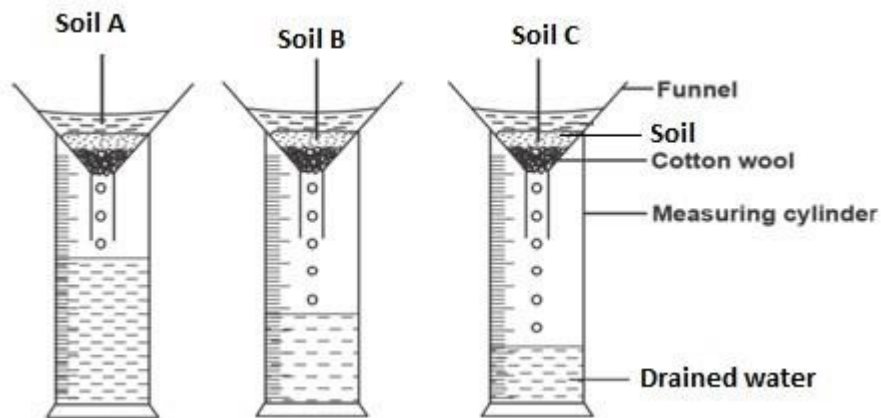
17. (a) What is the meaning of the following in agroforestry. (1mk)
- (i) Pruning
 - (ii) Looping
- (b) Name two trees that are used as livestock feeds. (1mk)

SECTION B (20MKS)
Answer ALL the questions in this section.

18. The Sacred Heart Girls High School, Mukumu Form Four student was to apply a compound fertilizer **5:20:10** at the rate of 200kg/Ha on her agricultural project plot measuring 3m x 4m.
- (a) (What do the figures 5 and 10 in the compound fertilizer stand for? (2mks)

(b) Calculate the amount of fertilizer she would require for the plot. (*show your working*) (3mks)

19. The diagram below illustrates an experiment on soil.



- (a) State the aim of the experiment. (1mk)

.....

- (b) If the volume of water illustrated in the measuring cylinder was observed after the hour. Identify the soil sample **A** and **B**. (2mks)

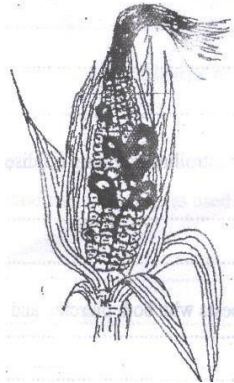
.....

.....
.....

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

.....
.....

20. The diagram below shows a crop disease. Use it to answer questions that follow.



(a) Identify the crop disease. (1mk)

.....

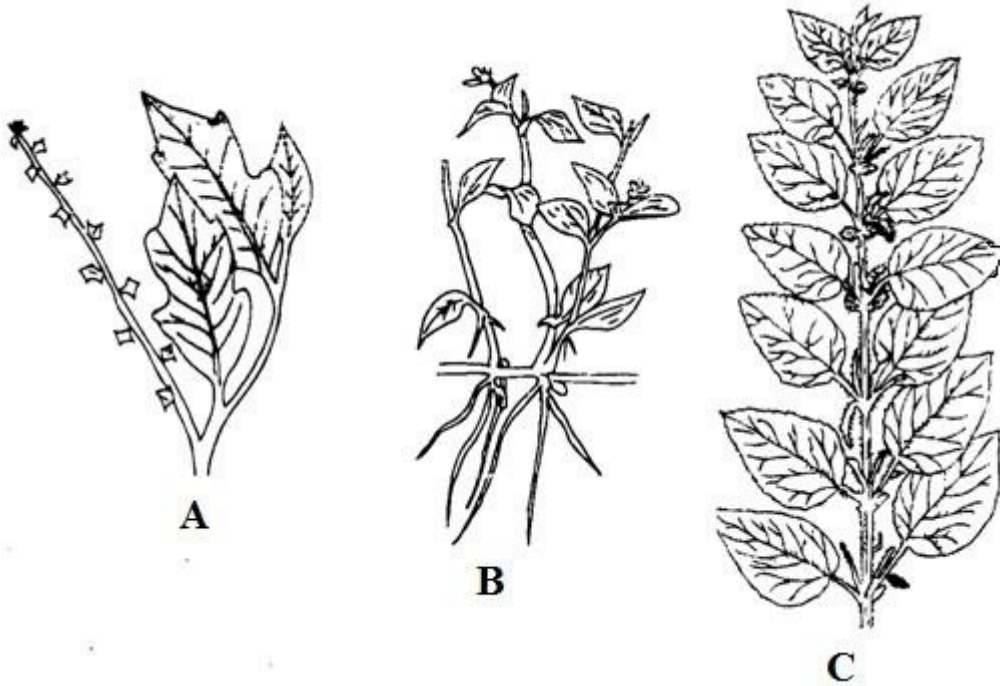
(b) Name two other crops apart from the one shown above that are attacked by the same disease. (2mks)

.....
.....

(c) State two control measures of the above disease. (2mks)

.....
.....

21. The diagrams below show some common weeds in East Africa.



- (a) Name the class of weeds that in which the above weeds belong basing on morphology. (1mk)
.....
- (b) Identify two weeds that lower the work output of human labour on the farm. (2mks)
.....
.....
- (c) Give two reasons why it is difficult to control weed **B** by cultivation. (2mks)

SECTION C (40MKS)

Answer ANY TWO questions in this section.

- 22. (a) Describe the production of tomatoes (Lycoperscon escalentum)
 - (i) Ecological requirements. (3mks)
 - (ii) Transplanting (3mks)
 - (iii) Field management practices (4mks)
- (b) State five measures of which are taken to minimize water pollution in the farm. (5mks)
- (c) Describe precautions to be observed when harvesting pyrethrum. (5mks)
- 23. (a) Describe six physical /structural methods of controlling soil erosion. (6mks)
- (b) Explain four practices of maintaining soil fertility. (4mks)
- (c) Describe five principles of crop rotation. (5mks)
- (d) State five conditions that necessitate effective settlement of people. (5mks)
- 24. (a) Describe six importances of budding and grafting in crop propagation. (6mks)

(b) State six factors that will lead to wider spacing when planting a crop. (6mks)

(c) The following information was obtained from Mr. Oseso’s Farming Enterprise. Use it to prepare cash analysis for the year. (8mks) Kshs.

30/6/2003 -	Cash at bank (opening balance)	50,000
01/7/2003 -	Bought 20 empty egg trays	400
01/7/2003 -	Bought 5 bags of DAP fertilizer	10,000
01/7/2003 -	Sold 10 trays of eggs	12,000
01/7/2003 -	Bought 5 bags of broilers starter	7,500
01/7/2003 -	Sold milk 200kg bag	4,000
20/7/2003 -	Sold maize	6,000
30/7/2003 -	Bought milk churn	500
31/12/2003	Closed the financial year	

PAPER 2

SECTION A (30MARKS)

- 1) State **four** disadvantages of natural mating. (2marks)

- 2) Give **two** reasons for supplementary feeding of bees (1mark)

- 3) Name any **two** methods used to identify goats. (1mark)

- 4) List **three** signs of lambing. (1½marks)

- 5) Explain the meaning of cropping as used in fish production. (1mark)

- 6) State **two** reasons why jersey breed is suitable than Friesian in marginal areas. (1mark)

- 7) State **four** methods used to control cannibalism in a flock of layers in a deep litter system. (2mark)

- 8) State **two** reasons why we have a footbath in a cattle dip. (1mark)

- 9) State **four** uses of solar energy in the farm. (2marks)

- 10) List **four** functions of water in an animal's body. (2marks)

- 11) State **four** reasons for controlling livestock diseases. (2marks)

- 12) State **one** importance of guard rails in a farrowing pen. (1mark)

- 13) List **two** groups of vitamins used in livestock feeding. (1mark)

- 14) State the functions of the following farm tools
 Shovel

 ... (½mark)
 Rubber ring and elastrator
 (½mark)
- 15) List **three** control measures for fowl pox disease in poultry (1½mark)

- 16) What is a production ration? (1mark)

- 17) State **two** maintenance practices carried out on slasher. (1mark)

- 18) Name the hormone responsible for milk let down (½mark)

19) List any **two** chemicals used to treat wood against weather elements. (1mark)

.....

20) State any **four** characteristics of exotic breeds of cattle. (2marks)

.....

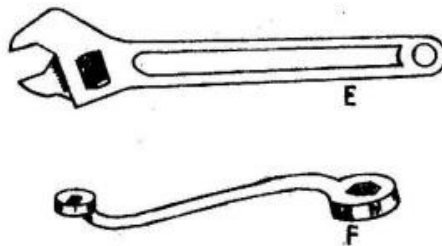
21) State **three** uses of biogas on a farm. (1½marks)

22) State **four** practices done to make wooden fence posts last longer. (2marks)

SECTION B (20mks)

23) A dairy farmer is required to prepare 100kgs of dairy meal containing 20% DCP (Digestible crude protein). Using the pearsons square method, Calculate the quantity of soya beans 40% DCP and rice 16% DCP the farmer requires for the dairy meal. (5marks)

24) The following diagrams illustrate some workshop tools. Study them carefully and answer the question that follows.

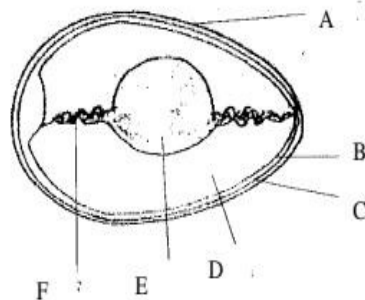


(a). Identify the tools labeled E and F (2marks)

(b). State the functional advantage tool E has over tool F. (1marks)

(c) State **two** maintenance practice carried out on tool E. (2marks)

25. Study the diagram below of an egg and use it to answer the questions that follow.

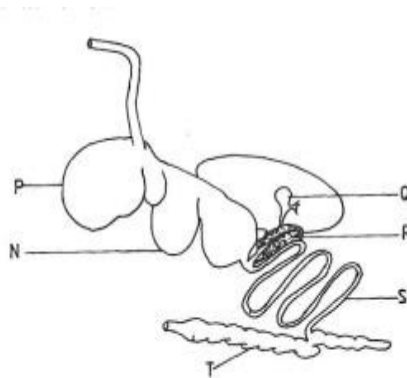


a) Name the parts labeled B, C, D and F. (2marks)

b) List any **two** structural qualities of an egg to be incubated. (2marks)

(c) Give the functions of part labeled E in a fertilized egg (1mark)

26. The diagram below shows the parts of the digestive system of cattle. Study it and answer the questions that follow.



a) Name the parts labeled N, P, R and Q. (2marks)

b) List **three** microbial activities that take place in part labeled P. (3marks)

SECTION C (40MARKS)

ATTEMPT ANY TWO QUESTIONS IN THIS SECTION

27. a) Discuss the preparation of the brooder before the arrival of chicks. (5marks)

b) Describe the management practices carried out on ewes two weeks before mating to weaning of lambs. (15marks)

28. (a) Outline any **eight** control measures for ticks. (8marks)

(b) Outline the daily maintenance practices that should be carried out on a farm tractor. (12 marks)

29. (a) Describe the uses of **five** materials and equipment required during hand milking (10marks)

b) Discuss mastitis disease under the following sub –heading

i. Animals affected (1mark)

ii. Casual organism (1mark)

iii. Predisposing factors (4marks)

iv. Control and treatment (4marks)

KCSE REPLICA 8

PAPER 1

SECTION A 30 MARKS.ANSWER ALL QUESTION

1.Differentiate between olericulture and pomoculture as used in crop production. (1mark)

.....

.....

.....

.....

.....

2.Give **two** methods of farming (1marks)

.....

.....

.....

.....

.....

3.Give **two** examples for each of the following types of cost incurred in broiler production.

a)Variable cost (1 mark)

.....

.....

.....

b)fixed cost (1 mark)

.....

.....

.....

4.Give **four** advantages of crop rotation. (2marks)

.....

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5.State **four** factors to consider when choosing seed rate. (2marks)

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6(a) Give **four** reasons for using certified seeds for planting. (2marks)

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.....

(b).Give **four** disadvantages of using non capped multiple stem pruning in coffee (2marks)

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.....

.....

.....

7. State **two** reasons why cassava should be grown as the last crop in crop rotation programme. (1mark)

8.State **four** importance of farm records. (2marks)

9.Name **two** aspects of light that affect crop production. (1mark)

10.(a) What is tissue culture? (1mark)

(b) State **two** importance of tissue culture in crop propagation. (1marks)

11.a) Apart from the identity of owner, title number and size of land, name other two essentials contained on a land title deed. (2marks)

b) Give **four** importance of a land title deed. (2marks)

12.List **four** methods of fertilizer application. (2marks)

13. State **four** advantages of growing maize in rows instead of broadcasting. (2marks)

14. Name **four** factors that determine the choice of a nursery site. (2marks)

15. Name **two** post-harvest practices in beans. (1marks)

16. Give **four** reasons why burning is discouraged as a method of land clearing. (2marks)

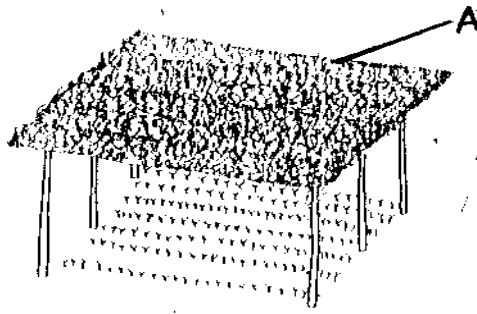
SECTION B 20 MARKS

17. The table below shows output of maize in response to increase in D.A.P fertilizers on one hectare of land.

Fixed input land (in ha)	Variable input D.A.P in 30kg-bag	Total product maize yield in 90-kg bag	Average product (AP) maize in 90kg bag	Marginal product (M.P) in 90kg bag
1	0	2	-	-
1	1	5	-	-
1	2	14	-	-
1	3	21	-	-
1	4	26	-	-

a) Fill in the table for average product (A.P) and marginal products (M.P) 5marks

18. The diagram below shows a structure used in crop production.



(a). Identify the structure above. (1mark)

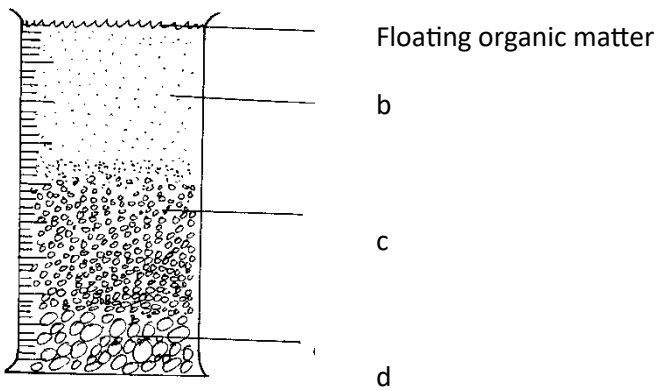
(b). Give a reason for carrying out each of the following practices in the structure shown above

(i). Pricking out. (1mark)

(ii). Hardening off. (1mark)

(c). State **two** importance of the part labelled A in the above structure. (2marks)

19. Form two student put some soil sample in a measuring cylinder, added some water and sodium carbonate and then covered the cylinder with the hand and shook the cylinder for about two minutes. He left the cylinder on the bench for one hour. The result was as shown below.



(i). Name the layers marked b,c, and d. (3marks)

b).....

c).....

d).....

(ii). What was the function of sodium carbonate in this experiment? (1mark)

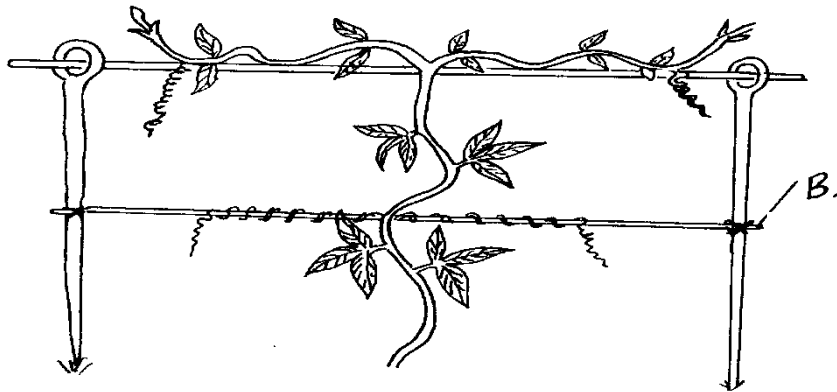
.....

.....

(iii). What was the aim of this experiment ? (1mark)

.....

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



(a) Name the crop production practice illustrated above. (1 mark)

.....

b) Name a material that may be used as part B in the diagram (1 mark)

.....

c) State **three** reasons why the practice is done in crops. (3marks)

SECTION C 40 MARKS(ANSWER ONLY TWO QUESTIONS)

21. (a) Outline any **ten** marketing functions (10marks)

(b) Discuss any **five** problems in marketing of agricultural produce (10marks)

22. Describe the production of tomatoes (*Lycopersicon 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)

23a) Explain **eight** factors that encourage soil erosion. (8marks)

b) Describe **seven** management practices that should be carried out on a vegetable nursery after sowing until the seedlings are ready for transplanting. (7marks)

c) Describe the harvesting of sugarcane. (5marks)

.....

PAPER 2

SECTION A (30 Marks)

Answer all question in this section in the spaces provided.

1 Study the table below fill in the blanks to show the term used to refer to parturition and young ones of the following animals?

(2mks)

Type of animal	Act of parturition	Term to refer to the young one
Cattle	Calving	Calf
Goats
pig

2 Name two tools used to trim overgrown hooves in sheep.

(1mk)

.....

3 Name three dual purpose breeds of sheep.

(1 ½

mks)

.....

4 State four symptoms of mastitis in cattle.

(2mks)

.....

5 State two functions of the queen bee in a bee colony.

(1mk)

.....

6 State four factors affecting the digestibility of a feed.

(2mks)

.....

7 State four harmful effects of ticks.

(2mks)

.....

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.....

8 State four conditions that may inhibit milk let-down during milking. (2mks)

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.....

9 Give three disadvantages of using a plunge –dip for tick control. (1 ½ mks)

.....
.....
.....

10 Name two viral diseases that affect each of the following livestock.

(a)

Cattle.....

..... (1mk)

(b)

Poultry.....

..... (1mk)

11 State four desirable factors to consider when siting a fish pond. (2mks)

.....
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12 Give three disadvantages of cross breeding in cattle. (1 ½ mks)

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13 State four conditions that would encourage hens to eat eggs in poultry production. (2mks)

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14 Outline four reasons for maintaining farm tools and equipment in good condition. (2mks)

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15 State four nonpathogenic causes of livestock diseases. (2mks)

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.....

16 In the preparation of artificial colostrum, what is the role of each of the following?

(a) Caster oil (½ mk)

.....
.....

(b) Cod liver oil (½ mk)

.....
.....

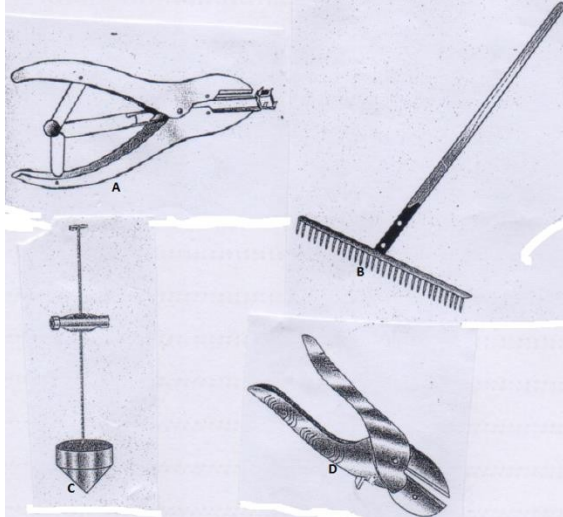
17 What is the importance of applying milking salve on teats of a lactating cow? (½ mk)

.....
.....

SECTION B (20 Marks)

Answer all questions in this section in the spaces provided

18 Below are illustrations of farm tools labeled A,B,C and D. Study them and answer questions that follow.



(a) Give the correct name of each of the tools illustrated above. (2mks)

A.....
.....

B.....
.....

C.....
.....

D.....
.....

(b) How is each of the tools **B** and **D** maintained?

(1mk)

B.....
.....

D.....
.....

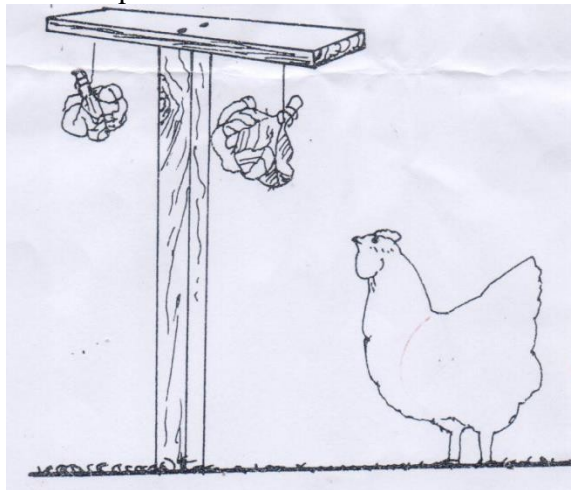
(c) State one proper use of each of the tools **A** and **C**.

(2mks)

A.....
.....

C.....
.....

19 The diagram below illustrates a method of providing feed stuff to chicken in a chicken house. Study the diagram and answer the questions that follow.



(i) What type of feed stuff is illustrated in the diagram above?

(1mk)

.....
.....

(ii) Give two reasons why the feed stuff should be suspended above the height of the chicken.(2mks)

.....
.....
.....

(iii) Apart from above practice, name one other practice that can be used in place of practice (ii) above.

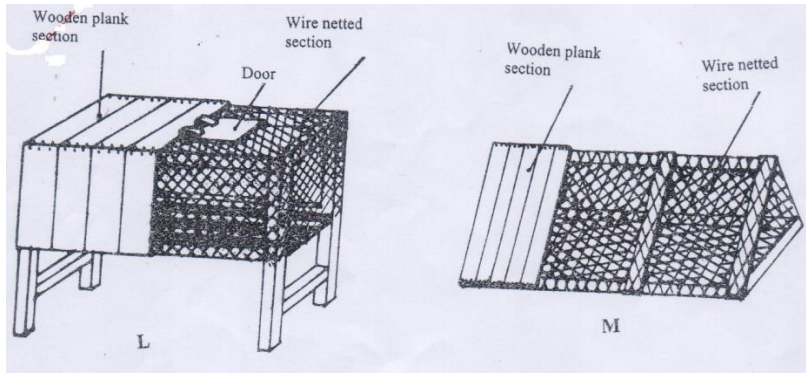
(1mk)

.....
.....

(iv) What other advantage of the practice named in (ii) in a deep litter house. (1mk)

.....
.....

20 The diagrams below illustrate two types of rabbit hutches labeled **L** and **M**. Study the diagrams and answer questions that follow.



(a) In which section of the hutches should the water and feed troughs be placed? (1mk)

.....

(b) State one use of the wooden section of the hutch. (1mk)

.....

(c) What additional facility should be included inside the hutches for a doe? (1mk)

.....

(d) Identify the type of floor shown in hutch L above.

(1mk)

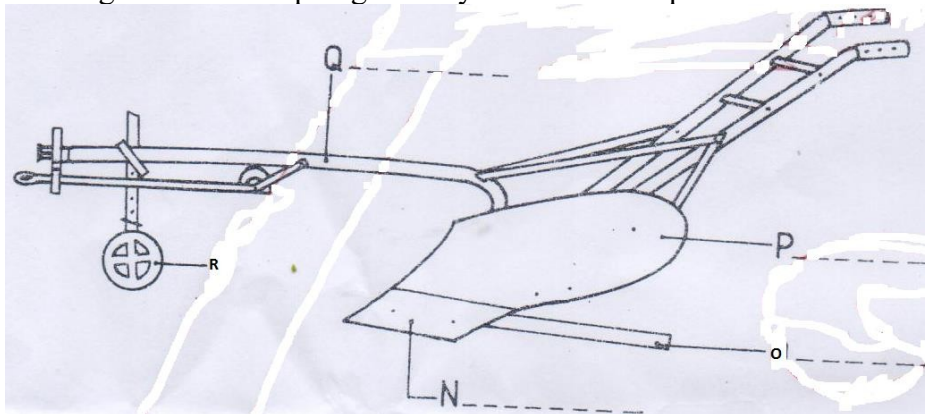
.....

(e) Give one advantage of the type of floor illustrated in hutch L above.

(1mk)

.....

21 Below is a diagram of an Ox-plough. Study it and answer questions that follow.



(a) Identify the parts labeled N, O, P and Q on the diagram above.

(2mks)

N.....

O.....

P.....

Q.....
.....

(b) State one maintenance practice that should be carried out in each of the parts labeled N and R.

N.....
..... (1mk)

R.....
.....(1mk)

(c) What adjustment should be carried out on the implement so as to reduce the depth of ploughing.

(1mk)
.....
.....

SECTION C (40 Marks)

Answer any two questions from this section. The answers be written in the spaces provided after every question.

22 (a) Describe the process of processing honey using heat method. (6mks)

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(b) Describe Foot and Mouth disease under the following sub- headings;

(1mk) (i) Causal organism.
.....
.....

(1mk) (ii) Animal attacked
.....
.....

(5mks) (iii) Five symptoms of attack.
.....
.....
.....
.....

.....
.....
.....
.....

(iv) three control measures.
(3mks)

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.....

(c) Outline four ways through which power is made available from a tractor. (4mks)

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.....

23 (a) Explain six requirements of a good calf pen.
(6mks)

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.....

(b) (i) Give four reasons for steaming up a dairy cow.
(4mks)

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(ii) Explain the management practices carried out on a dairy calf from birth and immediately after birth.
(4mks)

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(c) Outline six signs of round worms (*Ascaris spp*) infestation in cattle.
(6mks)

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24 (a) Describe the process of egg formation in a chicken up to the point of lay. (10mks)

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(b) State the difference between four stroke cycle and two stroke cycle engine. (4mks)

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(c) Describe the process of digestion in the rumen. (4mks)

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KCSE REPLICA 9

PAPER 1

SECTION A (30 MKS)

Answer all the questions in this section in the spaces provided

1.State three characteristic of shifting cultivation. (1 1/2mks)

.....

2.State any four factors that determine the spacing of a crop . (2mks)

.....

3.State two conditions under which the opportunities cost is zero in a farming practice. (1 1/2mks)

.....

4.Give two activities carried out during hardening off tomatoes seedling . (2mks)

.....

5.State three benefits of minimum tillage in crop production . (1 1/2mks)

.....

6.Differrentiate between Olericulture and Pomoculture as used in crop production.(1mks)

.....

7.Name three negative effects of strong wind on Agriculture . (1 1/2mks)

.....

8.Differentiate between hybrid and composite as used in crop production . (1mk)

.....

9.Name three reasons for treating water in the farm. (1 1/2mks)

.....

.....
.....
10. Outline four disadvantages of communal land tenure system. (2mks)

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.....

11. List three aspects of light that influence crop growth. (1 1/2mks)

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.....
.....
.....

12. List three reasons for conserving forage. (1 1/2mks)

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.....
.....

13. Name four factors that influence soil erosion. (2mks)

.....
.....
.....

14. What is integrated pest management. (1mk)

.....
.....
.....

15. Name four types of water pumps which can be used in the farm. (2mks)

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.....
.....

16. State four factors that determine the stage at which a grain crop is ready for harvesting. (1 1/2mks)

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.....
.....
.....

17. Name four methods of farming. (2mks)

.....
.....
.....

18. State two crop production practices that can be carried out to maintain optimum plant population. (1mk)

.....
.....

19. State four information contained in land title deed. (2mks)

.....

.....

SECTION B (20 MARKS)

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

20 . A farmer has four plots P1,P2,P3,& P4 as shown in the table below .

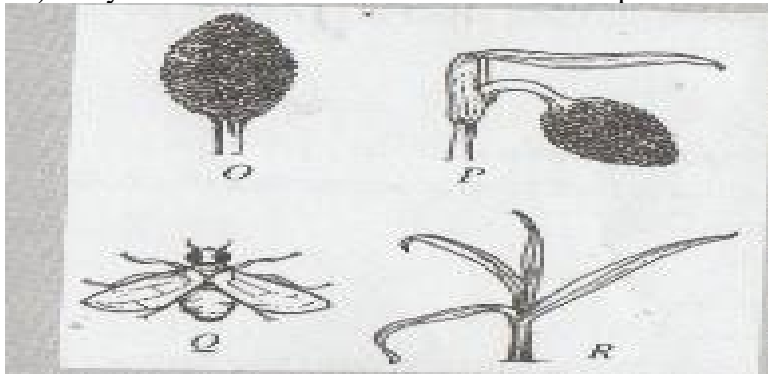
P1	P2	P3	P4
Infested with Bacteria wilt	Deficient in Nitrogen	Infested with witch grass(strigaspp)	Prone to soil erosion

a)A Farmer intends to grow Maize ,Irish potatoes ,beans and Rhodes grass .plan a rotation for the first year of the rotation system. **(2mks)**

b)Account for the plan above . **(4mks)**

.....

21)Study the illustration below and answer the question that follow.



a)Name the varieties which is resistantto bird attack . **(1mk)**

.....

b)Give a reason for your answer in a above. **(1mk)**

.....

c)Identify pest Q which has attacked sorghum seedling labeled R. **(1mk)**

.....

d).State two methods that are used in controlling birds in a field of sorghum. **(2mks)**

.....

22. Below is a diagram of a crop pest .



a) Identify the pest in the diagram . (1mk)

.....

b) Suggest two ways of controlling the pest . (2mks)

.....

.....

.....

c) Name any two diseases of cabbages. (2mks)

.....

.....

d) Give three advantages of training in crops. (3mks)

SECTION C (40 MARKS)

Answer any two questions in this section in the space provided.

23.a) Outline ten harmful effects of crop pest (10mks)

b) State the effect of land fragmentation (10mks)

24. Describe the production of tomatoes under the following sub heading :

- I. Ecological requirement (3mks)
- II. Land preparation (4mks)
- III. Transplanting (4mks)
- IV. field management practices (3mks)

b) Outline six importance of crop rotation. (6mks)

25.a) outline ten safety precautions when using Herbicides. (10mks)

b) state and explain biotic factors that influence agriculture. (10mks)

PAPER 2

SECTION A (30MARKS)

1. Give **four** livestock rearing practices that can be carried out in a crush. (2mks)

2. Name the part of the digestive system of poultry where insoluble grit is found. ($\frac{1}{2}mk$)

3. Give **two** distinguishing external characteristics of Californian breed of rabbit. (1mk)

4. State **four** pre-disposing factors of livestock diseases. (2mks)

5. Outline **four** functions of proteins in the body of an animal. (2mks)

6. State **four** observable features of indigenous cattle (*Bos indicus*) (2mks)

7. State **four** importance of creep feeding. (2mks)

8. Name **four** materials that are collected by bees. (2mks)

9. Give the function of each of the following parts of a fish pond.
 - a) Spillway ($\frac{1}{2}mk$)

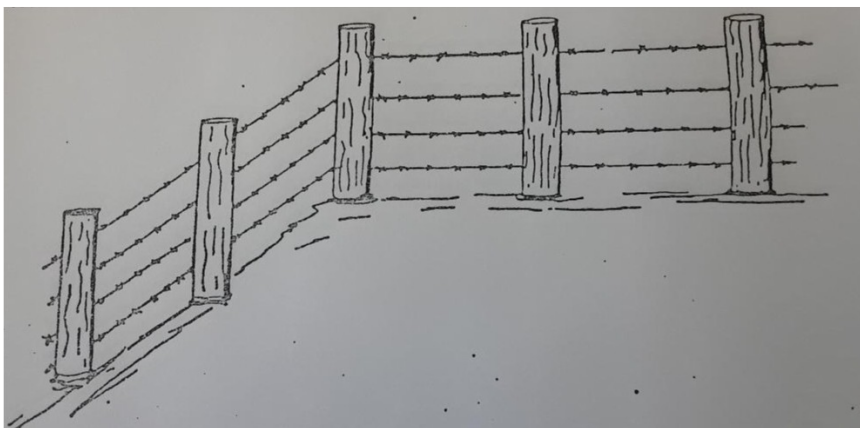
 - b) Outlet ($\frac{1}{2}mk$)

10. State **four** advantages of cross-breeding. (2mks)

11. Name the part of the digestive system of a non-ruminant animal where cellulose is broken down
($\frac{1}{2}$ mk)
.....
12. State **three** field conditions under which a disc plough should be used instead of a mouldboard plough.
($1\frac{1}{2}$ mks)
.....
13. State **four** advantages of artificial incubation in comparison to natural incubation as a method of hatching chicks.
($1\frac{1}{2}$ mks)
.....
14. Give **four** maintenance practices carried out on the water cooling system of a tractor. (2mks)
.....
15. State **four** advantages of a four-stroke cycle engine. (2mks)
.....
16. Give **three** reasons why drenching alone is not an effective method of controlling intestinal parasites in livestock.
($1\frac{1}{2}$ mks)
.....
17. Name **three** poultry diseases that are controlled by vaccination. (1 $\frac{1}{2}$ mks)
.....
18. Give the mineral whose deficiency causes the following disorders in livestock.
a) Anaemia ($\frac{1}{2}$ mk)
.....
b) Parakeratosis ($\frac{1}{2}$ mk)
.....
19. Give **three** reasons why liming is done in fish ponds. (1 $\frac{1}{2}$ mks)
20. If records show that a rabbit was served on 27th September 2020. Which date did it give birth.
($\frac{1}{2}$ mk)

SECTION B (20 MARKS)

21. Below is an illustration of part of a wooden post wire fence. Study it and answer the questions that follow.



- a) Identify the type of wire in the illustration. (1mk)

- b) On the illustration show by drawing how the corner post should be supported. (1mk)
- c) On the illustration draw, label and give the function of a dropper. (2mks)
- d) Name the correct tool for tightening the wire during construction of the fence. (1mk)

22. Observe the tools A, B and C illustrated below then answer the questions that follow.

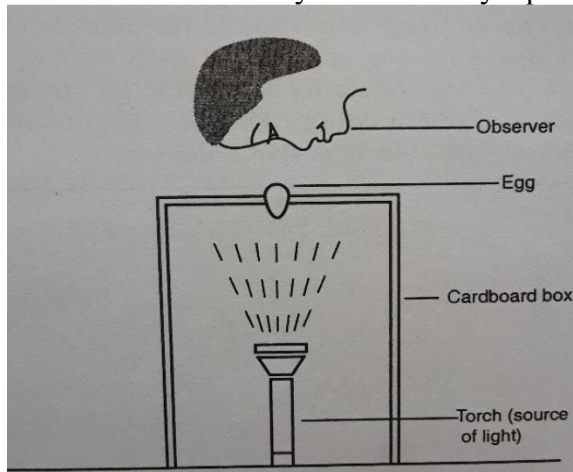


- a) Name tools A, B and C and state the correct use of each tool. (3mks)

Tool	Identity	Function
A		
B		
C		

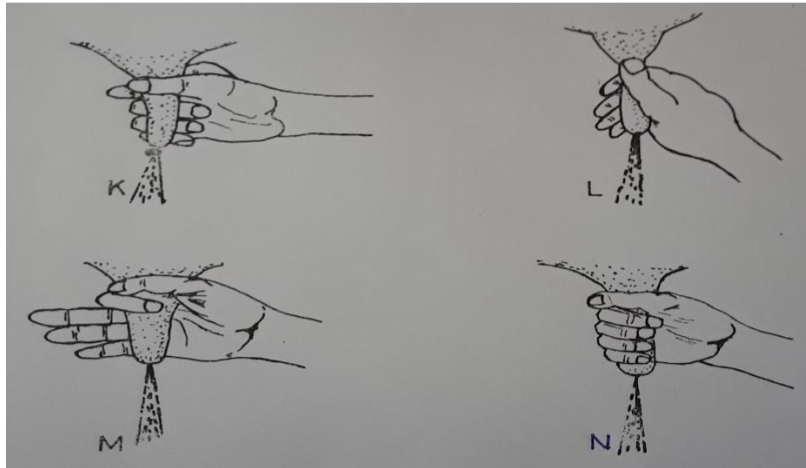
- b) State **two** maintenance practices that should be carried out to ensure that tool C is in a good working condition. (2mks)

23. Below is an illustration of an activity carried out by a poultry farmer keeping layers



- a) Identify the activity carried out using the set-up. (1mk)
- b) State **four** abnormalities in eggs that can be detected using the set-up above. (2mks)
- c) How can a farmer improve the following?
- Hardness of egg shells. (1mk)
 - Yellowness of the egg yolk. (1mk)

24. 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)

SECTION C (40MARKS)

- 25. a) Describe the advantages of battery cage system of rearing layers. (10mks)
- b) State and explain **five** factors affecting milk production. (10mks)

- 26. a) State the functions of any **six** parts of a plunge dip. (6mks)
- b) State and explain **four** ways through which power transmitted from the engine is made available for use. (4mks)
- c) Explain **five** mechanical methods of controlling ticks. (10mks)

- 27. a) State **five** advantages of embryo transplant. (5mks)
- b) Describe coccidiosis disease under the following sub- headings.
 - i. Animals attacked (2mks)
 - ii. Causal organism (1mk)
 - iii. Symptoms (4mks)
 - iv. Control measures (3mks)
- c) A ration containing 20% DCP for growing chicks is to be obtained by mixing ground maize containing 10% DCP and fishmeal containing 50% DCP. Calculate the amount of each feedstuff in kilograms required to prepare 200kg of the feed. (5mks)

**KCSE REPLICA 10
PAPER 1**

SECTION A (30MKS)

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

1. Give **two** characteristics of plantation farming. (1mk)
2. Name **two** chemical processes of weathering. (1mk)
3. State **two** advantages of organic farming. (1mk)
4. Outline **two** effects of soil organisms which benefit plant growth. (1mk)
5. Give **two** ways in which organic mulch help to conserve water in the soil. (1mk)
6. Give **two** types of labour records. (1mk)
7. Outline **four** ways in which land consolidation helps to improve farm management. (2mks)
8. State **four** importance of raising seedlings in a nursery bed. (2mks)
9. Give **four** ways of controlling weeds in a field of maize. (2mks)
10. State **three** reasons for top dressing pasture. (1¹/₂mks)
11. Give **four** reasons for training crops as a field practice (2mks)
12. State **three** activities the farmer carries out on a store before storing grains. (1¹/₂mks)
13. Give **four** desirable characteristics of certified seeds. (2mks)
14. (a) Outline **two** characteristics of nitrogenous fertilizers. (1mk)

- (b) Give the forms in which the following elements are available to plants: (1mk)
 - (i) Phosphorous:
 - (ii) Potassium:

15. Give **four** factors that influence the choice of tools and equipment used in Primary cultivation. (2mks)

16. State **four** factors that contribute to competitive ability of weeds. (2mks)

17. Define the following terms as used in crop production.

(a) Trellising
(1mk)

(b) Stooking
(1mk)

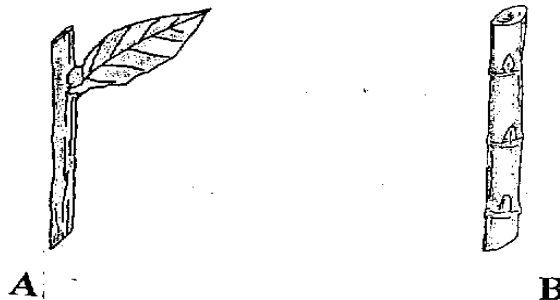
18. Give **two** advantages of strip grazing
(1mk)

19. State **four** advantages of mixed pasture.
(2mks)

SECTION B. (20 MARKS)

Answer ALL questions in this section in the spaces provided

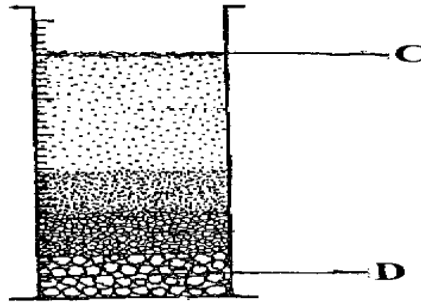
20. Study the diagram below and answer the questions that follow. The illustrations represent a method of crop propagation.



(a) Name the crops (s) propagated by illustrations:
(1mrk)

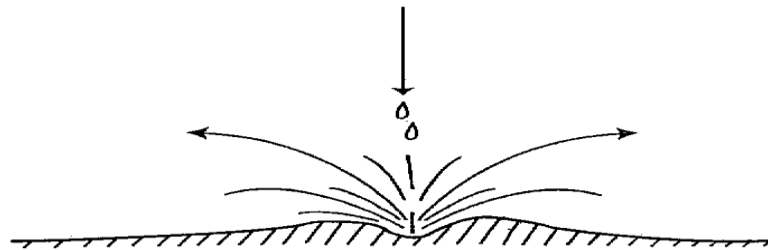
(b) Give **three** factors that promote the rooting of illustration A. (3mrks)

21. The diagram below illustrates an experiment using garden soil. Study it carefully and answer the question that follow.



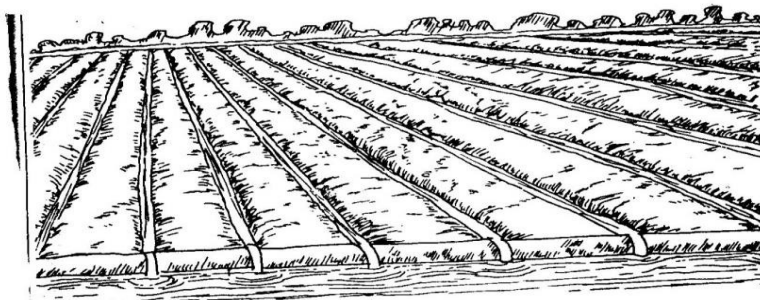
- (a) What was the aim of the experiment?
- (b) Name the parts labeled **C** and **D**. (2mrks)
- (c) Name the property of soil being investigated. (1mrk)

22. The illustration below shows a type of soil erosion. Study it carefully and answer the questions that follow.



- (a) Identify the type of erosion illustrated. (1mrk)
- (b) Give **two** soil factors that influence the rate of soil erosion. (2mrks)
- (c) Name **one** agent of soil erosion. (1mrk)

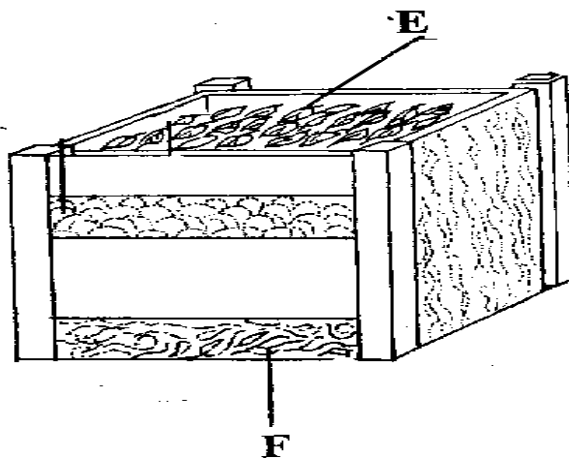
23. The diagram below illustrate a method of irrigation carried out on the farm



(i) Identify the type of irrigation shown above. (1mk)

(ii) Name **two** advantages of the above method. (2mks)

24. The diagram below represent a method of manure preparation. Study it carefully and answer the questions that follow.



- (a) Identify the type of manure being prepared. (1mrk)
- (b) Name the parts labeled E and F. (1mrk)
- (c) Give **three** disadvantages of manures. (3mrks)

SECTION C (40MARKS) Answer any **TWO** question from the section in the spaces provided

- 25. (a) Give six precautions observed in pruning mature tea (6 mks)
- (b) Describe the procedure followed when collecting a soil sample form the field for testing in the laboratory (6 mks)
- (c) Outline four advantages of intercropping crops (4 mks)
- (d) State four factors considered before selecting a farm enterprise. (4 mks)

- 26. Describe the production of tomatoes under the following sub-headings:
 - i) Ecological requirements of tomato plants (5mks)
 - ii) Land preparations (4mks)
 - iii) Transplanting (7mks)
 - iv) Disease control (4mks)
- 27.a) State five factors that influence soil productivity. (5mks)
- b) State five qualities of mother plant used during grafting. (5mks)
- c) Give two types of mulching materials. (2mks)
- d) State four agricultural practices which pollute water. (4mks)
- e) Describe precautions followed when harvesting coffee. (4mks)

PAPER 2**SECTION A: (30 MARKS)**

Answer all questions in this section in the spaces provided.

1. State any **two** causes of infertility in cattle. (1mk)
2. Mention two dual purpose breeds of sheep. (1mk)
3. Differentiate between the following terms quarantine and isolation. (1mk)
4. Give the meaning of the following terms as used in livestock production. (2mks)
 - (i) Cockerel _____
 - (ii) Capon _____
 - (iii) Ewe _____
 - (iv) Gilt _____
5. State **two** reasons why walls of a dairy shed should be white washed instead of oil painting. (1mk)
6. Give **three** factors that inhibit milk letdown in lactating cows. (1½mks)
7. State tools and equipment used alongside with the following in livestock production. (2mks)
 - (a) Needle _____
 - (b) Rubbering _____
 - (c) Canula _____
 - (d) Lead stick _____
8. State the functions of the following parts of power transmission system in a tractor. (1½mks)

(i) Draw bar

(ii) Propeller shaft

(iii) Hydraulic system

9. Name one intermediate host in the lifecycle of a

(a) Liver fluke. _____ (½mk)

(b) Tapeworm. _____ (½mk)

10. State **three** factors that determine the depth and size of foundation in a farm building. (1½mks)

11. Give **three** reasons why wind power is not reliable enough to be used in the farm. (1½mks)

12. Give functional difference between a rip saw and a cross cut saw. (1mk)

13. List **four** functions of protein in livestock. (2mks)

14. State **two** signs that would indicate that a cow has died of anthrax. (1mk)

15. State **one** reason for egg turning during incubation. (1mk)

16. Give **two** functions of reticulum in the process of digestion of a ruminant animal. (1mk)

17. List **two** ways of adjusting depth of harrowing in a disc harrow. (1mk)

18. State **four** characteristics of dairy breed of cattle. (2mks)

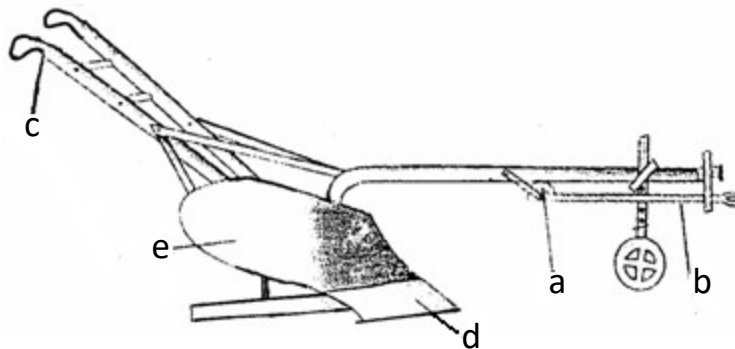
19. Differentiate between the following terms:-
Crutching and ringing. (1mk)

20. Give **four** ways of vaccinating animals in livestock production. (2mks)
21. Give **two** rules observed when milking a cow for high milk production. (1mk)
22. State **three** popular methods of harvesting fish from a fish pond. (1½mks)
23. Name the species of camel with two humps. (½mk)

SECTION B: (20 MARKS)

Answer all questions in this section in the spaces provided.

24. (a) The diagram below shows an ox-plough identify the part marked **a – c**. (3mks)

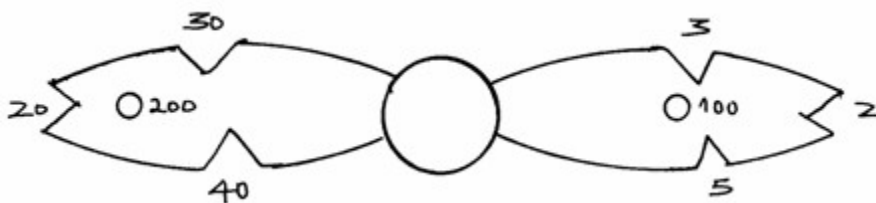


Agriculture Paper 2

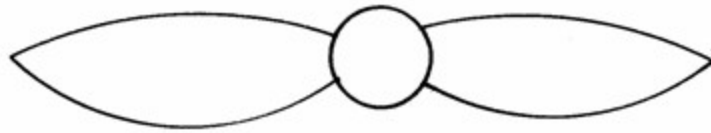
5

- (b) Outline the functions of the part marked **d** and **e**. (2mks)

25. The illustration below shows a method of identifying pig. Study the diagram and answer the questions that follow.



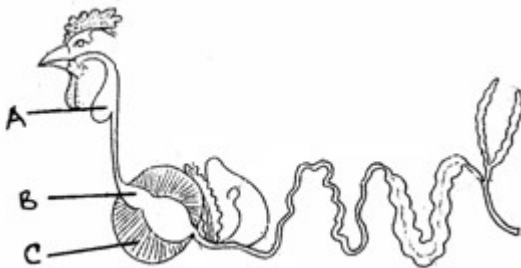
- (a) (i) On the diagram A provided below draw the mark to indicate a pig No.147 using the procedure of the ear notching in diagram. (1mk)



- (ii) What is the recommended stage of growth in pigs at which the ear notching should be carried out? (1mk)

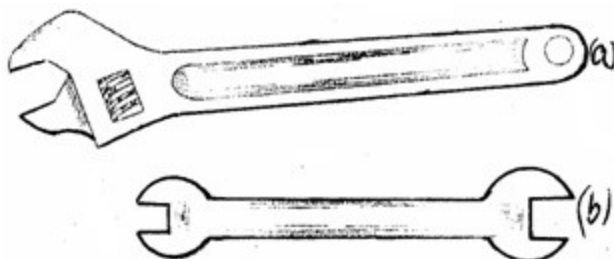
- (b) A farmer wants to produce a poultry feed containing 16% CP (crude protein) from maize meal with 9% CP and cotton seed cake with 30% CP. Using Pearson square method calculate the amount of maize and cotton seed cake required to produce a ration weighing 100kg. (3mks)

26. The following is a diagram showing part of the poultry's digestive system. Use it to answer the question that follow.



- (i) Name the parts labelled A, B, C. (3mks)
- (ii) Give **two** structural adaptations of C to its functions. (2mks)

27. The diagram below shows examples of workshop tools and equipment.



- (i) Identify tool (a). _____ (1mk)

- (ii) Identify tool **(b)** _____ (1mk)
- (b) State **one** advantage of tool **a** over tool **b**. (1mk)
- (c) State the maintenance practices of the above tools. (2mks)

SECTION C: (40 MARKS)

Answer any two questions from the section.

28. (a) Explain the functions of the following parts of a petrol ignition system:
- (i) Ignition coil. (1mk)
 - (ii) Distributor. (1mk)
 - (iii) Contact breaker. (1mk)
 - (iv) Condenser. (1mk)
- (b) State the maintenance practices of the ignition system. (6mks)
- (c) State the care and maintenance practices of a tractor battery. (6mks)
- (d) Give **four** appropriate ages for debeaking. (4mks)
29. (a) State advantages of Kenya top bar hives over a log hive. (4mks)
- (b) Describe brucellosis under the following subheading:-
- (i) Cause. (1mk)
 - (ii) Transmission. (1mk)
 - (iii) Symptoms (4mks)
 - (iv) Control measures. (4mks)
- (c) Explain advantages of spray race over cattle dip. (6mks)
30. (a) Describe the management of sheep starting from preparation for mating up to and including weaning of lambs. (10mks)
- (b) Outline advantages of using animal power instead of using tractor power. (5mks)
- (c) Describe the factors to consider in siting farm structures. (5mks)