KCSE 2023 FINAL PREDICTION

AGRICULTURE

(KCSE PREDICTIONS 1-10)

Confidential Analysis of Possible Expected sample KCSE Questions most likely to be tested in the Forthcoming KNEC examinations scheduled for November 2023.

The following are Expected Questions in KCSE 2023 EXAM.

CONFIDENTIAL!

For Marking Schemes

Mr Isaboke 0746 222 000 / 0742 999 000

SUCCESS TO ALL CANDIDATES

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 1

443/1

AGRICULTURE

PAPER 1
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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FOR EXAMINER'S USE ONLY

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A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

Answer all the questions in this section.

1. Give any two farming methods. **(l mark)**
2. List any three ecological factors which affect crop production in Kenya. **(1mark)**
3. State the difference between soil structure and soil texture. **(l mark)**
4. Explain the difference between liquid capital and working capital is an agricultural production. **(l mark)**
5. Give four factors influencing crop rotation **(2marks)**
6. State four types of crop field pests that commonly affect crops. **(2marks)**
7. State three deficiency symptoms of Sulphur in crop production. (1½ **mark)**
8. State the difference between Gross National production (GNP) and Gross Domestic Production(GDP). **(2marks)**
9. Mention any three types of farm records that a farmer should keep **(l ½ mark)**
10. Give three advantages of rotational grazing. **(1 ½ mark)**
11. Give two factors that determine the quality of hay. **(l mark)**
12. Give the beneficial effects of weeds. **(1 ½ mark)**
13. State four characteristics of a fertile soil. **(2marks)**
14. State five ways of preparing planting materials before planting. (2 ½ **marks)**
15. Give six factors that influence the rate of soil erosion. **(3marks)**
16. (a) Give the steps followed in the development of a gulley. **(2marks)**

    (b) State the two types of gulley erosion **(1mark)**
17. Name any four physiological diseases of a tomato crop. **(2marks)**

SECTION B 20 MARKS

Answer All Questions In This Section

18.(a) Different soil samples were tested and their **Ph** values tabulated as shown below

Soil sample	P_1	P_2	P_3	P_4	P_5	P_6	P_7	P_8
pH value	4	5	6	7	8	9	10	11

(i) Which soil sample had the highest acidity (**1 mark)**

ii) Which soil is suitable for growing coffee **(1 mark)**

iii) How would pH of soil sample P_1 be increased **(1 mark)**

iv) How would pH value of soil sample P_8 be reduced? **(1 mark)**

19. (a) State the four cardinal questions a farm manager formulates when preparing a partial budget **(2 marks)**

(b) A farmer has 160 ha of arable land, 60ha of which is under wheat, 32ha under maize, 12ha under fodder crops and the rest under pasture. She wishes to know whether replacing 12 ha of maize with Irish potatoes in the following year would be worthwhile. The fertilizer rate would have to be increased from 5 bags per ha for maize to 7 bags per ha for Irish potatoes and an extra 100 man-days of casual labour per ha will be necessary as a result of the change. The average yield of maize and Irish Potatoes is 45 and 115 bags/ha respectively. The prices are Shs. 1,400 per bag for maize and Shs. 1,200 per bag for Irish potatoes. Seed costs are Shs. 2,500 per ha for maize and Shs. 30,000 per ha for Irish potatoes. Fertilizer costs are Shs. 1,300 per bag. Labour is paid Shs. 150 per man-day. Draw up a partial budget and indicate the effect of the change. **(6 Marks)**

20. . A Farmer in Ol Joro-orok was adviced to plant maize at a spacing of 100cm by 50cm in his one hectare piece of land

a) Calculate the plant population in his maize field. (*show your working*). **(3 Marks)**

b) Give two undesirable effects of high population density in a field of maize grown for grains **(2 marks)**

c)A maize pest is shown in the diagram below. Study them and answer questions that follow



(a) Identify the pests in the diagram **(1 mark)**

(b) At what stage of maize production does the pest damage the crop **(1marks)**

(c) Give three way of controlling the pest. **(3 marks)**

SECTION C – 40 MARKS

Answer ANY TWO questions in this section

21.a) State and explain the different methods of farming **(5marks)**

b. Discuss the importance of drainage as a method of reclaiming land **(5marks)**

c. Explain how biotic factors influence agriculture **(10marks)**

22. a) Outline the various uses of farm records **(14marks)**

b) State and explain factors considered when spacing crops **(6marks)**

23. Describe the production of cabbage under the following subheadings

- Ecological requirements **(4marks)**
- Planting/transplanting **(5marks)**
- Field management **(4marks)**
- Harvesting and marketing **(7marks)**

KCSE 2023 FINAL PREDICTION

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443/2

AGRICULTURE

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SECTION A- 30 MARKS

Answer all the questions in this section.

1. Give four reasons maintaining farm tools. **(2marks)**

2. Name four complementary tools. **2marks**

3. Name the following breeds of livestock. **3marks**

i. A black pig with white shoulders and white forelegs.……...……

ii. White rabbit with red eyes ……

iii. A camel with two humps……..…

4. (a) State four importance of keeping livestock healthy **2marks**

(b) Give three physical appearance of an animal to be observed when checking on the health of an animal. **1½marks**

5. Name four nutritional diseases of livestock. **2marks**

6. State four effects of external parasite on livestock production. **2marks**

7. Give four mechanical methods of controlling ticks. **2marks**

8. State 3 characteristics of succulent roughages. **1 ½ marks**

9. List down the four compartments of a ruminant stomach. **2marks**

10. (a)What is selection in livestock production? **1mark**

(b) Name two methods of selection. **1½marks**

11. What is the role of the following parts of the reproduction systems in livestock**. 2marks**

i. Ovary

ii. Uterus

iii. Fallopian tube

iv. Testis

12. Give three signs of heat in a rabbit. **1½marks**

13. Give four reason why castration is done in livestock production. **2marks**

14. State four reasons as to why bees would swarm away. **2marks**

SECTION B (20MARKS)

15. The diagrams below illustrate ectoparasites. Study them and answer the questions that follow.



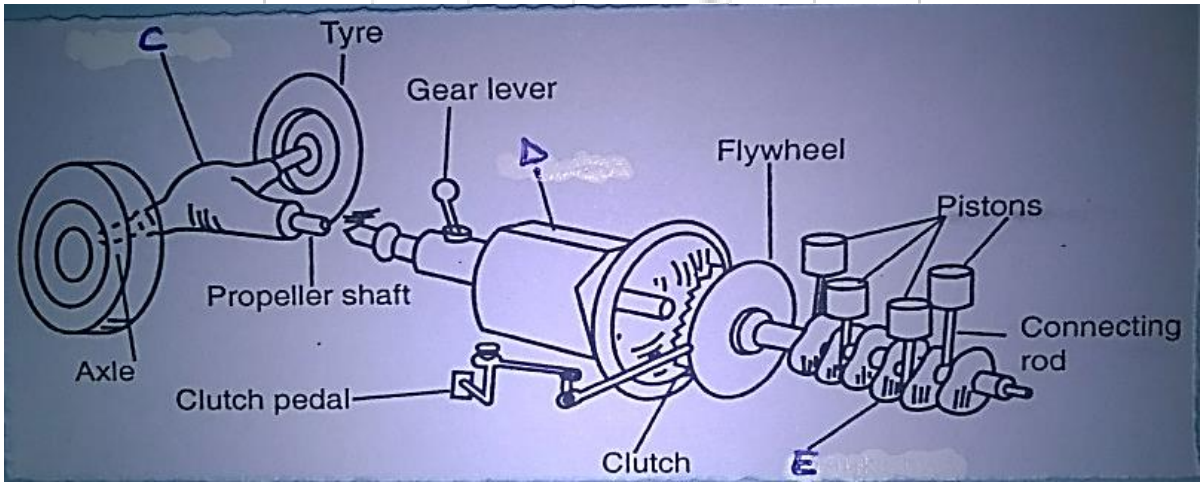
A **B**

a) Identify the parasites labelled A and B**.** **(1mark)**

b) Name the livestock affected by the parasite labelled A. **(1mark)**

c) State **two** harmful effects of parasites A and B in livestock production**.** **(2marks)**

16. Below is a diagram of the power transmission system of a tractor engine. Study it and answer the questions that follow.



a) Name the parts labelled C, D and E**.** **(3marks)**

b) State the functions of parts C, D and E**.** **(3marks)**

17. a) Outline the procedure of castrating a male piglet**.** **(4marks)**

b) At what age should the male piglet be castrated**?** **(1mark)**

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



F



G



H



I

a) Identify the tools labelled F, G, H and I. **(2marks)**

b) Give the uses of each of the tools labelled H and I. **(2marks)**

c) Name the part of the animal where tool F is placed when in use. **(1mark)**

SECTION C : 40MARKS

Answer any two questions from this section

19. a). Discuss anthrax disease under the following sub headings:

i. Animals affected **(1mark)**

ii. Causal organism **(1mark)**

iii. Symptoms observed in affected animals **(4marks)**

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

b). (i). State four problems associated with artificial methods of service in cattle production **(4marks)**

(ii). Give six factors that affect productivity of draught animals **(6marks)**

20. a). Discuss any six sources of power on the farm **(12marks)**

b). Discuss the components that make up the power transmission mechanism of a tractor **(8marks)**

21. a). Describe any five general effects of parasites on livestock **(10marks)**

b). Outline the general characteristics of beef cattle breeds **(10marks)**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 2

443/1

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	90	

SECTION A- 30 MARKS

Answer all the questions in this section.

1. Give two reasons why agriculture is looked as an artistic practice **(2marks)**

2. Outline two disadvantages of communal land tenure system **(1mark)**

3. Give three different types of soil water **(1 ½ marks)**

4. Give two ways of utilization of napier grass as a forage crop **(1mark)**

5. Give two signs of crop infestation by root nodes nematodes **1mark)**

6. Name two chemicals used in water treatment **(1mark)**

7. a) A farmer was advised to apply 210 kg of calcium of ammonium nitrate (CAN 21-0-0) per hectare. Calculate the amount of nitrogen required **(2 marks)**

b) Different between fertilizer grade and fertilizer ratio **(2marks)**

8. Give four biotic factors that influence agriculture **(2marks)**

9. a) Give reasons why land should be prepared early in readiness for planting **(2marks)**

(b) State reasons for deep ploughing during land preparation **(2marks)**

10. List two methods of land reclamation **(2marks)**

11. A form four student planted maize for her KCSE agriculture project. She use a spacing of 75cmx25cm; her plot was 4 x3m.

(i) What does 75cm stand for in this statement **(1mark)**

(ii) Calculate the plant population showing your working **(3marks)**

12. Name two pests with piercing and sucking mouth parts **(1mark)**

13. a) Explain the form changing the cycle in coffee growing **(1mark)**

b) State two importance of tissue culture in crop production **(1mark)**

14.Why are leguminous plants preferred for green manure? **(1mark)**

15. i) What is opportunity cost **(1mark)**

ii) A farmer has an option of growing either wheat or maize in her one hectare of land. Wheat gives a return of Kshs. 20, 000 while maize fetches Kshs. 35, 000 in the market. If the farmer chooses to grow wheat, what will be the opportunity cost? **(1mark)**

16. State three control measures of maize streak disease **(1.5marks)**

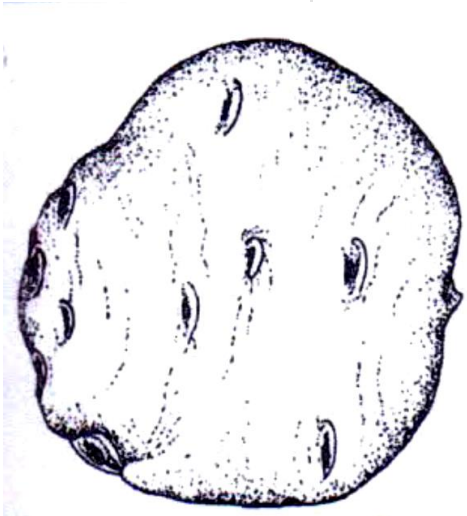
SECTION B (20 MARKS)

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

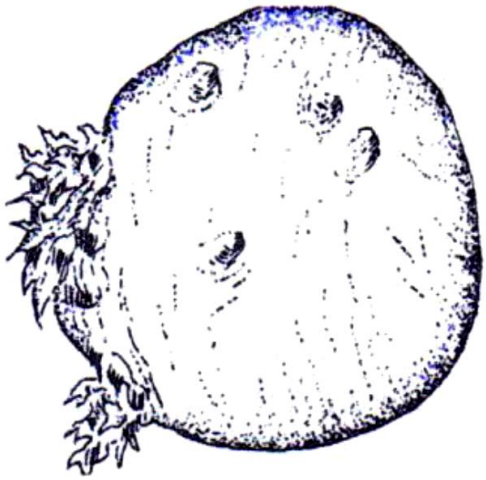
Fixed input land (in ha)	Variable input D.A.P in 30kg-bag	Total product maize yield in 90-kg bag	Average product (AP) maize in 90kg bag	Marginal product (M.P) in 90kg bag
1	0	2	-	-
1	1	5	-	-
1	2	14	-	-
1	3	21	-	-
1	4	26	-	-

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

18. The diagrams below illustrate irish potato seed preparation before planting. Study it carefully and answer the questions that follow.



(a) Before the Practice.



(b) After the Practice.

a) Name the practice used in preparing the seed potato above before planting. **(1mark)**

b) Describe the procedure followed in preparing the seed potatoes for planting. **(3marks)**

c) Give **one** reason for carrying out the practice named above. **(1mark)**

19. The photograph below shows an irish potato plant attacked by a disease. Study it and answer the questions that follow.



a) Identify the disease represented by the photograph. **(1mark)**

b) Name the causative agent of the diseases. **(1mark)**

c) Give **one** other crop that can be attacked by the same disease. **(1mark)**

d) List **two** control measures of the disease. **(2marks)**

20. The photographs below show common weeds C and D in pasture land. Study them carefully and answer the questions that follow.



C



D

a) Identify weeds C and D. **(2marks)**

b) Classify weed D according to plant morphology. **(1mark)**

c) State the major problem posed by each of the weeds above in pasture land. **(2marks)**

SECTION C (40MARKS)

Answer Any TWO questions in this section

21. (a) Explain **FIVE** cultural methods of pest control **(10marks)**

(b) Outline **FIVE** factors considered in timely planting of annual crops **(10marks)**

22. (a) Outline the process of land Adjudication **(5marks)**

a. (b) Discuss **five** reasons for carrying out minimum tillage. **(5 marks)**

b. Explain **5** ways in which soil losses fertility. **(10 marks)**

23. (a) Describe **seven** field management practices in tomato production. **(7marks)**

b. Outline **five** factors that determine water requirements in an animal's body. **(5 marks)**

c. Describe the transplanting of tree seedlings. **(8 marks)**

KCSE 23

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 2

443/2

AGRICULTURE

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SECTION A- 30 MARKS

Answer all the questions in this section.

1. Give **two** reasons for docking in sheep production. **(1 mark)**
2. Give **four** ideal qualities of a good calf pen **(2 marks)**
3. Outline **four** characteristics of Romney marsh sheep breed **(2 marks)**
4. (a) State **two** disadvantages of using metal frames in construction of farm buildings **(1 mark)**

   (b) Give **two** reasons for seasoning timber **(1 mark)**
5. Outline **four** reasons for swarming of bees **(2 marks)**
6. List **two** methods that can be used to preserve fish **(1 mark)**
7. (a) What is a notifiable disease? **(1 mark)**

   (b) Name **four** examples of notifiable diseases in livestock. **(2 marks)**
8. Name **two** major physical differences between Bactrian and Dromedary breeds of camel. **(1 mk)**
9. State **two** characteristics of heavy poultry breeds. **(1 mark)**
10. List **two** maintenance practices of a wood chisel. **(1 mark)**
11. State **four** ways of controlling tsetse flies. **(2 marks)**
12. State **four** characteristics of livestock roughage feedstuff. **(2 marks)**
13. List **two** equipment used in handling cattle during agricultural exhibition. **(1 mark)**
14. State the gestation period of the livestock animals given below

    a) Rabbit **(½ mark)**

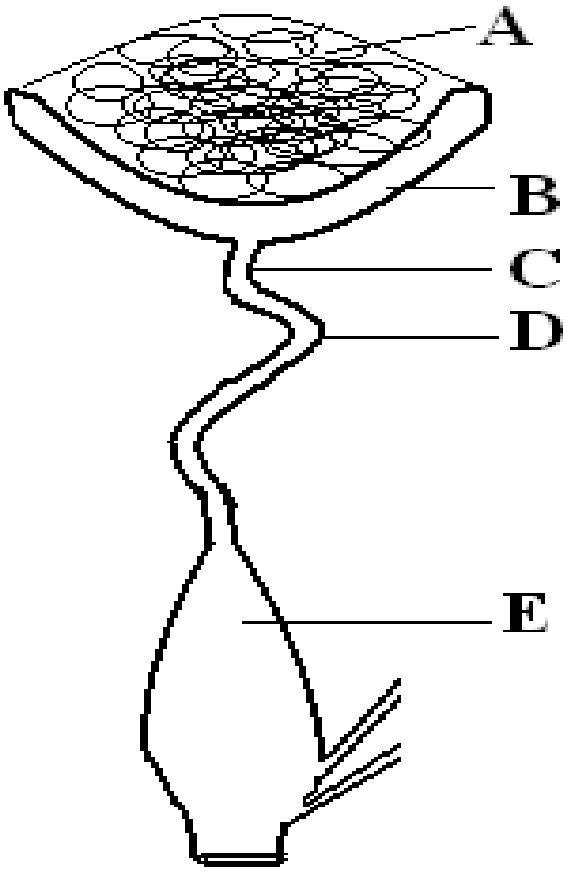
    b) Goat **(½ mark)**
15. State **four** disadvantages of natural mating **(2 marks)**
16. State **one** egg content added to it at the magnum during egg formation process. **(1 mark)**
17. State **four** methods used to control cannibalism in a deep litter system **(2 marks)**
18. (a) Give **three** uses of Biogas in the farm **(1 ½ marks)**

    (b) State **three** reasons why the use of wind power on the farm is limited. **(1 ½ marks)**

SECTION B (20 marks)

Answer ALL questions in this section.

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

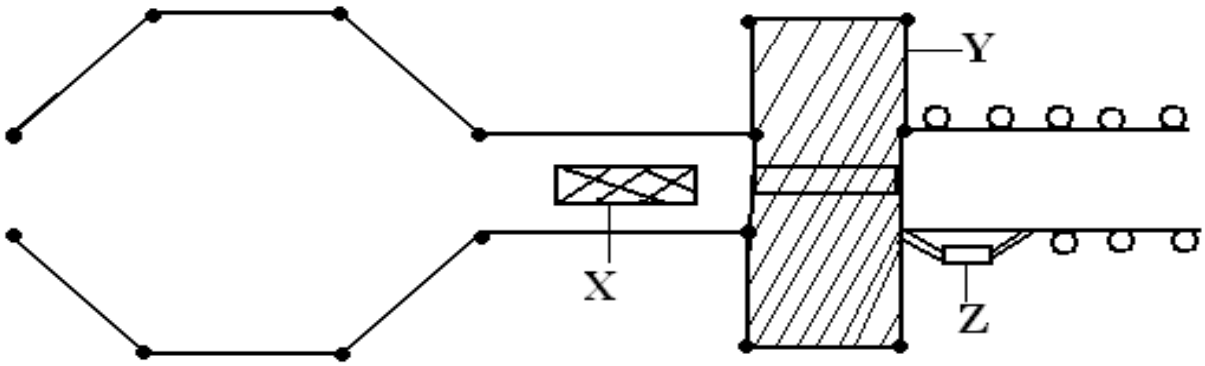


(i) Name the parts labelled A, B, C, D and E in the diagram. **(2½ marks)**

(ii) State the function of each part. **(2½ marks)**

20. Give two reasons why a jersey breed cattle is adapted to arid and semi arid areas **(2marks)**

21. The diagram below represents an aerial view of a farm structure. Study it carefully and answer the questions that follow.



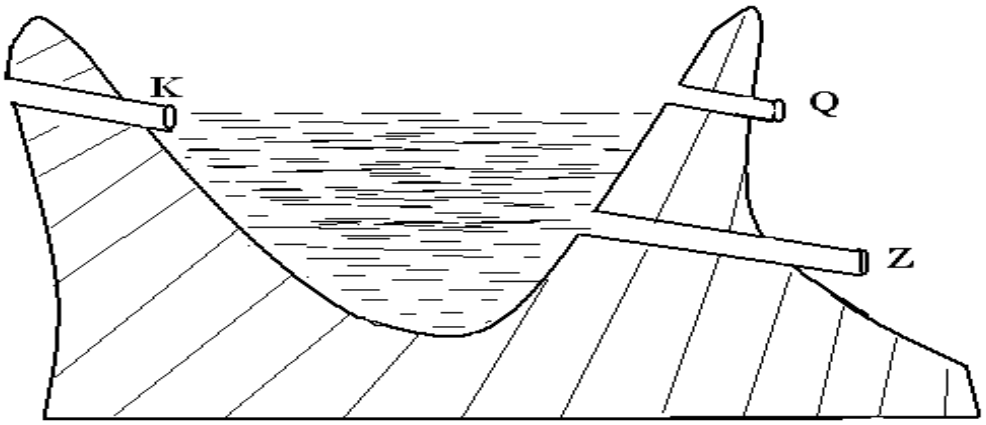
a) Identify the structure. **(1 mark)**

b) Name the parts labeled X, Y and Z. **(3 marks)**

c) List two roles of the part labeled Y. **(2 marks)**

22. Give two reasons for carrying out hoof trimming. **(1 mark)**

23. The illustration below is a farm structure.



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

b) Name the parts labeled K, Q and Z. **(3 marks)**

c) Give four maintenance practices carried out on the above structure. **(2 marks)**

SECTION C

Answer only two questions from this section.

24. (a) Describe the control measures of cannibalism in layers. **(10 marks)**

(b) State **five** maintenance practices of a mould board plough. **(5 marks)**

(c) State the advantages of a four stroke engine. **(5 marks)**

25. (a) Describe **six** effects of parasite on livestock **(6 marks)**

(b) Explain **five** reasons for maintaining farm tools and equipment **(5 marks)**

(c) Discuss the management of layers in a deep litter system **(9 marks)**

26. (a) Explain the practices observed in clean milk production **(8 marks)**

(b) Explain the importance of fences in a farm **(12 marks)**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 3

443/1

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SECTION A- 30 MARKS

Answer all the questions in this section.

1. State **four** factors considered when identifying a farming system **(2 marks)**
2. What is training as used in crop production **(1 marks)**
3. Name **two** types of planting materials. **(1 mark)**
4. Give **two** ways in which soil structure influences crop production . **(1 mark)**
5. State **four** importance of raising seedlings in a nursery bed . **(2 marks)**
6. State **one** importance of soil colour in crop production. **(1 mark)**
7. Mention **three** methods of primary cultivation **(1½ marks)**
8. Give **four** reasons why green manures are not commonly used by farmer to enrich the soil **(2 marks)**
9. a) State **four** factors considered when designing a crop rotational programme. **(2 marks)**

b) Give **two** reasons why maize should not be alternated with rice in a rotational programme. **(1 mark)**

10. State **four** importance of organic matter in the soil . **(2 mark)**
11. a) What is seed scarification . **(1 mark)**

    b) Give **three** ways of achieving seed scarification. **(1½ marks)**
12. Give **three** types of information contained in a labour record **(1½ marks)**
13. a) What is "government policy" as used in agriculture **(1 mark)**

    b) Give three ways in which the government regulates the production and sale of agricultural goods. **(1½ marks)**
14. State **three** ways of modifying the soil pH . **(1½ marks)**
15. State **two** effects of bacteria on crop production **(1 mark)**
16. Differentiate between rolling and ridging as used in crop production. **(1 mark)**
17. Name **three** poor farming practices that lead to water pollution in the farm. **(1½ marks)**
18. What is "topping" as used in forage production **(1 mark)**
19. List **two** ways through which water is collected and stored in most farms **(1 mark)**

SECTION B (20 marks)

Answer all questions in this section on the spaces provided

20. Below is a diagram of sorghum seedling that has been attacked by a certain pest



a) Identify the pest **(1 mark)**

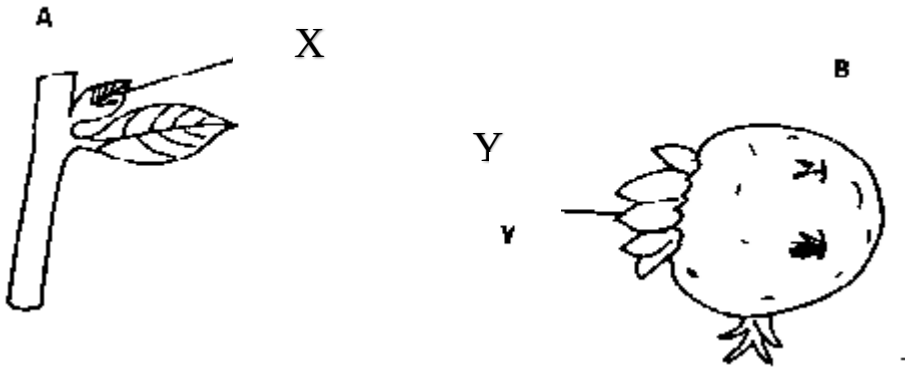
b) Identify the developmental stage of the pest named in (a) above that causes the damage.

(1 mark)

c) State the damage that has been caused by the pest named in (a) above. **(1 mark)**

d) Give **two** control measures that can be used to control the pest named in (a) above **.(2 marks)**

21. The illustration below shows materials used in vegetative propagation, labelled A and B



a) i) Identify the vegetative materials A and B **(1 mark)**

ii) Name the parts labelled X and Y **(1 mark)**

iii) Name the preparation method used to get the vegetative material B **(1 mark)**

iv) State **two** disadvantages of using vegetative materials for planting (2marks)

22. The illustration below shows a tomato fruit affected by a disease or a condition

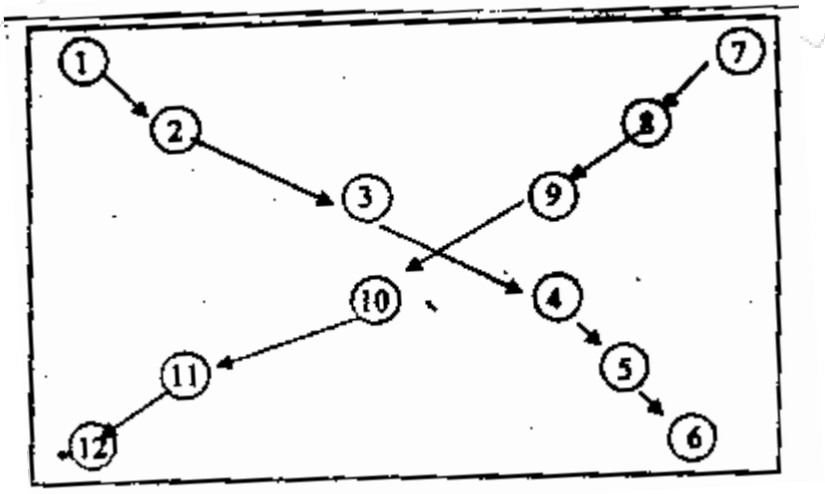


a) Identify the condition illustrated **(1 mark)**

b) State **three** conditions that predispose a tomato plant to the condition stated in (a) above **(3 mrks)**

c) Name **two** other diseases that affect tomatoes **(1 mark)**

23. Below is an illustration showing a soil sampling method. Use it to answer the questions that follow.



a) What method of soil sampling is represented above **(1 mark)**

b) Outline **two** areas which should be avoided during soil sampling **(2 marks)**

c) State the **two** sets of information that should accompany the composite soil sample to the laboratory for analysis. **(2 marks)**

SECTION C (40 MARKS)

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

24. a) Explain the advantages of grass-legume pastures over a pure grass pasture . **(8 marks)**

b. Describe the effects of fragmentation and sub-division of land in our country. **(6 marks)**

c) Explain **six** biotic factors that influence agricultural production. **(6 marks)**

25. a) Explain the process of treating water in the farm using the chemical treatment system. **(12 marks)**

b) Explain **six** physical factors that increases the rate of soil erosion in farm. **(6 marks)**

c) Explain how monoculture leads to loss of soil nutrients . **(2 marks)**

26. a) Explain **ten** precautions that a farmer should observe when using farm chemicals. **(10 marks)**

b) Give **five** reasons for pruning in coffee production. **(5 marks)**

c) Describe **five** factors that influence soil formation . **(5 marks)**

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443/2

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SECTION A- 30 MARKS

Answer all the questions in this section.

1. State **four** roles of worker bees in a bee colony**.** **(2 marks)**
2. Name a tool used for **:** **(1 mark)**

a. Tightening barbed wire.

b. Digging and collecting manure.

3. List **four** routes through which pathogens can enter the body of an animal. **(2 marks)**
4. What is the name given, whereby hind legs come out first during parturition? **(1 mark)**
5. Give **two** functions of Kenya Meat Commission (KMC). **(1 mark)**
6. Name a breed of pig which has the following characteristic.

i. Black body with a white patch on the shoulders and the forelegs. **(½ mark)**

ii. White body with blue spots**.** **(½ mark)**

7. Mention **two** tools used in cutting mature horns in cattle**.** **(1 mark)**
8. Name the other combination of tool used together with each of the following tools.**(2 marks)**

a. Canula
b. Brace
c. Elastrator
d. Wood chisel

9. Give **four** factors that would affect digestibility of food in livestock. **(2 marks)**
10. State **two** reasons why the wire loop hanging in Kenya Top Bar Hive (K.T.B.H) is recommended to be smeared with grease. **(1 mark)**
11. State **four** reasons of castration in pig production**.** **(2 marks)**
12. Distinguish between the following practices as used in livestock production.

a. Crutching and ringing in sheep management. **(2 marks)**

b. Cropping and harvesting in fish farming. (**2 marks)**

13. State **three** aspects to examine in the dung to determine ill health in livestock. **(1 ½ marks)**
14. List **four** farm structures that are necessary for handling dairy animals**.** **(2 marks)**
15. Name the causal agent of the following livestock diseases**.** **(2 marks)**

i. Anaplasmosis
ii. Anthrax
iii. Swine fever
iv. East coast fever

16. State **three** cultural uses of livestock. **(1 ½ marks)**

17. Name the intermediate host of the following endoparasites. **(1 mark)**

a. Fasciola hepatica

b. Taenia saginata

18. Give **two** advantages of natural mating in pig management. **(1 mark)**

19. What is dry cow therapy**?** **(1 mark)**

SECTION B (20MARKS)

Answer all the questions in this section in the spaces provided

20. The following photograph shows a poultry structure, study it carefully and answer the questions that follow.



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

b. Give **three** advantages of the above structure in poultry rearing. **(3 marks)**

c. Name any other structure used for rearing **poultry** **(1 mark)**

21. The diagrams below show farm tools. Study them and answer the questions that follow.



J



K

a. Identify tool J and **K** **(2 marks)**

b. State **two** uses of the tools shown **above** **(2 marks)**

c. Classify the tools under woodwork tools and equipment**.** **(1 mark)**

22. Below is a photograph of a bull. Study it carefully and answer the questions that follow.

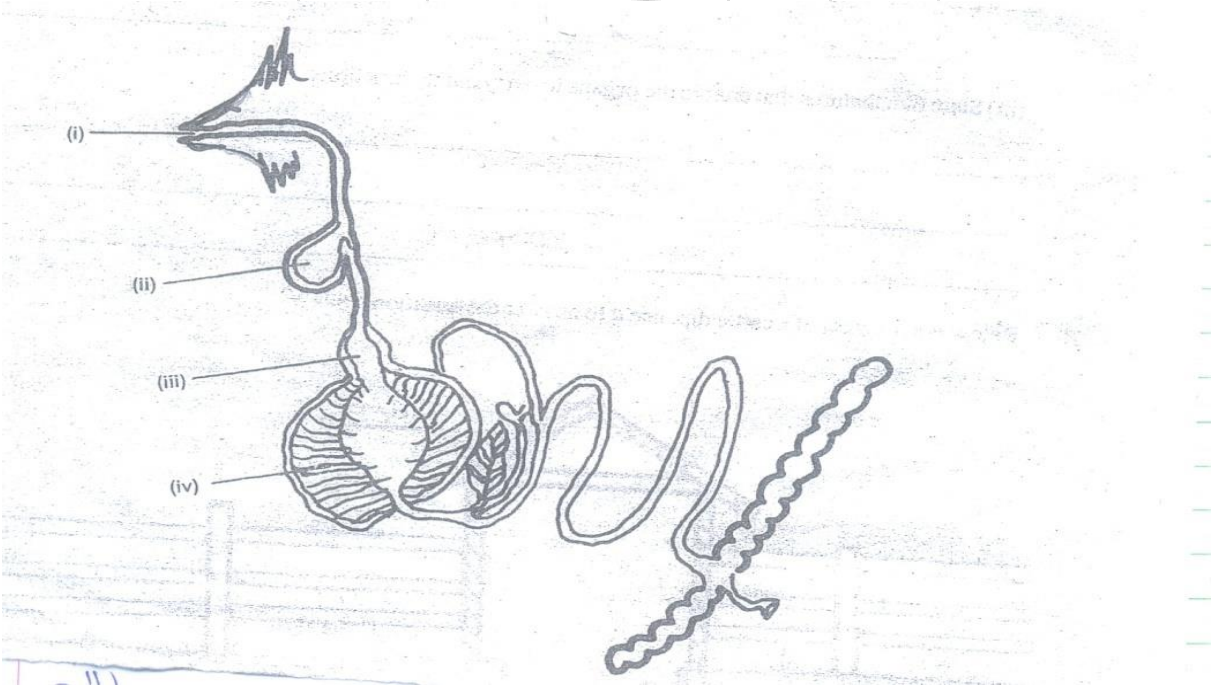


a. Name **two** observable methods of identification **(2 marks)**

b. State the name of the rope placed on the face around the head of the animal **(1 mark)**

c. State **two** observable characteristics of the bull shown above**.** **(2 marks)**

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



a. The diagram above shows digestive system of a **chicken** **(2 marks)**

Name the parts labelled:

(i)……..

(ii)…….

(iii)……

(iv)……

b. State **two** functions of part (i) **above** **(2 marks)**

c. State **two** features that enable the organ (iv) to carry out its function **(1 mark).**

SECTION C (40 MARKS)

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

24. a) Discuss the management of day old chicks to the end of brooding**.** **(10 marks)**

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

c) Give the management practices carried out on a hedge grow/live fence**.** **(5 marks)**

25. a) Outline the management practices carried out in a fish pond to ensure maximum harvest of fish. **(7 marks)**

b) State the mechanical methods used to control ticks. **(5 marks)**

c) Describe brucellosis disease in cattle under the following sub-headings:

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

ii. Symptoms of **attack** **(3 marks)**

iii. Control measures **(4 marks)**

26. a) Explain **six** routine management practices carried out in rearing a dairy male calf.**(6 marks)**

b) Describe the procedure of milking using hand milking method**.** **(8 marks)**

c) Outline the factors that a farmer should consider when selecting materials for constructing a dairy cattle shed **(6 marks)**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 4

443/1

AGRICULTURE

PAPER 1
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *Write your name and index number in the spaces provided above.*
- *The paper consists of **three** sections A , B and C.*
- *Answer all questions in section A and B in the spaces provided*
- *Answer **any two** questions from section C in the spaces provided*

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE SCORE
A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

1. **Give four** reasons why farmers are encouraged to practice organic farming **(2marks)**
2. **Distinguish** between GDP and GNP **(2marks)**
3. **What** is meant by the following terms **(2marks)**

(i) Seed inoculation

(ii) Seed dressing

4. **Name** four types of terraces **(2marks)**
5. Name the routine field practice done by;

(a) Removal of extra suckers in a banana stool **(1mark)**

(b) Removal of old stems down to level of top foliage in pyrethrum **(1mark)**

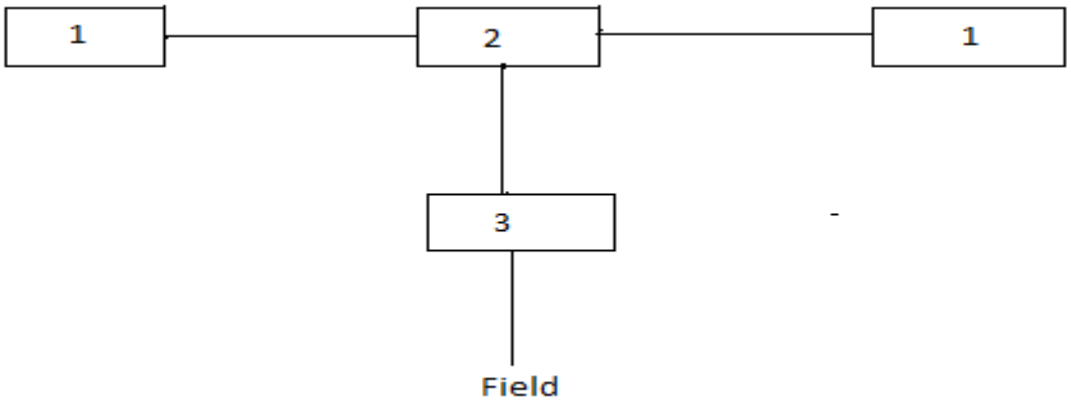
(c) Removal of suckers from coffee bushes **(1mark)**

6. State three characteristics of phosphatic fertilizers **(1.5marks)**
7. Explain the relationship between scarcity and choice as used in agricultural economics (1mark)
8. **Outline** four ways by which crop pests are classified **(2marks)**
9. **State four** advantages of land consolidation **(2marks)**
10. **Outline three** benefits derived from trees used in agroforestry **(1½marks)**
11. **State four** practices which improve light intensity in crop production **(2marks)**
12. **Give four** factors that influence the quality of hay **(2marks)**
13. **Outline two** other methods of conserving forage in the farm **(1mark)**
14. **State four** factors that determine the demand of a commodity in a free market **(2marks)**
15. **Give four** varieties of tomatoes grown for processing **(2marks)**
16. **State two** advantages of mixed farming **(1mark)**
17. **Name any two** land tenure systems practiced in Kenya **(1mark)**

SECTION B: 20 MARKS

Answer all questions in the spaces provided

18. Illustrated below is a method of turning compost. Study the method and answer the questions that follow.



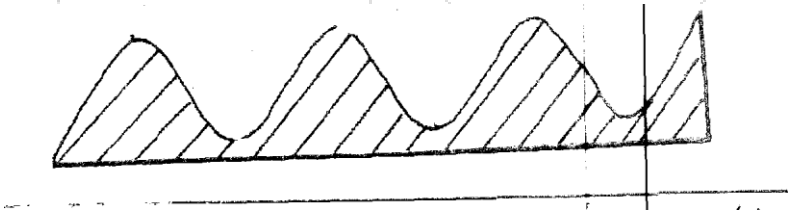
(a) Identify the method **(1mark)**

(b)Using arrows in the diagram, show how the turning is done before the manure can be taken to the field **(2marks)**

(c) After how long should the compost be ready for use **(1mark)**

(d) Apart from the above named type of organic manure, name any other two types of organic manure (**1mark)**

19. Below is a diagram of a tertiary operation. Study it and answer the questions that follow.



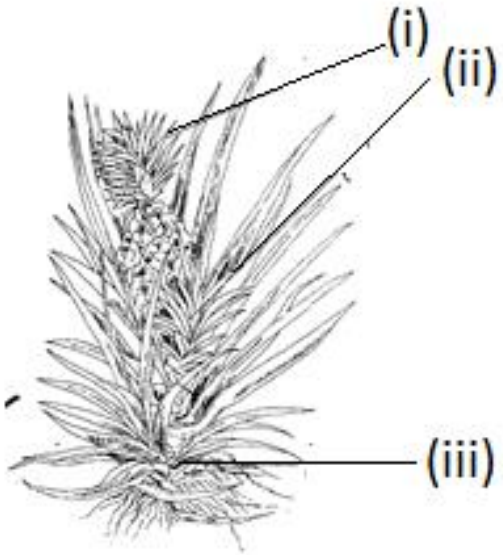
(i) Name the operation **(1mark)**

(**ii)Explain** the process of performing the operation **(1mark)**

(iii)Name the implement that can be used to achieve the operation **(1mark)**

(iv)State the importance of carrying out the operation **(2marks)**

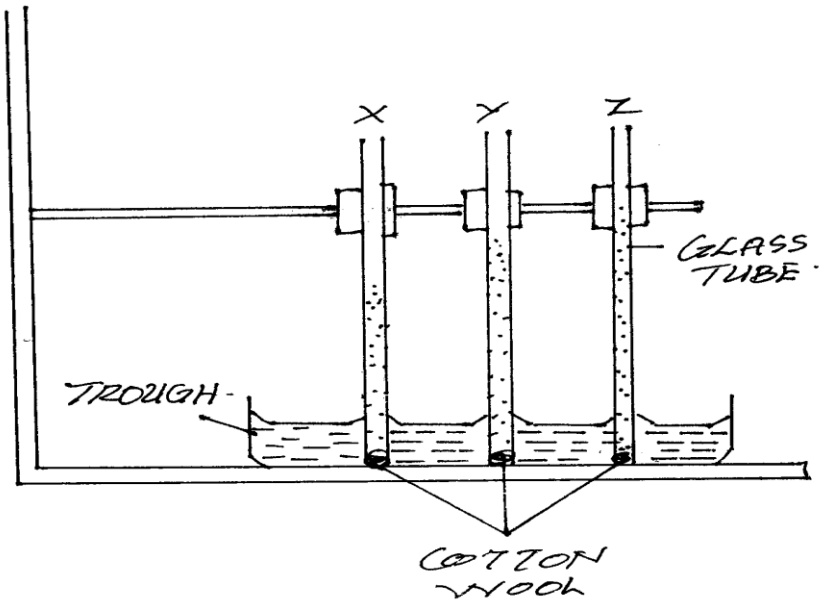
20. Below is the diagram of a planting material. Study it and answer the questions that follow.



(a) Label the parts labelled i, ii and iii **(3marks)**

(b)State two factors that determine seed rate **(2marks)**

21. Below is the set up of three different types of soil.



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

(b)State two ways of improving the soil structure labelled Z **(1mark)**

(c) Name three processes of rock weathering **(3marks)**

SECTION C: 40 MARKS

Answer any two questions from this section.

22. Study the following information which was extracted from Mr Kibui's farm records on 30th November 2022 and answer the questions that follow.

Loans payable to bank	Ksh.300,000
Five milking cows	Ksh.250,000
400 layers	Ksh.80,000
20 goats	Ksh.30,000
Debts payable to cooperative	Ksh.20,000
Buildings and structures	Ksh.600,000
Bonus payable to workers	Ksh.19,000
Cattle feed in store	Ksh.10,000
Animals drugs in store	Ksh.4,000
Breakages to repair	Ksh.30,000
Cash at hand	Ksh.20,000
Cash in bank	Ksh.30,000
Spray equipment	Ksh.12,000
Debts receivable	Ksh.18,000

(a) Prepare a balance sheet for Mr Kibui's farm using the information above **(8marks)**

(b)Was Mr Kibui's business concern solvent or insolvent **(1mark)**

(c)Name any other financial statement that can be found in Mr Kibui's farm **(1mark)**

(d)Describe five factors to consider in siting farm structures **(10marks)**

23.(a)Describe the procedure of silage making **(5marks)**

(**b)State five** effects of wind on crop production **(5marks)**

(c)State five precautions that should be observed when harvesting cotton **(5marks)**

(d)Why should it be advisable to use a nursery in crop production **(5marks)**

24. State five ways through which a farmer can adjust to risks and uncertainties in farming **(5mks)**

(b)Describe the marketing functions in agricultural economics **(5marks)**

(c)Describe the safety precautions a farmer should take when using herbicides **(5marks)**

(d)Explain five physical methods of pest control **(5marks)**

KCSE 23

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 4

443/2

AGRICULTURE

PAPER 2
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

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A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

1. State four features of a good pig house **(2marks)**
2. State four features of large white breed of pigs **(2marks)**
3. Name three stages of liver fluke which occurs in the fresh water snail **(1½marks)**
4. **State four** reasons for controlling livestock diseases **(2marks)**
5. **Name four** factors which determine the maintenance requirements of an animal **(2marks)**
6. **Give four** ways of stimulating milk let down in a dairy cow **(2marks)**
7. **Distinguish** between the following pair of terms as used in livestock production

(a) Ringing and crutching **(1mark)**

(b) Steaming up and flushing **(1mark)**

8. **Give four** reasons for maintaining a wheel barrow in good working condition **(2marks)**
9. **State four** symptoms of Newcastle disease in poultry **(2marks)**
10. **State four** disadvantages of a tractor as a source of power **(2marks)**
11. **Give four** conditions that reduces the quality of eggs for hatching **(2marks)**
12. **Name three** methods that are used in selection of breeding stock in livestock production **(1½marks)**
13. **State four** construction features necessary in a fish pond **(2mark)**
14. Give an appropriate terms that refers to each of the following

(i) Castrated chicken **(½mark)**

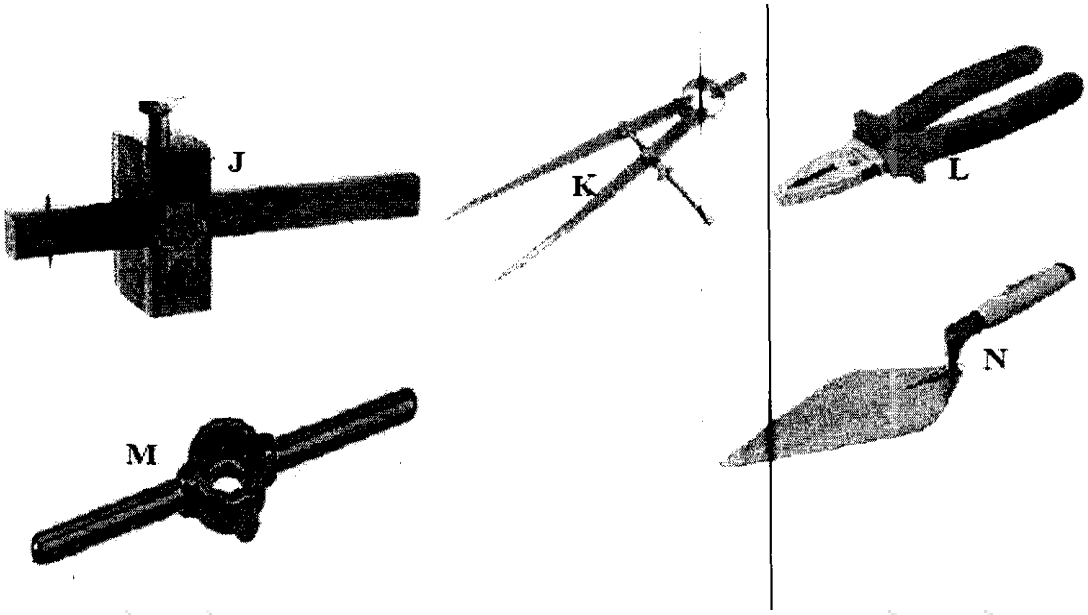
(ii) Young one of a rabbit **(½mark)**

15. **State four** methods of dehorning **(2marks)**
16. **State four** disadvantages of in breeding **(2marks)**

SECTION B: 20 MARKS

Answer ALL questions in the spaces provided

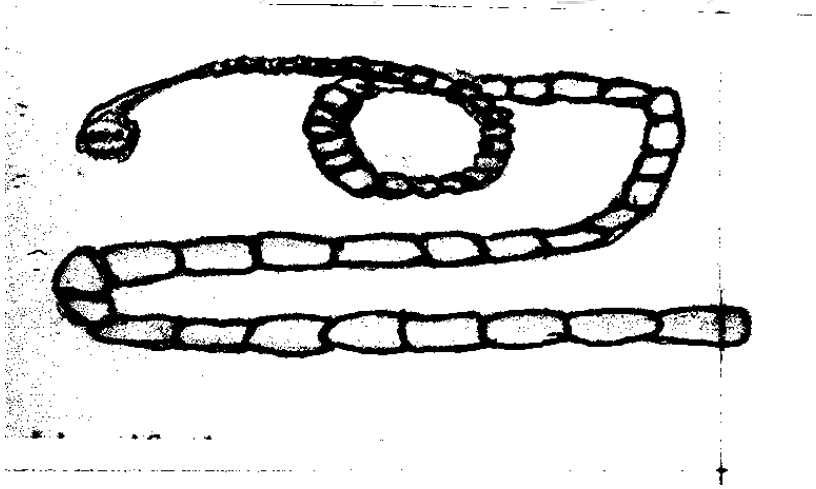
17. **The diagram** below represents farm tools and equipment. Study them and answer the questions that follow



(a) Identify the tools and equipment J and K **(2marks)**

(b)State the uses of tools labelled L, M and N **(3marks)**

18. **The** diagram below shows a livestock parasite



(a) Identify the parasite **(1mark)**

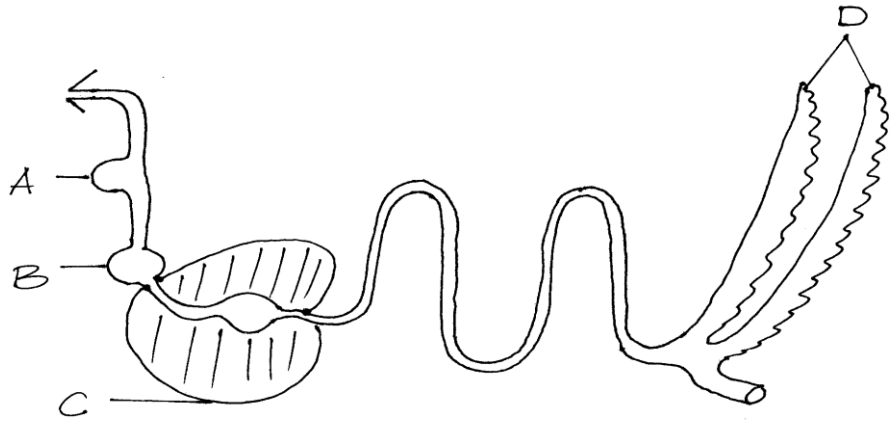
(b) Explain how the parasite can be passed from;

(i) Livestock to human beings **(1mark)**

(ii) Human beings to animals **(1mark)**

(c)State two control measures for the parasite in a zero grazing unit **(2marks)**

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



(a) Identify the parts labelled **(2marks)**

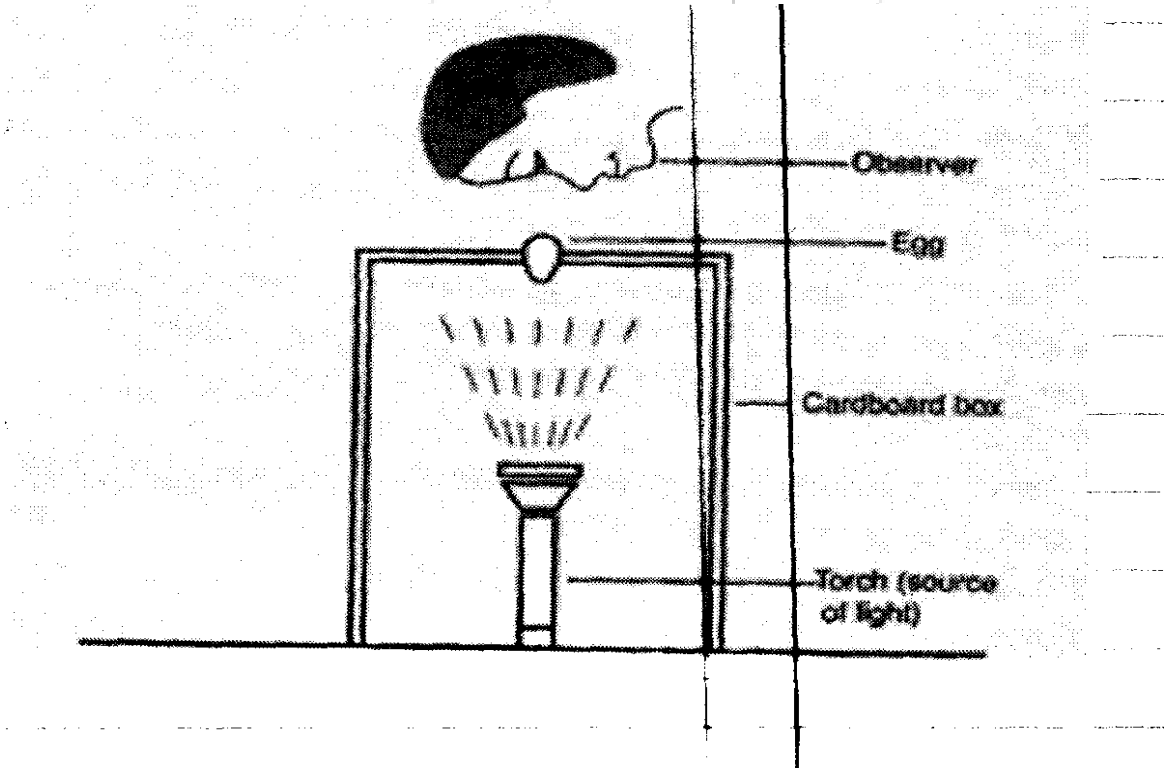
B

D

(b) State the function of part labelled A **(1mark)**

(c) State two adaptations of parts labelled C to its function **(2marks)**

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



(a) Give one reason for carrying out the practice in poultry layering **(1mark)**

(b)State two faults which can be detected using the method illustrated above **(2marks)**

(c)How can a farmer improve the following in poultry production

(i) Hardness of egg shell **(1mark)**

(ii) Yellowness of egg York **(1mark)**

SECTION C: 40 MARKS

Answer any TWO questions from this section in the spaces provided after question 23

21.(a) Describe **Ten** causes of low egg production in layers **(10marks)**

(b) Discuss foot and mouth disease under the following headings:

(i) Causal organism **(1mark)**

(ii) Livestock species attacked **(2marks)**

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

(iv) Control measures **(3marks)**

22.(a) Outline **five** advantages of artificial insemination in cattle management **(5marks)**

(b) Explain **five** factors that a farmer should consider when sitting a bee hive to prevent swarming **(5marks)**

(c) Explain **five** precautions taken by dairy farmer to ensure clean milk production **(10marks)**

23.(a) State **five** characteristics of light breed of poultry **(5marks)**

(b) Describe the operation of a four stroke cycle engine **(12marks)**

(c) State three good hygiene practices in livestock feeding **(3marks)**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 5

443/1

AGRICULTURE

PAPER 1
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

1) State **two** causes of forking in carrots **(1mk)**

2) Name **four** books of account kept by a farmer **(2 mks)**

3) Give the element whose deficiency in plants is characterized by the following

(a) Interveinal chlorosis of the leaves **(½ mark)**

(b Blossom end rot in tomatoes**.....(1/2mark)**

(c) Scorched edges of a leaf **..... (½mark)**

4) Give **four** advantages of using grafting as a method of improving avocado fruits. **(2mks)**

5 Give **four** reasons for using certified seeds for planting. **(2mks)**

6) List **three** methods used to control weeds in pastures. **(1 ½ mks)**

7) State **two** reasons for conserving forage crops. **(1mk)**

8) State **four** effects of high level of education and technology on agriculture **(2marks)**

9) State **four** features that characterize subsistence **farming** **(2mks)**

10) Name **three** aspects of light that affect agricultural production **(1 1/2marks)**

11. Give **four** farming practices in agriculture that destroy soil structure **(2mks)**

12. State four characteristics of clay **soil** **(2mks)**

13. Give **three** reasons for erecting a shade over a nursery bed **(1 1/2mks)**

14. State **three** characteristics of good root stock **(1 1/2)**

15. Name **three** tertiary operations in land **preparations** **(1 1/2)**

16. State four reasons for sub-soiling. **(2mks)**

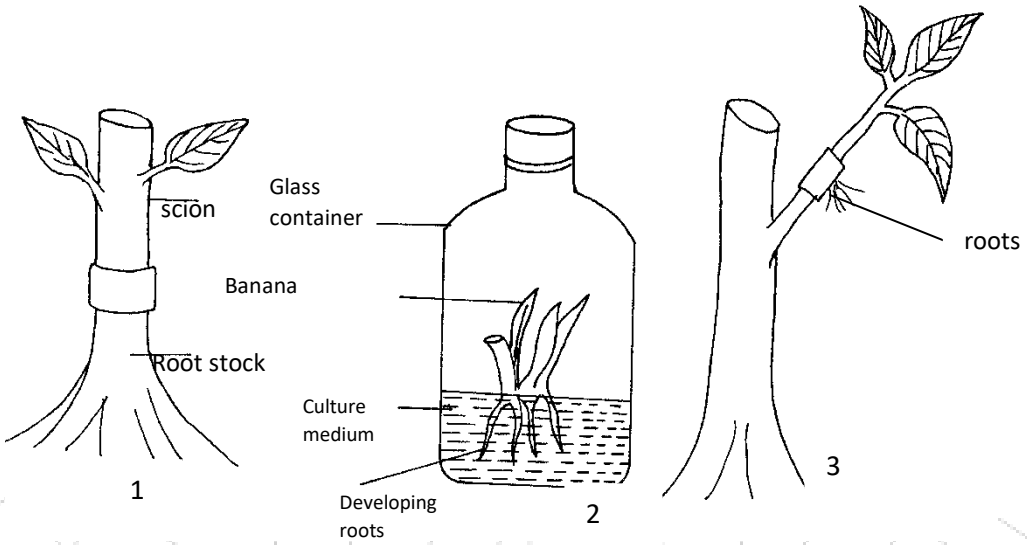
17. Give **four** importance of seed selection **(2mks)**

18. Outline **four** factors that determine the time of planting **(2mks)**

19.State **four** ways in which land reform can be implemented in Kenya **(2mks)**

SECTION B (20 MARKS)

20. Study the methods of crop propagation illustrated below and answer the questions that follow



a) Identify the methods of crop propagation illustrated above

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

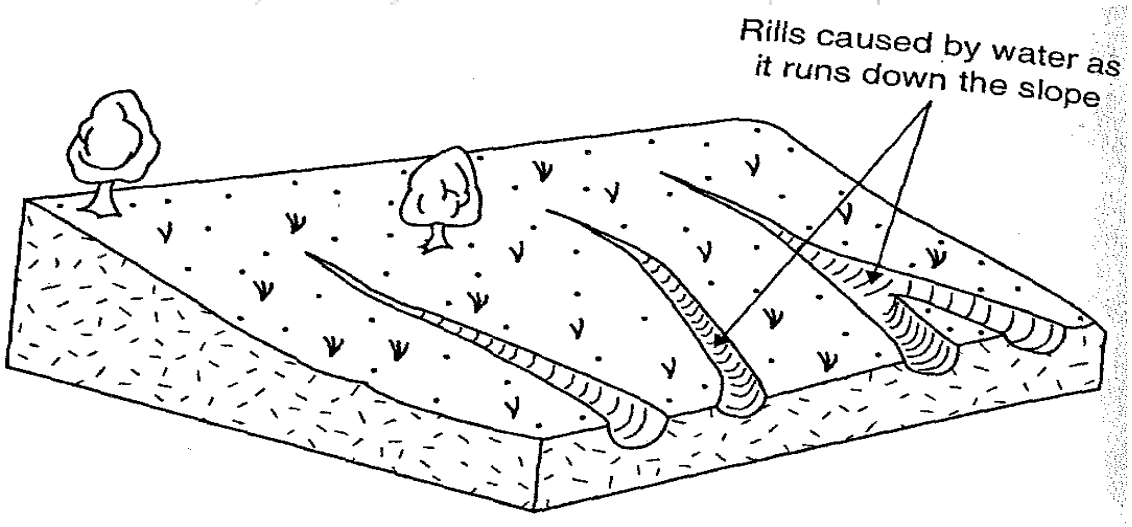
2.....**(1mk)**

3.....**(1mk)**

b) Give one condition under which method (1) above is carried out. **(1mk)**

c) State **two** disadvantages of using stem cuttings for planting. **(1mk)**

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



a) Identify the diagram shown above **(1mk)**

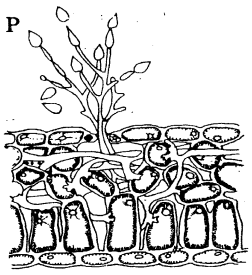
(b) Under what conditions would you expect the above diagram to occur **(2mks)**

(c) State **two** ways of preventing the conditions shown in a above from occurring **(2mks)**

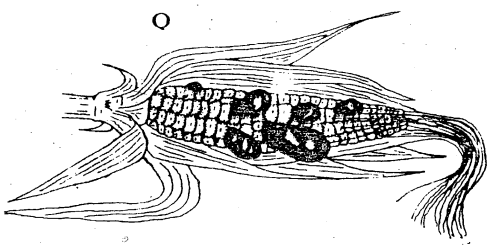
22. The diagrams below show symptoms of disease attack on some field crops.

Study them and answer the questions that follow.

P



Q



(a) Identify the pathogen causing symptoms shown in diagrams labeled P and Q. **(1mk)**

P –_____ **Q –**_____

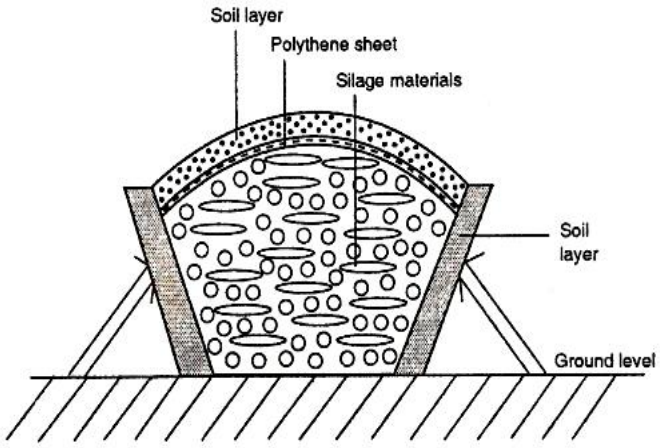
(b) Give the name of the disease whose symptoms are indicated in diagrams P and Q**.** **(1mk)**

P - _____ **Q –** _____

(c) State **two** harmful effects of crop disease shown in diagram Q. **(2mks)**

(d) Give **two** cultural control measures for infestation Q. **(1mk)**

23. Below is a diagram of a clamp silo. Study it carefully and then answer the following questions.



i)(a) What is the use of the soil layer at the sides? **(1mk)**

(b) Why should the top of the silage material be arched or slopping? **(1mk)**

c) Why is it necessary to check the temperature of the material throughout the ensiling process? **(1mk)**

(d) How is high temperatures reduced in the silo during ensiling process? **(1mk)**

(e) Give two reasons why molasses are added while making silage using Napier. **(1mk)**

SECTION C (40 MARKS)

24. (a) State **four** major questions a farm manager needs to ask and answer while preparing a partial budget **(4mks)**

(b) Under what conditions is partial budget an appropriate tool for planning **(4mks)**

(c) A farmer has 160 ha of land, 60 ha of which is under wheat, 32 ha under maize, 12ha under fodder crops and the rest under pastures. She wishes to know whether replacing 12 ha of maize with irish potatoes the following year would be worthwhile. The fertilizer would have to be increased from 5 bags per ha for maize to 7 bags per ha for irish potatoes and an extra 100 man –days of casual labour per ha will be necessary as a result of the change. The average yield of maize and irish potatoes is 45 and 115 bags/ha respectively. The prices are Shs. 1400 per bag for maize and Ksh.1200 per bag for irish potatoes seed costs are Sh.2500 per ha for maize and Shs. 30,000 per ha for irish potatoes. Fertilizer costs are Shs.1300 per bag. Labour is paid at Shs. 150 per man-day.

Draw up a partial budget and indicate the effects of the change **(12mks)**

25 a) Explain **five** factors that influence soil productivity. **(10mks)**

b) Outline **five** factors that a farmer would consider before deciding on the type of irrigation in crop production. **(5mks)**

c) Describe the qualities of the mother plant that should be considered when selecting vegetative material for planting. **(5mks)**

26 a) Explain cultural measures used in the control of weeds in a field of Cereal crop. **(10mks)**

b) Explain **six** factors that can influence a well designed crop rotational program. **(6mks)**

c) Give four reasons why timely ploughing of the seedbed is important in crop production. **(4mks)**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 5

443/2

AGRICULTURE

PAPER 2
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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FOR EXAMINER'S USE ONLY

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A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

1. What is a notifiable disease **(½ mk)**

2. List **four** routes through which disease causing organism enter the animals body **(2mks)**

3. Outline **two** ways through which proper feeding contributes to disease control **(1mk)**

4. State **four** characteristics of an effective acaricide **(2mks)**

5. Give the adaptive features of gizzard which enables it to digest easily **(1 ½ mks)**

6. State **two** reasons which make teeth clipping an important management practice in pig production **(1mk)**

7. (a) List **three** types of lubrication systems in a tractor **(1 ½ mks)**

(b) Give **four** functions of lubrication system (**2mks)**

8. State **three** pre-disposing factors to coccidiosis disease in livestock farms **(1 ½ mks)**

9. Indicate the functions of each of the following parts of cooling system of an engine

Temperature gauge **(½ mk)**

Water jackets **(½ mk)**

Radiator **(½ mk)**

10. State **three** qualities of a good livestock ration **(1 ½ mks)**

11.(a) Give **two** causes of soft shells in eggs. **(1 mark)**

(b) How should the feeding of bees be supplemented during a dry season? **(½ mark)**

12. State **four** reasons for keeping livestock healthy. **(2 marks)**

13.State **four** disadvantages of inbreeding in livestock. **(2 marks)**

14. Outline **four** benefits of steaming-up in livestock. (**2 marks)**

15. Name **four** reasons for castrating male calves. **(2 marks)**

16. Outline **four** uses of solar energy in a farm. **(2 marks)**

17. State two reasons why calves should be housed in individual pens **(1mk)**

18 Give **four** conditions that reduce the quality of eggs for incubation **(2Marks)**

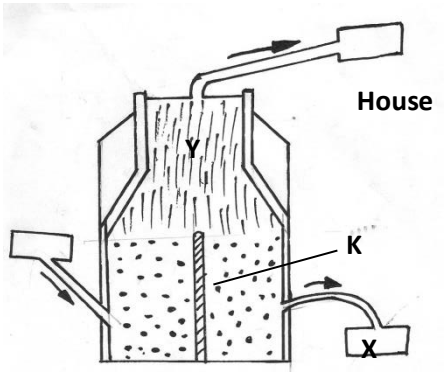
19. Mention **four** symptoms of milk fever in dairy cows. (**2Marks)**

20.State **four** causes of infertility in dairy cattle (**2Marks)**

21. Outline **three** reasons why farm structures should be maintained **(1 ½ Marks)**

SECTION B (20 MARKS)

22. Study the biogas digester plant illustrated below and answer the questions that follow



(a) Give the name and use of the material in the part marked X **(2mks)**

Name……

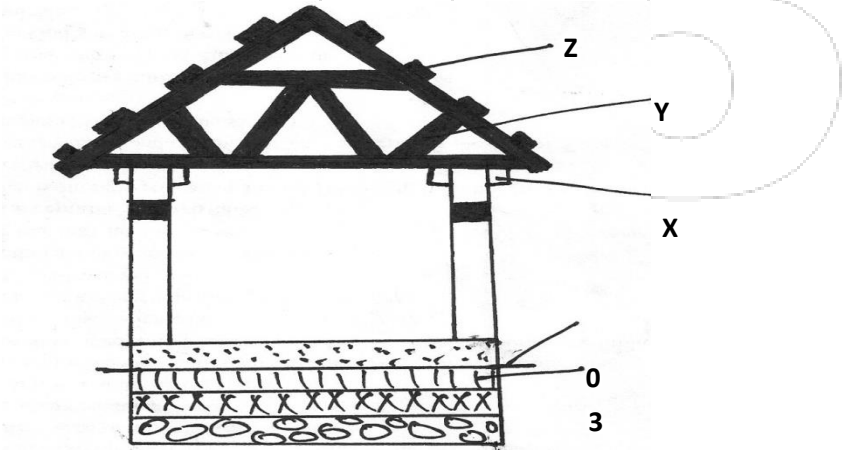
Use:……

(b) State the major function of part marked K above **(1mk)**

(c) Give the major component in the place marked Y on the diagram **(1mk)**

(d) Outline the disadvantages of using the power source in the set up above **(1 mk)**

23. Study the farm structure below and answer the questions that follow



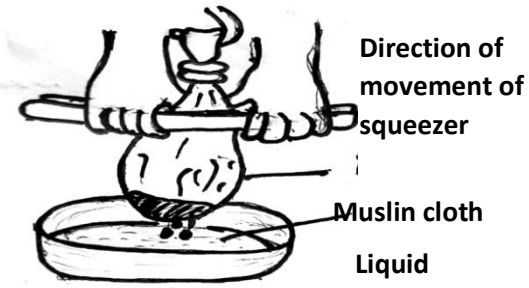
(a) Name the parts marked Z,Y and X on the structure **(1 ½ mks)**

(b) Give the ratio of the materials for making labeled 3 above **(1mk)**

(c) State **two** functions of material placed in part marked O above **(1mk)**

(d) Name **one** example of the tools that can be used on the part labeled Y above **(½ mk)**

24. Study the method of livestock production preparation below and answer the questions that follow



(a) Identify the method of extraction illustrated **(½ mk)**

(b) Name **two** alternative methods of obtaining the product other than the one illustrated above **(1mk)**

(c) Give **two** factors that determine the quality of the product **(1mk)**

25. A farmer wants to prepare a ration for layers containing 18% DCP using maize germ 20% DCP and wheat bran 10% DCP.

(a) Calculate using pearson's square method the amount of each feed-stuff needed in order to prepare 100kg of feed **(4mks)**

(b) Name **one** other method the farmer can use to compute the ratio **(1mk)**

SECTION C (40MARKS)

26.(a) State and explain **ten** materials and equipment used during milking. **(10Marks)**

(b) Explain **four** advantages of rearing birds through a battery cage system. **(10mks)**

27. Discuss foot and mouth disease under the following sub-headings.

a) i)Animal affected. **(2mks)**

ii)Methods of transmission. **(2mks)**

iii)Symptoms of attack**.** **(4mks)**

iv)Control measures**.** **(2mks)**

b) Outline general control measures of livestock parasites**.** **(10mks)**

28. (a) Give the differences between a petrol and a diesel engine **(10mks)**

(b) Describe the daily maintenance of a tractor **(10mks)**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 6

443/1

AGRICULTURE

PAPER 1
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *Write your name and index number in the spaces provided above.*
- *The paper consists of **three** sections A , B and C.*
- *Answer all questions in section A and B in the spaces provided*
- *Answer **any two** questions from section C in the spaces provided*

FOR EXAMINER'S USE ONLY

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A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

1. State **four** reasons why agriculture is important to Kenya's economy. **(2 marks)**

2. State **four** ways in which mulching conserves water. **(2 marks)**

3. State **four** ways in which trees improve soil productivity. **(2 marks)**

4. What is meant by the term integrated pest management? **(2 marks)**

5. State **four** factors that influence soil formation. **(2 marks)**

6. State **four** causes of crop diseases. **(2 marks)**

7. State **four** ways in which a land title deed is important to a farmer. **(2 marks)**

8. Give **four** agents of soil erosion. **(2 marks)**

9. Give **four** reasons for intercropping in crop production **(2 marks)**

10. **State four** characteristics of extensive farming system. **(2 marks)**

11. Outline **four** minimum tillage practices **(2 marks)**

12. Give **four** reasons why burning of land is discouraged. **(2 marks)**

13. State **four** functions of Young Farmers Club **(2 marks)**

14. Distinguish between a perfect and an imperfect market. **(1 mark)**

15. State the meaning of the following terms as used in crop production.

(a) Crop rotation. **(1 mark)**

(b) Pruning. **(1 mark)**

(c) Rogueing. **(1 mark)**

SECTION B (20 marks)

16. A farmer has a piece of land on which he can grow maize, cabbages and beans.

The expected yields and selling prices of the three crops are shown below.

Crop	Yield (kg)	Selling prices (ksh/kg)
Maize	4000	40
Cabbages	2800	60
Beans	3000	80

If the cost of producing any of the three crops is the same.

(a) Which crop should the farmer grow? Show your working. **(2 marks)**

(b)(i) State the farmer's opportunity cost. **(1 mark)**

(ii) Give a reason for your answer in (b) (i) above. **(1 mark)**

(c) Give a reason why farmers always have to make a choice on the enterprise to implement on the farm. **(1 mark)**

17. A famer is advised to apply 60kg N, 20kg P_2O_5 and 30kg K_2O per hectare. Calculate the quantity of urea (46%N), single super phosphate (20%P_2O_5) and muriate of potash (50% K_2O) the farmer should apply on his 10 hectares land. **(5 marks)**

18. Below is a diagram showing a crop disease.



(a) **Identify** the crop disease. **(1 mark)**

(b) State **three** control measures for the crop disease. **(3 marks)**

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

19. The diagram below illustrates a nursery practice.



(a) Identify the practice. **(1 mark)**

(b) Describe the procedure followed in carrying out the practice illustrat**ed.** **(2 marks)**

(c) State **two** advantages of the practice illustrated above in crop production. **(2 marks)**

SECTION C (40 marks)

20 (a) Describe **seven** harmful effects of crop pests. (**7 marks)**

(b) Describe **eight** safety measures a farmer should observe when using herbicides to control weeds. **(8 marks)**

(c) Describe the harvesting of coffee. **(5 marks)**

21. (a) Explain **five** factors that can increase the demand for tea on a market. **(10 marks)**

(b) State **four** ways of improving labour productivity on the farm **(4 marks)**

(c) The following information was obtained from Upendo Farm inventory on 1st January2013.

ITEM	VALUE(Ksh)	
Layers		80,000
Beef cattle		240,000
Beans in store		40,000
Cash at hand		15,000
Land		550,000
Machinery		250,000
Buildings		310,000
Calves		75,000

On the same day the farm recorded the following;

ITEM	VALUE(Ksh)	
Wages payable		5,000
Interest payable		8,000
Bank loan		725,000
Milk sales on credit		12,000
Chicken sales on credit		6,000
Cash in bank		52,000
Purchase of fertilizer on credit		26,000
Taxes payable		3,000

Using the information provided prepare a balance sheet for Upendo Farm. **(6 marks)**

22. (a) Describe the field management practices for tomatoes. **(10 marks)**

(b) Explain ways in which the Kenyan Government can improve maize production to ensure food security in the country. **(10 marks)**

KCSE 23

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 6

443/2

AGRICULTURE

PAPER 2
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

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

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

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

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

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

6. Give **four** disorders associated with calcium deficiency in livestock **(2marks)**

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

8. Give a reason why ruminant animals are able to digest grass. **(1 mark)**

9. Give the difference in meaning of the following terms as used in livestock.

(a) Quarantine and Isolation **(1 mark)**

(b) Zoonotic and notifiable diseases **(1 mark)**

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

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

12. Name **thre**e farm implements operated by the tractor's P.T.O shaft. **($1\frac{1}{2}$marks)**

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

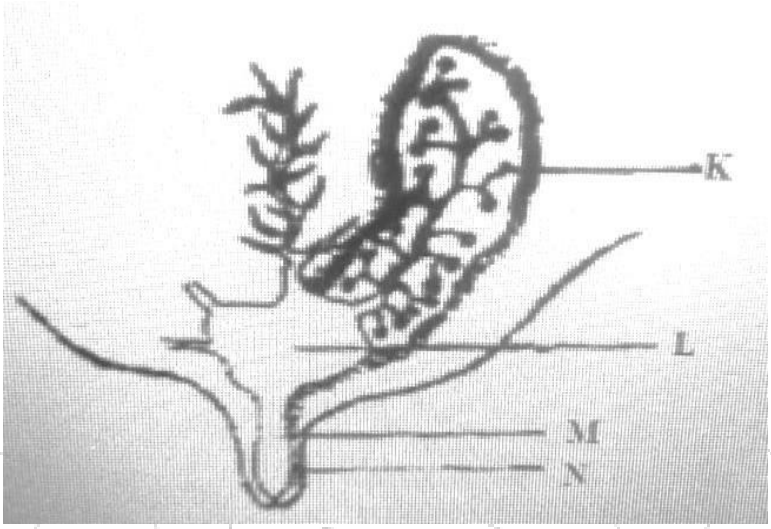
14. Name **three** breeding diseases controlled through the use of artificial insemination. **($1\frac{1}{2}$mks)**

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)

17. The diagram below shows the udder of a cow. Use it to answer the questions that follow.



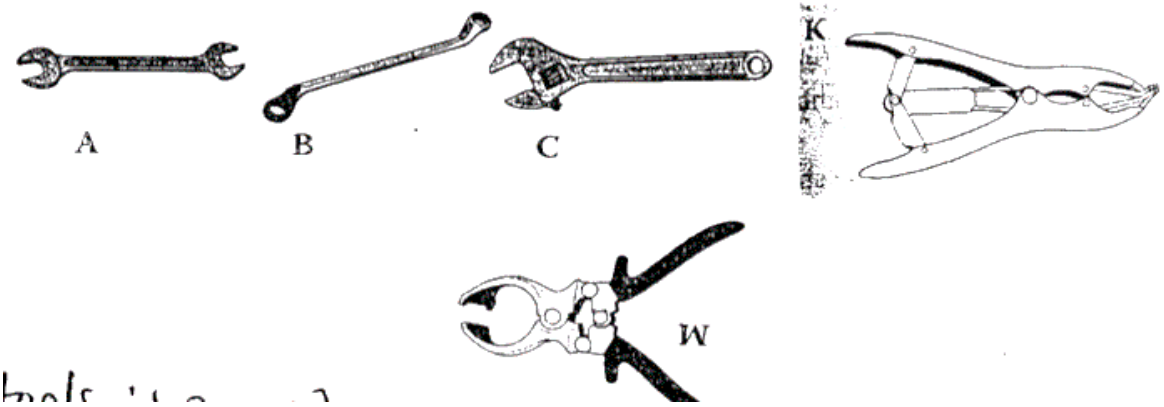
a) Name parts L and M. **(2 marks)**

b) State the hormone responsible for milk let down. **(1 mark)**

c) Define dry cow therapy. **(1 mark)**

d) Why milking should be done quickly and evenly. **(1 mark)**

18. The diagrams below show some farm tools. Study them and answer the questions that follow.



a) Name the tools. **(2 marks)**

A-

B-

C-

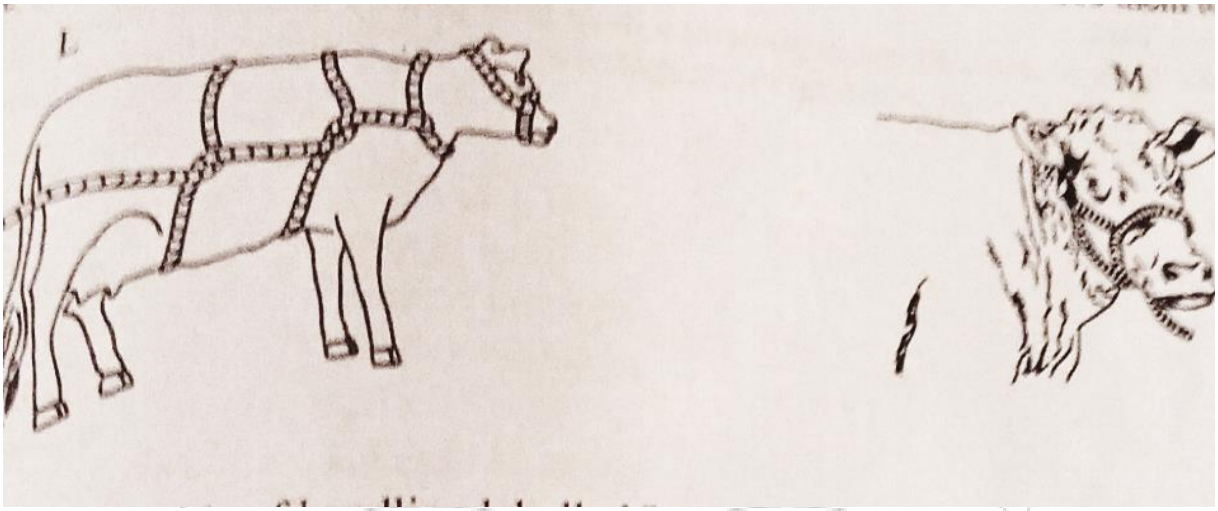
W-

b) State the functional differences between tools K and W. **(1mark)**

c) What advantage does C have over A and B? **(1 mark)**

d). State one common maintenance practice carried out tool C and W**.** **(1mark)**

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

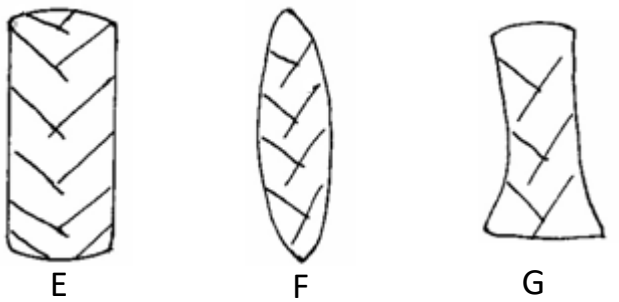


a) Identify the methods of handling livestock labelled L and M. **(1 mark)**

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)**

20. The diagram **below** represents conditions of the tyre.



(a) Which diagram represents the correct pressure in a tractor tyre? **(1 mark)**

(b) Identify the mistakes with the other two tyres. **(2 marks)**

(b) Give the correct measures taken for each tyre mentioned in **(b) above**. **(2 marks)**

SECTION C (40 MARKS)

Answer any two questions in this section

21.a) Explain **five** factors that affect milk composition in dairy farming. **(5 marks)**

b) State five signs of parturition in cattle **(5marks)**

c) State five maintenance practices of a fish pond **(5marks)**

d) Explain five factors considered when selecting livestock for breeding **(5marks)**

22.a) Describe the management of a sow during parturition. **(10 marks)**

b) Describe the lifecycle of a three host tick. **(7 marks)**

c) Outline **three** effects of endo-parasites to the host animals **(3marks)**

23. a) Describe a blue tick (*Boophilus decolaratus*) under the following sub-headings.

i) Diseases transmitted. **(2marks)**

ii) Preferred site of attachment. **(3marks)**

iii) Non-chemical control measures. **(5marks)**

b) Discuss mastitis disease under the following sub-headings:

i) Predisposing factors. **(5marks)**

ii) Control and treatment. **(5marks**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 7

443/1

AGRICULTURE

PAPER 1
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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FOR EXAMINER'S USE ONLY

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A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

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

2. Give **four** factors that would determine the stage at which a crop is harvested**.** **(2marks)**

3. Give three reasons for early seedbed preparation. **(1½marks)**

4. State **four** disadvantages of organic mulches. **(2 marks)**

5. Outline four functions of magnesium in crops . **(2 marks)**

6. .State four objectives o f land tenure reform . **(2marks)**

7. .State two disadvantages of late defoliation in pasture management . **(1mark)**

8. .Define the following terms as used in economics .

(a) National income **(1mark)**

(b) Per capita income **(1mark)**

9. Give four benefits of a good soil structure in crop production . **(2marks)**

10. Name **four** farm records that should be kept by a poultry farmer. **(2marks)**

11. Give three factors that should be considered when choosing the type of labour to use on the farm**.** **(1½ marks)**

12. State four ways in which burning of vegetation may lead to lose of soil fertility **(2 marks)**

13. State ***four*** symptoms of viral diseases in crops. **(2marks)**

14. State ***three*** methods of classifying herbicides. **(1½marks)**

15. Give ***four*** methods of applying fertilizers to crops. **(2marks)**

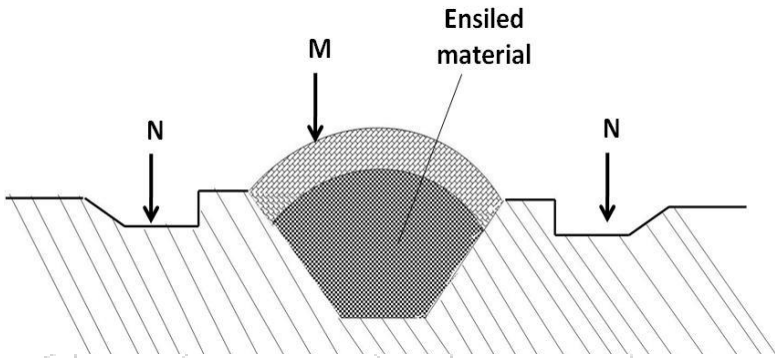
16. State **three** advantages of drip irrigation **(1½ marks)**

17. Outline **two** ways of controlling damping off diseases on vegetable seedlings in a nursery **(1mark)**

SECTION B(20 MARKS)

Answer all the questions in this section in the spaces provided

18. The diagram below shows a silo. Study it carefully and answer the questions that follow.

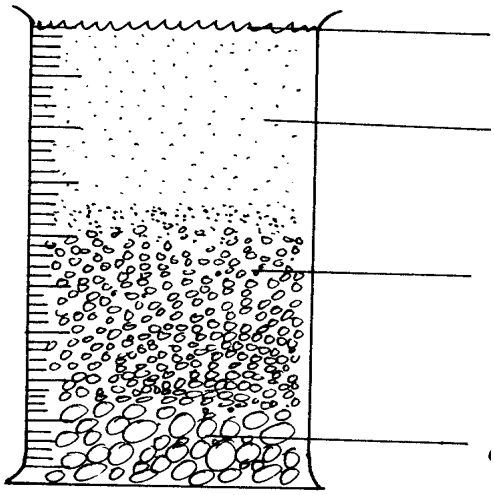


a) Identify the type of silo shown on the diagram. **(1mark)**

b) State the use of the part labeled M and N **(2marks)**

c) Give **two** ways of ensuring that anaerobic conditions are achieved during silage making process. **(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.

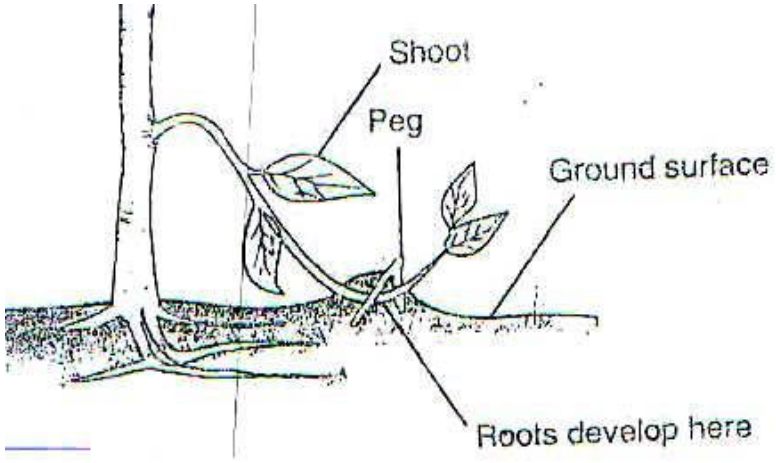


(i). Name the layers marked a,b,c, and d. **(2mrks)**

(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 of crop propagation and answer the following questions



a) Identify the propagation method **(1mark)**

b) State two factors that encourage root formation in the above method of propagation **(2marks)**

c). Name two crops that can be propagated using the above method **(2marks)**

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

(b) Name one fungal disease of tomatoes that can be controlled using the above procedure. **(1marks)**

c) State four safety measures that should be taken while spraying the crop with the fungicide. **(4marks)**

SECTION C (40 MARKS)

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

22. (a) Explain **five** factors that should be considered when siting a vegetable nursery**. (5marks)**

(b) Explain six factors that should be considered when selecting seeds for planting. **(6marks)**

(c) Explain the different ways in which each of the following environmental factors Influence crop production:

(i) Temperature; **(4marks)**

(ii) Wind. **(5marks)**

23. (a) Explain the benefits of land consolidation. **(6marks)**

b) Briefly explain **six** factors influencing mass wasting**.** **(6marks)**

c) Explain **four** ways of improving labour **productivity** **(8marks)**

24 (a) Explain five factors that determine the spacing to be used in crops. **(10marks)**

(b) Describe seven nursery practices carried out while seedlings are still growing**.(7marks)**

(c) Outline three precautions taken in harvesting tea. **(3marks)**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 7

443/2

AGRICULTURE

PAPER 2
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

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		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

1. List two cattle diseases caused by viruses. **(1mark)**

2. State one use for each of the following tools

a) Spoke shave …….

b) Plumb bob …….

3. List two distinguishing external characteristics of California breed of rabbit. **(1mark)**

4. State four reasons for culling a breeding boar . **(2marks)**

5. State any two disadvantages that may arise from inbreeding in livestock. **(1mark)**

6. State two reasons for seasoning timber before use . **(1mark)**

7. a) Differentiate between a roughage and a concentrate feed in animal nutrition. **(1mark)**

b)State four desirable qualities of a livestock ration. **(2marks)**

8. State three factors that may influence the amount of water intake by a farm animal . **(1 ½ marks)**

9. State three advantages of keeping a herd of dairy cattle healthy. **(1½ marks)**

10. Give three reasons for dehorning cattle. **(1½ marks)**

11. Give two methods of extracting honey from honey combs **(1mark)**

12. a) Give four reasons for candling eggs in poultry production. **(2marks)**

b) Give four maintenance practices that should be carried out on the mould board plough**.** **(2marks)**

13. a) List four harmful effects of internal parasites in livestock. **(2marks)**

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

(ii) Name three dairy goats kept in Kenya . **(1½ marks)**

14. Name **two** diseases that affect female animals only **(1mark)**

15. What is the function of a spillway in a fish pond **(½ mark)**

16. Name three types of lubrication systems used in tractors . **(1½ marks)**

17. Give the functions of the following parts of an ox-plough

a) Land side …… **(½mark)**

b) Draft rod **……(½ mark)**

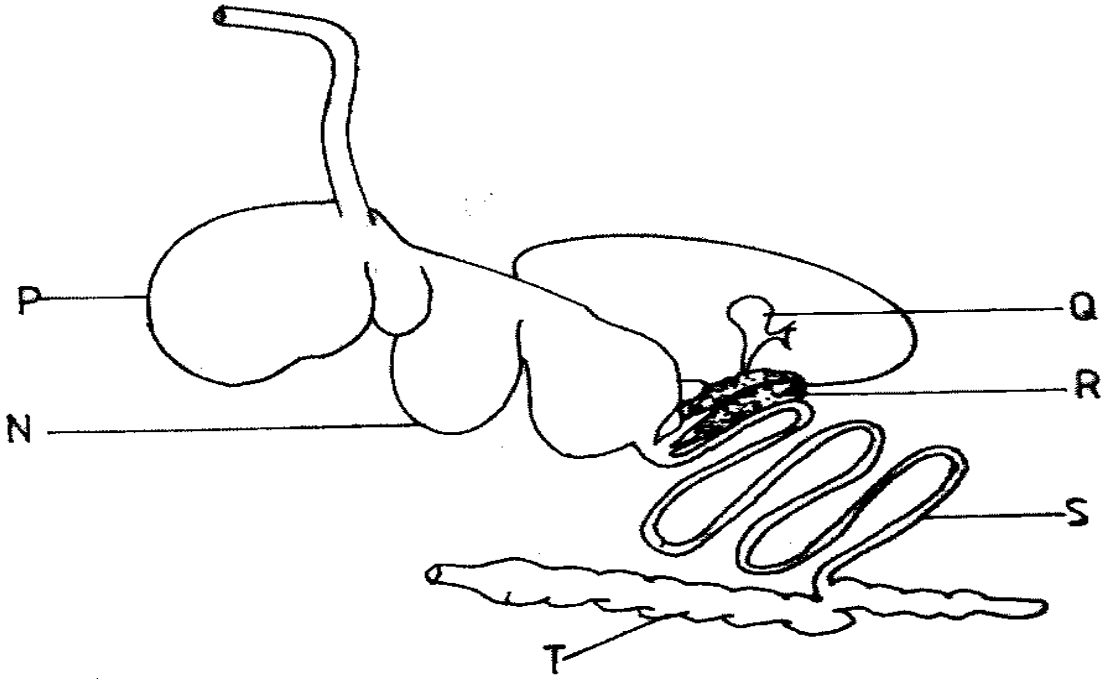
18. Give three structural requirements for a grain silo. **(1½ marks)**

19 State three advantages of natural feeding in calf rearing. **(1½ marks)**

SECTION B (20 MARKS)

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

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



a). Name the parts labelled **N, P and Q.**

N ..... **(1 mark)**

P ..... **(1 mark)**

b). State one function for each of the parts labelled **S** and **T**.

S..... **(1 mark)**

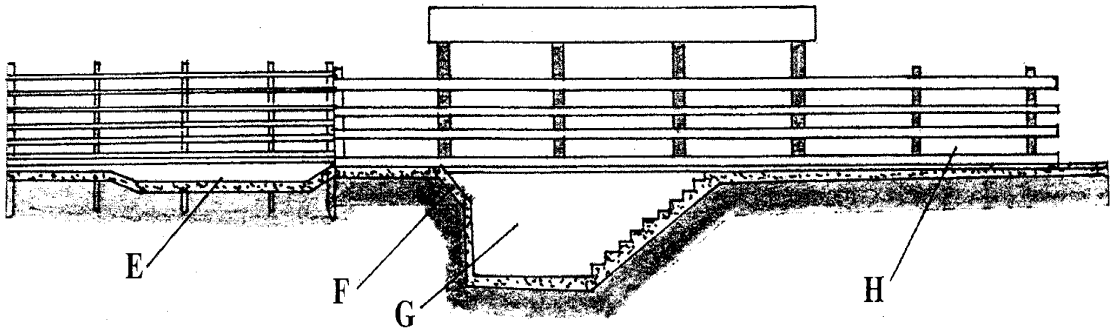
T ..... **(1 mark)**

c). Give one enzyme produced by each of the parts labelled **R** and **S.**

R ..... **(½ marks)**

S ..... **(½ marks)**

21. The illustration below shows a cross section of a cattle dip.



a) Name the parts labelled **E and G.**

E…… **(1mark)**

G…… **(1mark)**

b) State one use for each of the parts labelled E, F and H. **(3marks)**

22. The following diagrams show animals with deficiency symptoms of some minerals. Study the diagrams carefully and answer the questions that follow.



(a) State the nutrients lacking in the diet of each animal shown above.

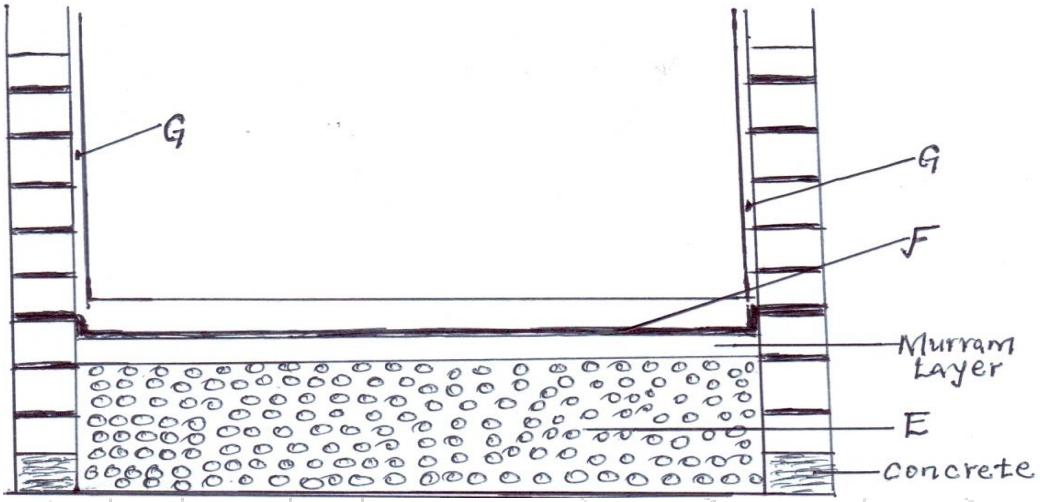
Animal **G** ……**……** **(1mark)**

Animal H……. **(1mark)**

(b) Name the disease whose symptoms are shown by the animal labeled G above**.** **(1 mark)**

(c) Give **two** reasons why the disease named in (b) above should not be controlled by giving medicine through the mouth**.** **(2marks)**

23.The diagram below represents a foundation of a farm structure .Study it and answer questions that follow .



(a) Identify the parts labeled E and F .

E…… **(1mark)**

F…… **(1mark)**

(b) State two uses of part labeled F in a foundation structure . **(2marks)**

(c) What ingredients are used to complete part G **(1mark)**

SECTION C (40 MARKS)

Answer any two questions in this section in the spaces provided at the end of each question.

24. (a) Describe the uses of fences on the farm. **(10 marks)**

(b) Describe Newcastle disease under the following sub-headings

(i) causal organism; **(1 mark)**

(ii) signs of infection; **(7 mark)**

(iii) control measures. **(2 marks)**

25. a) Describe the rearing of lambs from lambing up to weaning time **(10 marks)**

b) Explain **five** causes of livestock diseases **(5 marks)**

c) State **five** differences between Ruminants and non Ruminants **(5 marks)**

26.a. State and explain **five** preventive measures of livestock diseases. **(10 Marks)**

b. Describe long term service carried out during tractor servicing. **(6 Marks)**

c. Outline four functions of the gearbox in a tractor. **(4 Marks)**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 8

443/1

AGRICULTURE

PAPER 1
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

1. Name two field practices that are carried out to obtain optimum plant population in a crop field. **(1 Mark)**

2. List four post-harvest practices that are carried out in maize production**.** **(2 Marks)**

3. State two effects of high rainfall intensity to farming**.** **(1 Mark)**

4. State four ways in which a farmer can improve the structure of water logged clay soil**.(2 Mks)**

5. List four factors that determine the type of irrigation used in crop production. **(2 Marks)**

6. State four symptoms of potassium deficiency in crops. **(2 Marks)**

7. State any four disadvantages of using non capped multiple stem pruning in coffee**.** **(2 Marks)**

8. state two practices which are carried out during hardening off in seedlings**.** **(1 Mark)**

9. Give two conditions in economics when opportunity cost is zero. **(1 Mark)**

10. State four advantages of organic farming**.** **(2 Marks)**

11. State four disadvantages of organic mulch in crop production**.** **(2 Marks)**

12. State four problems that may be brought up by hardpan in crop land. **(2 Marks)**

13. State four pieces of information contained in land title deed. (**2 Marks)**

14. Differentiate between seedbed and a seedling bed**.** **(2 Marks)**

15. Give four reasons why it is difficult to control Sodom apple weed in crop fields. **(2 Marks)**

16. Give two reasons for imposing quarantine on imported planting materials. **(1 Marks)**

17. Give four benefits of top dressing in management of grass pasture. **(1 Marks)**

18. Define the following terms as used in crop production**.** **(1 Mark)**

(a) trellishing

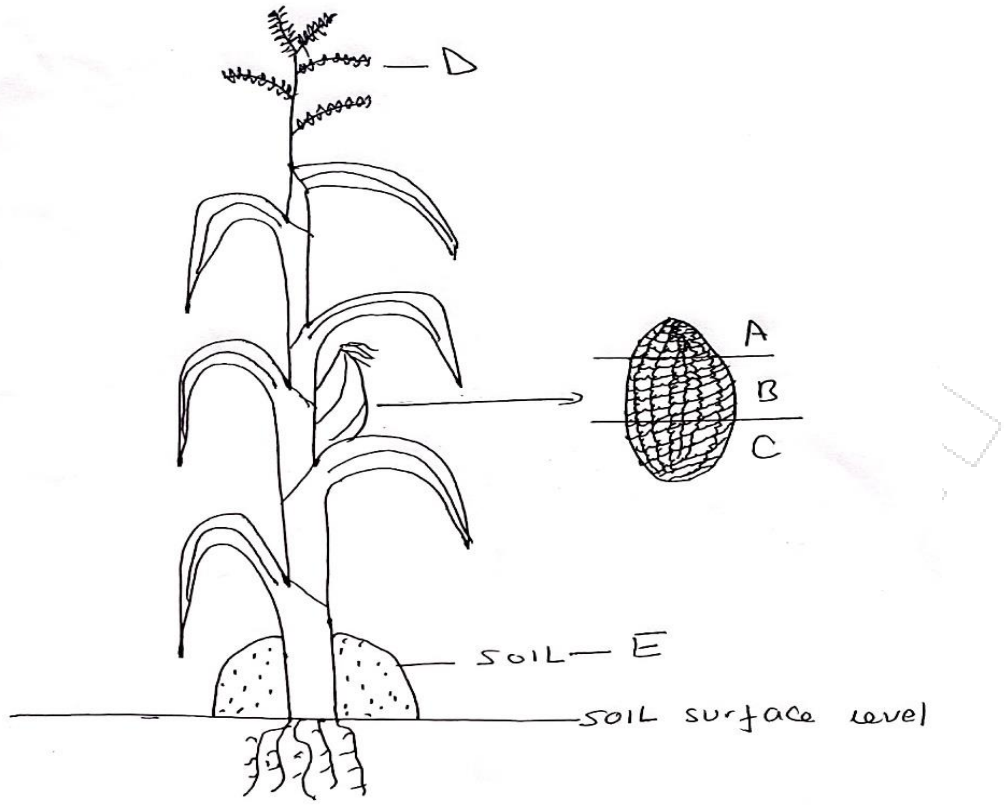
(b) stooking.

19. Outline two ways of controlling damping off diseases on vegetable seedlings in nursery. **(1 Mark)**

SECTION B (20 MARKS)

Answer all questions in the spaces provided.

20. The diagram below illustrates a maize crop plant and its produce. Study the diagram and answer the questions that follow.



(a) Name one disease that attacks the part of the plant labelled D. **(1 Mark)**

(b) From which section of the produce labeled A, B and C should seeds for planting be obtained?

($\frac{1}{2}$ Mark)

(c) Give one reason for the answer given in (b) above. **(1 Mark)**

(d) Which practice is done on part E? **($\frac{1}{2}$ Mark)**

(e) State the importance of the practice in the following crops.

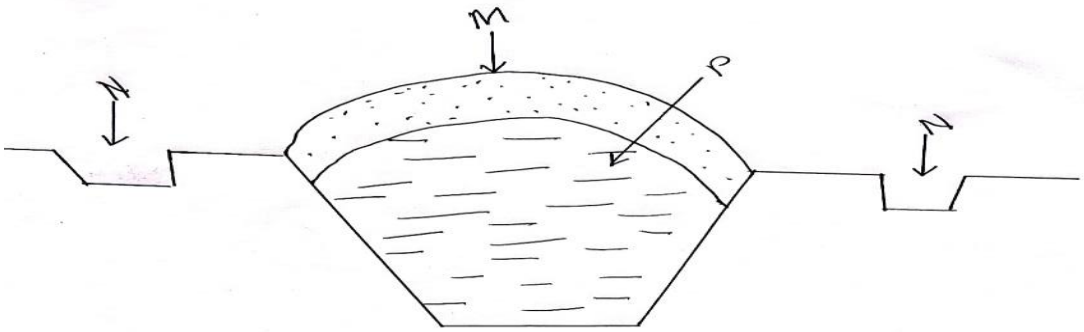
(i) Maize **($\frac{1}{2}$ Mark)**

(ii) Irish **potato** **($\frac{1}{2}$ Mark)**

(iii) At what stage of growth should the above practice be carried out on maize? **($\frac{1}{2}$ Mark)**

(f) A plot measuring 4 M by 3 M was prepared for planting maize at a spacing of 30 cm by 90 cm. Calculate the plant population in the plot. (Show your working**).** **(1 $\frac{1}{2}$ Mark)**

21. The diagram below shows a silo. Study it carefully and answer the questions that follow.



(a) Identify the type of silo shown**.** **(1 Mark)**

(b) Identify the part labeled P**.** **($\frac{1}{2}$ Mark)**

(c) State the use of the part **labeled** **(1 Mark)**

M-……...

N-……

(d) Give two ways of ensuring that anaerobic conditions are achieved during silage making process. **(2 Mark)**

(e) Name three other types of silage that are used in the farm. **(1 $\frac{1}{2}$ Mark)**

(f) Outline three ways in which silage losses occur during ensiling. (1 $\frac{1}{2}$ Mark)

22. Use the information on the table below to answer the questions that follow.

Fertilizer input Units	Maize yield Bags	Maize product Bags
0	50	–
1	62	12
2	66	4
3	68	2
4	69	1
5	69	0

The cost unit of fertilizer is sh 1500 per unit and price of maize is sh 1200 per bag.

(i) At what unit of fertilizer input should the farmer be advised to stop applying more fertilizer to the maize. **(1 Mark)**

(ii) Give a reason for your answer in (a (i)) above. **(1 Mark)**

(iii) Calculate the marginal return at the point of optimum production. **(1 Mark)**

(iv) State the law of diminishing returns in a crop production function process. **(1 Mark)**

(v) Name and explain three ways of combining inputs in production. **(1 Mark)**

SECTION C (40 MARKS)

Answer only two questions. Each question carries 20 Marks.

23. (a) Describe effects of land fragmentation and sub-division. **(6 Marks)**

b)What advantages does a farmer holding a title deed have over one who does not have a title deed. (4 Marks)

c) Describe the cultural methods a farmer would employ to control crop diseases. **(10 Marks)**

24. (a) State the importance of the following during chemical water treatment.

(i) Filtration at water intake. **(1 Mark)**

(ii) Softening. **(1 Mark)**

(iii) Chlorination **(1 Mark)**

(iv) Coagulation and sedimentation. **(2 Mark)**

(b) State seven roles of a farm manager. **(7 Marks)**

(c) Explain four ways a farmer can adjust to uncertainty and risks. **(8 Marks)**

25. (a) Discuss the classification of pesticides according to their mode of action. **(10 Marks)**

(b) Outline any seven general post-harvesting practices carried out on crops. **(7 Marks)**

(c) Give three pieces of information a dairy farm manager should collect for planning purposes. **(3 Mark)**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 8

443/2

AGRICULTURE

PAPER 2
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *Write your name and index number in the spaces provided above.*
- *The paper consists of **three** sections A , B and C.*
- *Answer all questions in section A and B in the spaces provided*
- *Answer **any two** questions from section C in the spaces provided*

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE SCORE
A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

1. Name four dairy cattle breeds reared in Kenya. (**2mks)**

2. Give four reasons for castrating male goats. **(2mks)**

3. Give two parasites of cattle which are also disease vectors **(1mk)**

4. List two possible causes of overheating in a tractor engine **(1mk)**

5. Mention the use of the following tools. **(2mks)**

i) Dibber…….

ii) Spoke shave ……...

iii) Tinsnips…….

iv) Burdizzo ……

6. State the importance of the following in livestock nutrition:

i) Water **(1mk)**

ii) Vitamin A (**1mk)**

7. State four management practices that should be carried on a fish pond in order to obtain Maximum fish production. **(2mks)**

8.a) State two reasons for washing the udder of a cow with warm water before milking**(1mk)**

b) Name the hormone that causes each of the following in dairy cows:.

i) Milk let down. **…… (1mk)**

ii) lactogenesis **…… (1mk)**

9. Differentiate between 'breed' of animal and 'type' of animal. **(2mks)**

10. Name two livestock diseases that are spread through natural mating. **(1mk)**

11. Name the compartment of the ruminant stomach where microbial digestion takes place**. (1mk)**

12. List four precautions that should be taken when using workshop tools and **equipment. (2mks)**

13. State four methods of increasing the depth of penetration of a disc harrow. **(2mks)**

14. List four factors considered when formulating livestock ration. **(2mks)**

15. State four conditions that necessitate the handling of farm **animals** **(2mks)**

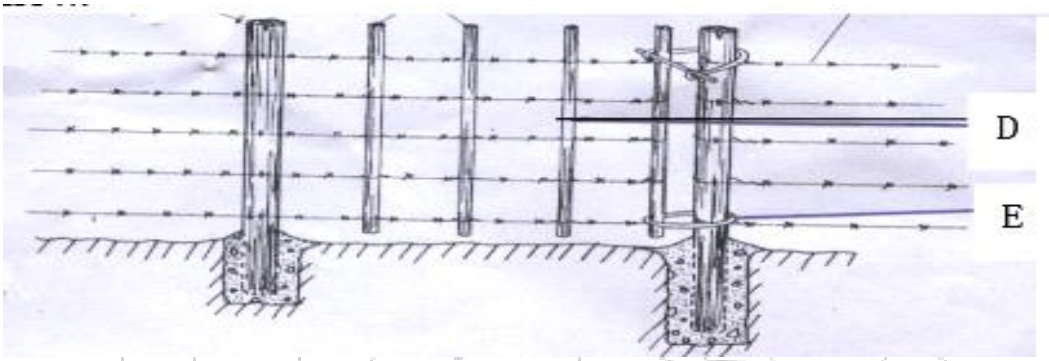
16. State four abnormalities of eggs that can be detected during egg candling. **(2mks)**

17. List two events which occur during induction stroke in a four stroke engine. **1mk)**

SECTION B (20 MARKS)

Answer ALL the questions in the spaces provided.

18. The diagram below shows a type of a farm gate. Study the diagram and answer the questions that follow.



a) Identify the type of gate shown. **(1 mark)**

b) Name parts labeled D and E. **(2 marks)**

c) i) State two functions of the part labelled E. **(2marks)**

ii) State two functions of the gate illustrated above. **(2 marks)**

19. The diagram below illustrates a calf rearing practice.

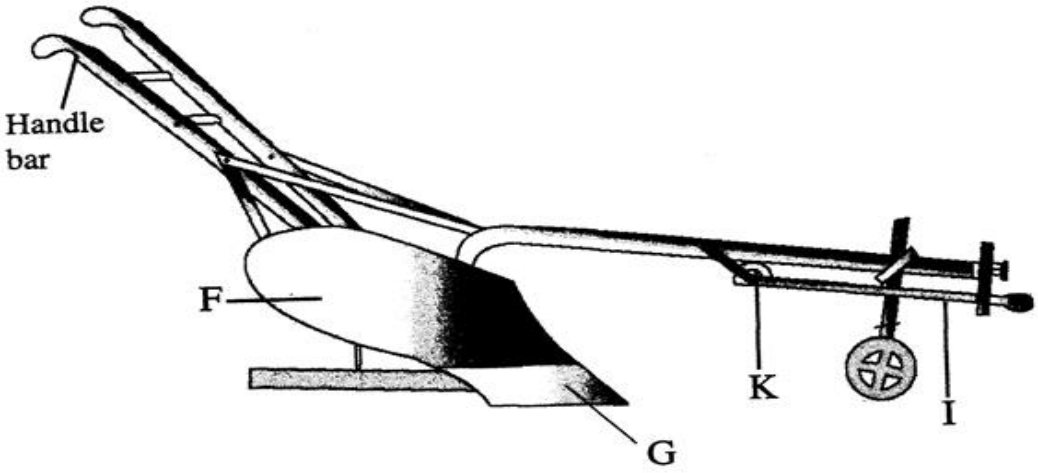


a) Identify the practice illustrated above. **(1 mark)**

b) i) Describe the procedure followed in the feeding practice named in (a) above. **(3 marks)**

ii) Give two precautions taken while using the rearing practice stated in (a) above. (2 marks)

20. Study the diagram below of an ox-plough and use it to answer the questions that follow.



a) Give the functions of parts **G and F**

G…… (1mark)

F…….. (1mark)

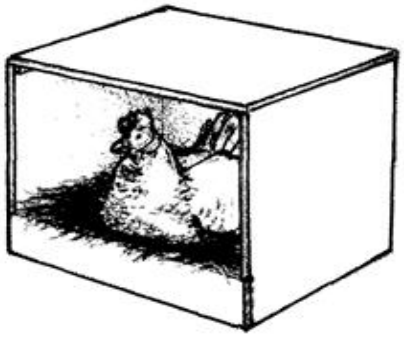
b) Name the parts labelled **K and I**

K…… (1mark)

I…… (1mark)

c) Mark on the diagram using letters M and N the two parts used to adjust the depth of ploughing. (1mark)

21. The diagram below shows a hen sitting on eggs. Use it to answer the questions that follow.



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

b) Give **<u>two</u>** signs that may show that the hen is ready to sit on the eggs. **(`1marks)**

SECTION C (20 MARKS)

Answer ANY TWO questions in the spaces provided after question.

22. a) Describe brucellosis under the following subheadings:

i) Causal organism **(1mark)**

ii) Transmission **1mark)**

iii) Symptoms **(4mks)**

iv) Control measures **(4mks)**

b) State the function of any five parts of a zero grazing unit in dairy farming**.** **(5mks)**

c) Explain **five** factors that should be considered when choosing tools and equipment to use in the farm. **(5mks)**

23 a) Outline the control measures of mastitis. **(5marks)**

b) Describe the marketing of eggs. **(10marks)**

c) Outline the general characteristics of chinchilla breed of rabbits. **(5marks)**

24. a) Give the differences between a petrol and a diesel engine **(10mks)**

b) Describe the daily maintenance of a tractor **(10mks)**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 9

443/1

AGRICULTURE

PAPER 1
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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- *The paper consists of **three** sections A , B and C.*
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FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE SCORE
A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

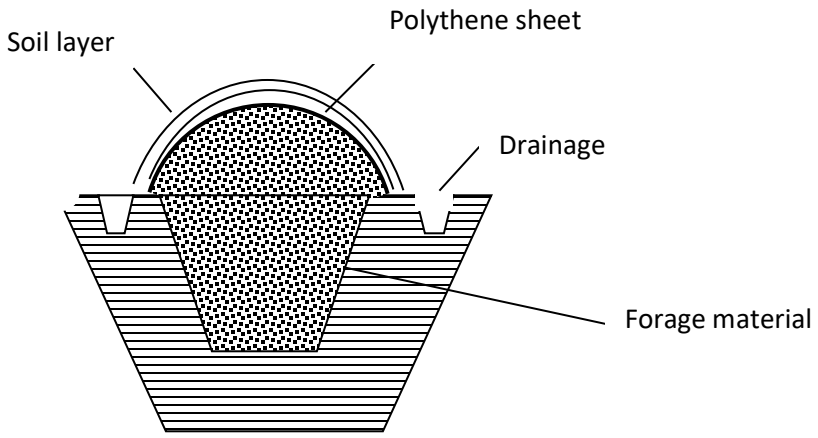
Answer all the questions in this section.

1. Name **four** classes of livestock farming **(2 marks)**
2. State **four** advantages of landlordism and tenancy land tenure system. **(2 marks)**
3. Give **four** methods of harvesting agro forestry trees **(2 marks)**
4. State **four** characteristics of a good grain store. **(2 marks)**
5. Give **four** structural soil and water conservation measures. **(2 marks)**
6. Name **two** types of labour records kept by a farmer. **(1 mark)**
7. State **four** methods of land acquisition **(2 marks)**
8. State **four** factors which increases seed rate during planting **(2 marks)**
9. State **four** importance of growing crops under optimum temperature **(2 marks)**
10. Name **four** classes of weeds. **(2 marks)**
11. State **four** factors to consider when siting a nursery bed. **(2 marks)**
12. State **four** contents of a tomato sales receipt **(2 marks)**
13. State **four** factors that determine pesticide efficiency. **(2 marks)**
14. State **four** conditions under which land clearance may be necessary. **(2 marks)**
15. Name **two** non-competative market system **(2 marks)**
16. Name **two** methods of soil sampling. **(1 mark)**

SECTION B (20MARKS)

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

17. The diagram below shows a method of forage conservation



(i) Name the structure illustrated above **(1 mark)**

(ii) Name the form of forage conservation using the above structure. **(1 mark)**

(iii) State **two** factors to consider when siting the structure. **(2 marks)**

(iv) Name other form of forage conservation apart from the one illustrated above. **(1 mark)**

18. Below is a format of a record kept by a farmer. Use it to answer the questions the follow.

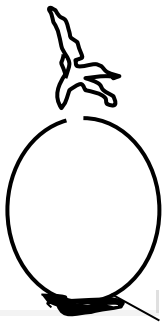
Date	**Disease symptom**	**Animal affected**	**Drug used**	**Cost of treatment**	**Remarks**

(i) Name the type of farm records illustrated above. **(1 mark)**

(ii) State two importance of the record to the farmer **(2 marks)**

(iii) Give any two entries on the remark section. **(2 marks)**

19. During harvesting of tomato, a farmer noticed some symptoms at the bottom of the tomato fruit as shown below

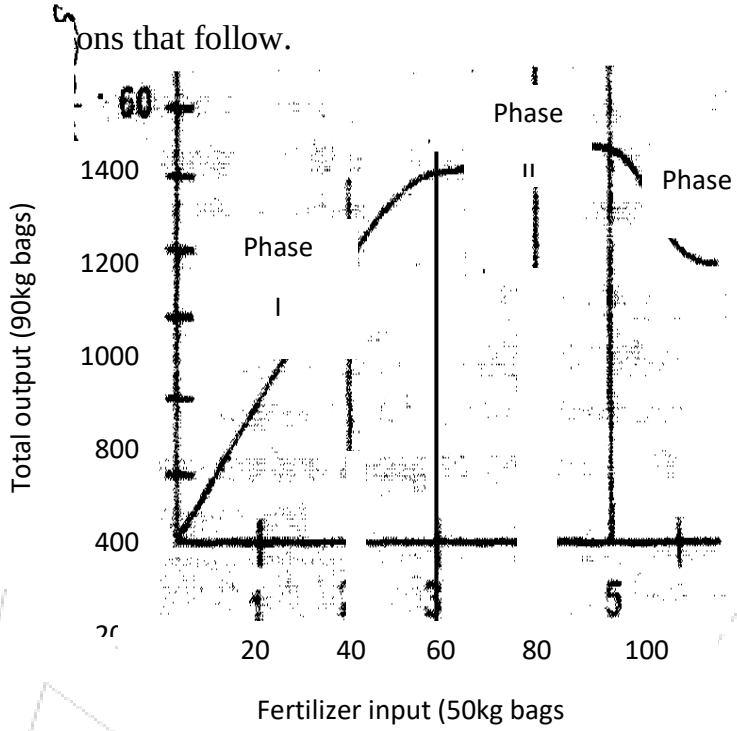


(i) Name the disease whose symptom is illustrated in the tomato (diagram) **(1 mark)**

(ii) State two causes of the disease in the tomato **(2 marks)**

(iii) State two ways of controlling the disease. **(2 marks)**

20. Below is a graphical representation of a law in Agricultural economics. Study the graph carefully and answer the ons that follow.



i) Identify the law represented by the graph. (1 mark)

ii) State the law. (1 mark)

iii) Explain how each additional unit of fertilizer input relates to total output of maize in the Phases II and III.

Phase II ……..(1 mark)

Phase III ……..(1 mark)

iv) State the importance of the law identified in (i) above to a maize farmer. (1 mark)

SECTION C (40 MARKS)

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

21. i) State five importance of irrigation. **(5 marks)**

ii) State four roles of calcium in crops. **(4 marks)**

iii) State six cultural disease control measures. **(6 marks)**

iv) Describe five factors that may increase the demand of maize in Bondo market**. (5 marks)**

22. i) State five causes of land fragmentation. **(5 marks)**

ii) Describe five ways by which soil looses its fertility. **(5 marks)**

iii) Describe transplanting of tomato seedlings from the nursery bed to a seedbed. (**5 marks)**

iv) Describe the management of agro forestry trees. **(5 marks)**

23. i) Describe five ways by which a farmer can overcome risks and uncertainties in maize production. **(5 marks)**

ii) Describe harvesting and precaution taken during harvesting of tea. **(5 marks)**

iii) State four farming practises which may destroy soil structure. **(4 marks)**

iv) State six importance of crop rotation in a farming business. **(6 marks)**

KCSE 23

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 9

443/2

AGRICULTURE

PAPER 2
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE SCORE
A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

Answer all the questions in this section in the spaces provided

1. Name a breed of camel with two humps **(1/2mks)**

2. State **two** types of roughages as used in livestock nutrition **(1mk)**

3. Give **two** reasons why it is advisable to dehorn cattle **(1mk)**

4. Give **three** properties of clean milk **($1\frac{1}{2}$mks)**

5. Name the tool or equipment used to carry out the following routine livestock practices

a) Castration **(1/2mks)**

b) Vaccination **(1/2mks)**

6. What is the role of iron in livestock nutrition? **(1mk)**

7. List **two** importance of fish farming in Kenya **(1mk)**

8. Name **two** hormones that influence milk let-down in dairy cattle **(1mk)**

9. Name **two** exotic breeds of dairy goats reared in Kenya **(1mk)**

10. What is the role of a crop in the digestion system of poultry? **(2mks)**

11. Name **two** zoonotic diseases of livestock **(1mk)**

12. Give **four** routine practices carried out during calf rearing **(2mks)**

13. State **two** factors that determine the amount of water required by an animal **(1mk)**

14. List **three** methods of outbreeding as used in livestock nutrition **($1\frac{1}{2}$mks)**

15. Outline **four** conditions necessary for artificial incubation **(2mks)**

16. List **three** sources of lipids in livestock diet **($1\frac{1}{2}$mks)**

17. Name **two** parasites of bees **(1mk)**

18. State **four** qualities of an ideal calf pen **(2mks)**

19. Give **four** reasons why stones are good as construction materials **(2mks)**

20. Name a disease transmitted by the following vectors **(1mk)**

a) Tsetse fly ……..

b) Brown ear tick ……..

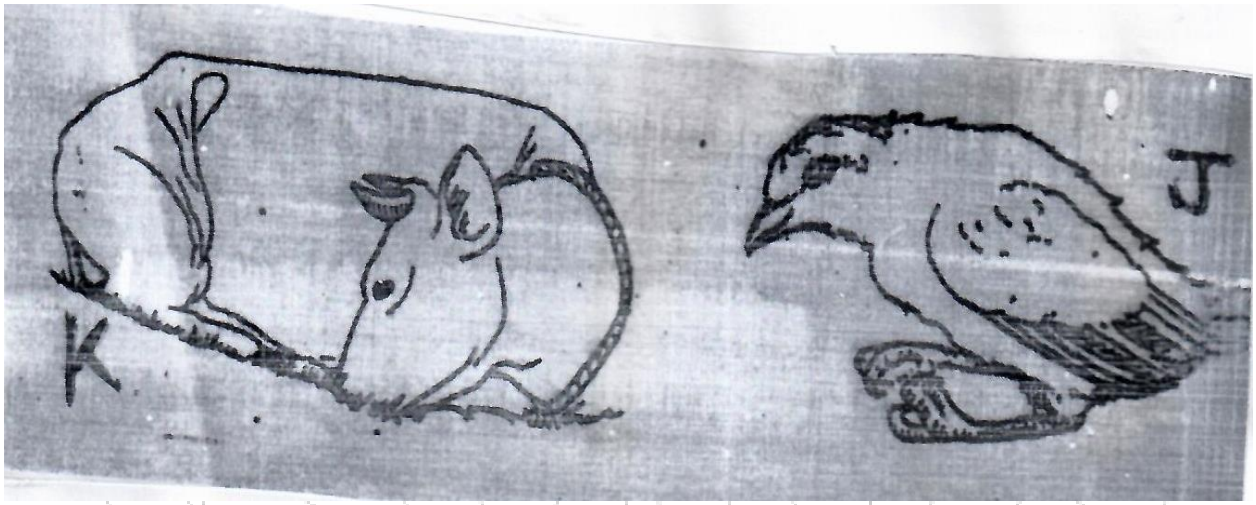
21. List **four** requirements in a deep litter house **(2mks)**

22. Give **two** causes of soft shells in eggs **(2mks)**

SECTION B (20MKS)

Answer all questions in this section in the spaces provided

23. Study the diagram and answer questions that follow.



a) Identify the condition or deficiency disease as illustrated in J and K above

J ……**(1mk)**

K ……**(1mk)**

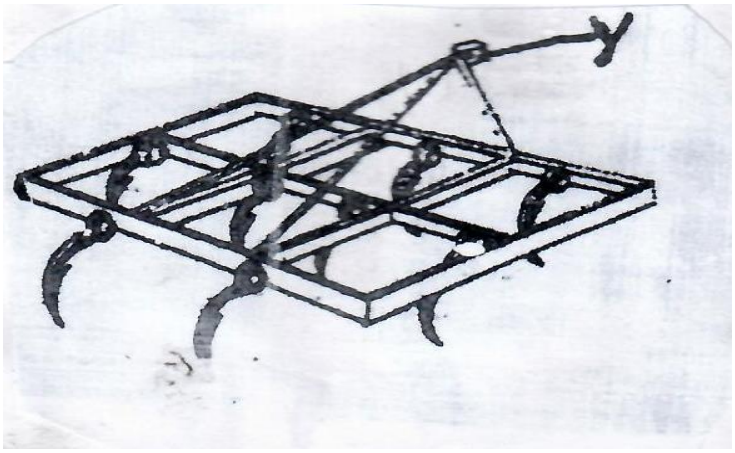
b) Name cause of the deficiency condition in

J ……**(1mk)**

K ……**(1mk)**

c) Give **one** remedy to control condition K in lactating cows (1mk)

24. Below is a diagram illustrating a farm implement. Study it and answer the questions that follow.



a) Identify the implement **(1mk)**

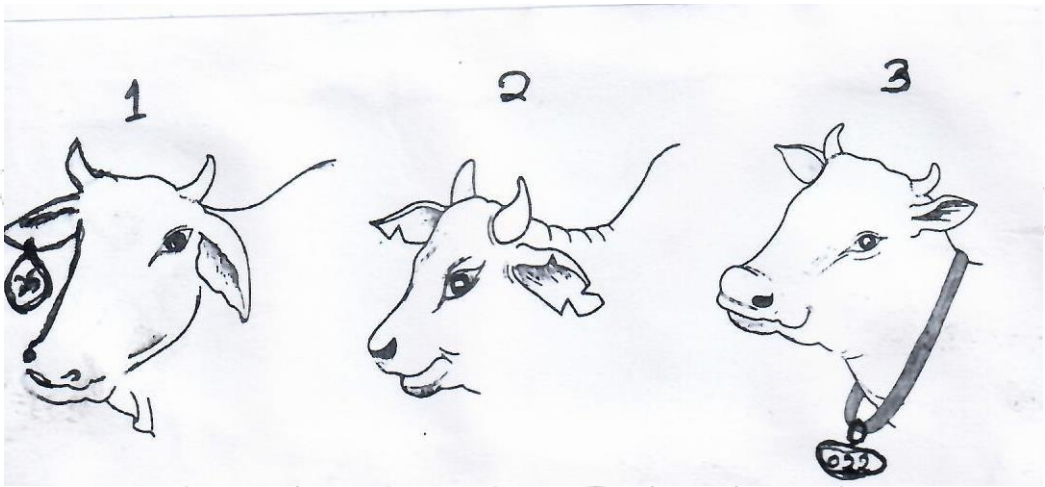
b) State:

(i) The role of the part labelled Y **(1mk)**

(ii) **Three** uses of the implement on the farm **(3mks)**

c) List **two** maintenance practices carried out on the implement **(2mks)**

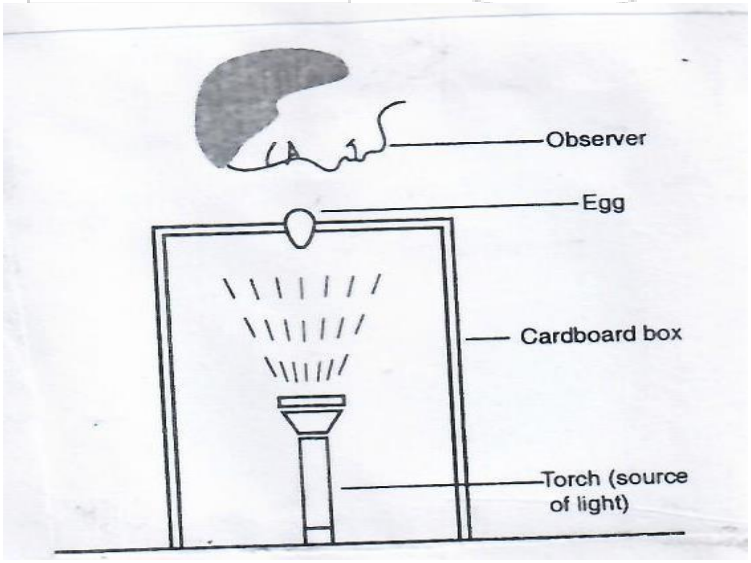
25. The diagram below represents methods of identifications in livestock. Use them to answer questions that follow.



a) Name the **three** methods shown above **($1^1/_{2mks}$)**

b) State **three** importance of identification method shown above **($1^1/_2$mks)**

26. The diagram below illustrates a common practice in poultry production



a) Identify the practice **(1mk)**

b) Give abnormalities of eggs that can be observed using the above illustrated practice **(4mks)**

SECTION C (40MKS)

(Answer any two questions from this section)

27. a) Discuss causes and control of cannibalism in poultry. **(10mks)**

b) Highlight various measures that famers undertake to control tapeworms **(5mks)**

c) Explain the importance of streaming up in dairy cattle **(5mks)**

28. a) Describe the precautions undertaken while handling farm tools and equipment **(10mks)**

b) Discuss contagious abortion disease under the following sub headings:

(i) Animals attacked **(2mks)**

(ii) Casual organism **(2mks)**

(iii) Symptoms **(2mks)**

(iv) Control measures **(4mks)**

29 *a) Discuss* the structural and functional differences between petrol and diesel engines **(10mks)**

b) Describe general characteristics of indigenous cattle breeds **(5mks)**

c) Outline five general methods of disease control in livestock **(5mks)**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 10

443/1

AGRICULTURE

PAPER 1
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *Write your name and index number in the spaces provided above.*
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FOR EXAMINER'S USE ONLY

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A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

1. Give four aspects of rainfall that affect agricultural production. **(2mks)**

2. State four factors considered when choosing water pipes for use in the farm**.** **(2mks)**

3. List down four types of water erosion**.** **(2mks)**

4. Give three classes of weeds on the basis of growth cycle**.** **(1½mks)**

5. Define the term pest. **(1mk)**

6**. State** four reasons why burning of bushes is discouraged as a method of land clearing. **(2mks)**

7. Outline four factors considered when grading tomatoes. (**2mks)**

8. State four problems associated with marketing agricultural produce **(2mks)**

9. Give three maintenance practices carried out on water tanks**.** **(1 ½ mks)**

10. Give four characteristics of agroforestry **trees** **(2mks)**

11. Define the following terms. (2 mks)

(i) Nursery bed

(ii) Seed bed

(iii) Pricking out

(iv) Hardening off

12. List four financial documents used in the farm **(2mks)**

13. List down four factors of production. **(2mks)**

14. Name the parts harvested for each of the following crops**.** **(1 ½ mks)**

(a) Onions

(b) Carrots

(c) Coffee

15. Name four main methods of controlling pests in the farm**.** **(2mks)**

16. Mention three ways of applying water to crops **(1 ½ mks)**

17. Differentiate between pomoculture and **olericulture** **(1mk)**

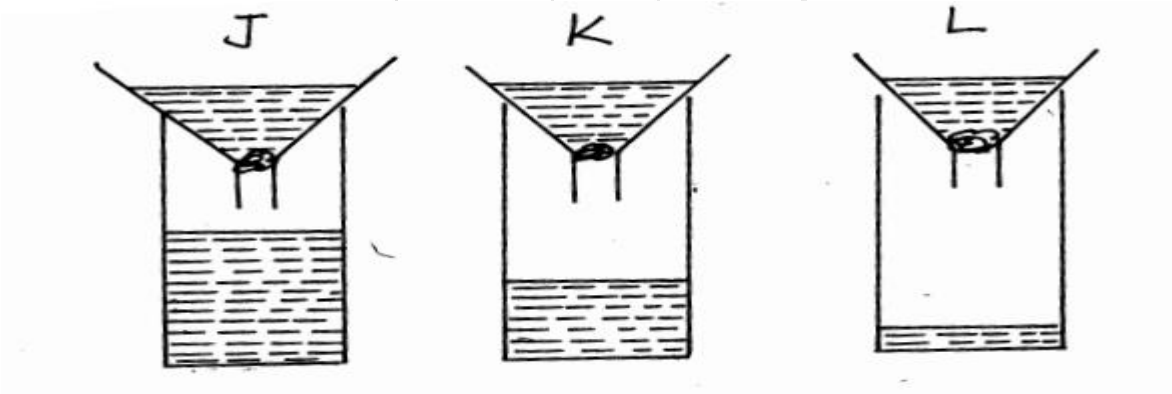
SECTION B (20 MKS) Answer ALL questions in this section

18.a) A farmer in Kabondo was advised to apply 80 kg of nitrogen to his maize plantation during top dressing. The fertilizer available was calcium ammonium nitrate (20% N) .Calculate the amount of this fertilizer in kilograms the farmer should purchase **(2mks)**

b. At what stage should the farmer top dress his maize crop **(1mk)**

c. State three methods of fertilizer application (**3mks)**

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



a.) If the level of water drained into the test tubes were observed after two hours, name the property of soil being investigated **(1mk)**

b.) What is the relationship between this property of soil and the size of soil particles **(1mk)**

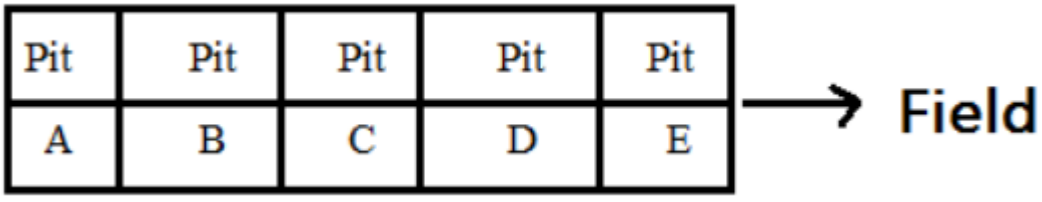
c.) Which soil sample will be suitable for growing paddy rice ? **(1mk)**

d.) Name the type of soil **labeled** **(2mks)**

J. ……

L. ……

20. Study the illustration below of making compost manure and answer the questions that follow.

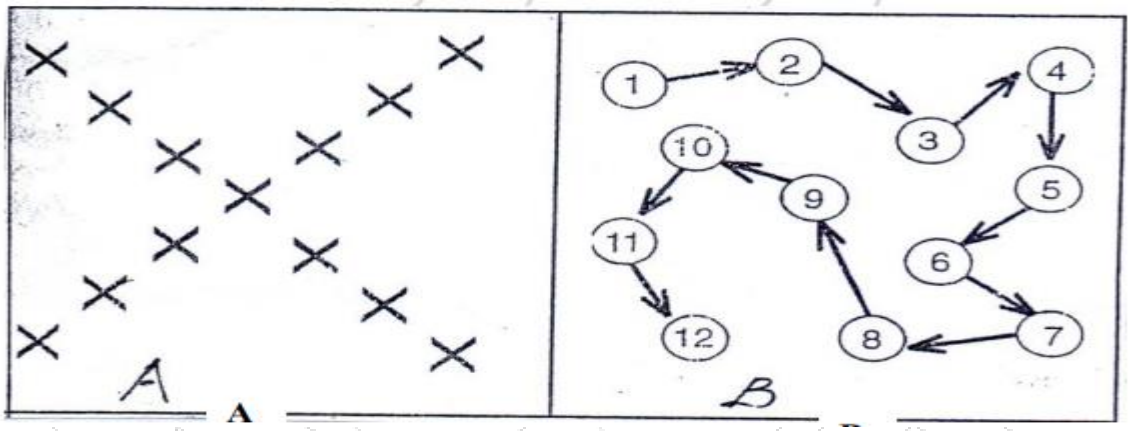


(a) Name the method of making compost manure illustrated above**.** **(1mk)**

(b) Name the other method of making compost manure**.** **(1mk)**

(c) State three qualities of well decomposed compost manure**.** **(3mks)**

21. The following diagrams illustrate two methods of soil sampling.Study them and answer questions that follow .



(a) What do diagrams A and B represent? **(2 marks)**

(b) Describe the procedure of soil sampling**.** **(3 marks)**

SECTION C (40mks) Answer only two questions in this section

22. (a) Describe seven cultural or biological methods of soil and water conservation. **(7 marks)**

(b) Describe the importances of keeping farm records **.** **(7 marks)**

(c) Explain six objectives of the million acre scheme of land settlements. **(6 marks)**

23[a] Describe the growing of dry bean seeds under the following sub headings.

(i) Selection and preparation of planting materials**.** **(3marks)**

(ii)Planting**.** **(4marks)**

(iii) Weeding**.** **(3marks)**

(b) Describe the environmental conditions that may lead to low crop yields **(10 marks)**

24. (a) Explain seven factors that influence seed rate in crop production. **(7mks)**

(b) Outline seven safety precautions observed when using herbicide in the farm. **(7mks)**

(c) Explain briefly any six factors that affect the quality of hay a farmer may produce in the farm. **(6mks)**

KCSE 2023 FINAL PREDICTION

EXPECTED TRIAL 10

443/2

AGRICULTURE

PAPER 2
TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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A		30	
B		20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A- 30 MARKS

Answer all the questions in this section.

1. Name **a tool** recommended for the following practices in the farm.

(i) Smoothening rough surface of wood. **(½ mark)**

ii) Cutting threads on pipes. **(½ mark)**

iii) Relieving a bloated animal of gases particularly ruminants. **(½ mark)**

2. Study the table below and fill in missing names **(3marks)**

Description	Cattle	Pigs	Poultry
Young from birth /hatching to weaning			Chick
Young female before parturition /laying		Gilt	
Mature male for breeding	Bull		

3. Name **two** livestock diseases controlled through artificial insemination (A.I) **(1mark)**

4. Name **two** dairy goat breeds reared in **Kenya** **(1mark)**

5. Give **four** reason of feeding calves on colostrum**.** **(2mark)**

6. State **four** effects of tsetse fly (Glossina spp) in livestock . **(2mark)**

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

8. State four factors considered when setting a pigsty in the farm. **(2mark)**

9. Name four sources of power in the farm **(2mks)**

10. State **four** predisposing factors to the occurrence of mastitis in dairy cattle. **(2mark)**

11. Why are the following conditions maintained during artificial incubation of eggs in poultry production?

a. Proper ventilation. **(1mark)**

b. Relative humidity maintained at 60%. **(1mark)**

12. Give **four** reason for keeping a herd of dairy cattle healthy. **(2mark)**

13. Differentiate between the following terms as used in livestock production

a. Close breeding and line breeding. **(1mark)**

b. Crutching and ringing**.** **(1mark)**

14. State **four** reasons for maintaining farm tools and equipment**.** **(2marks)**

15. Name **four** ways of restraining cattle during routine management. **(2mark)**

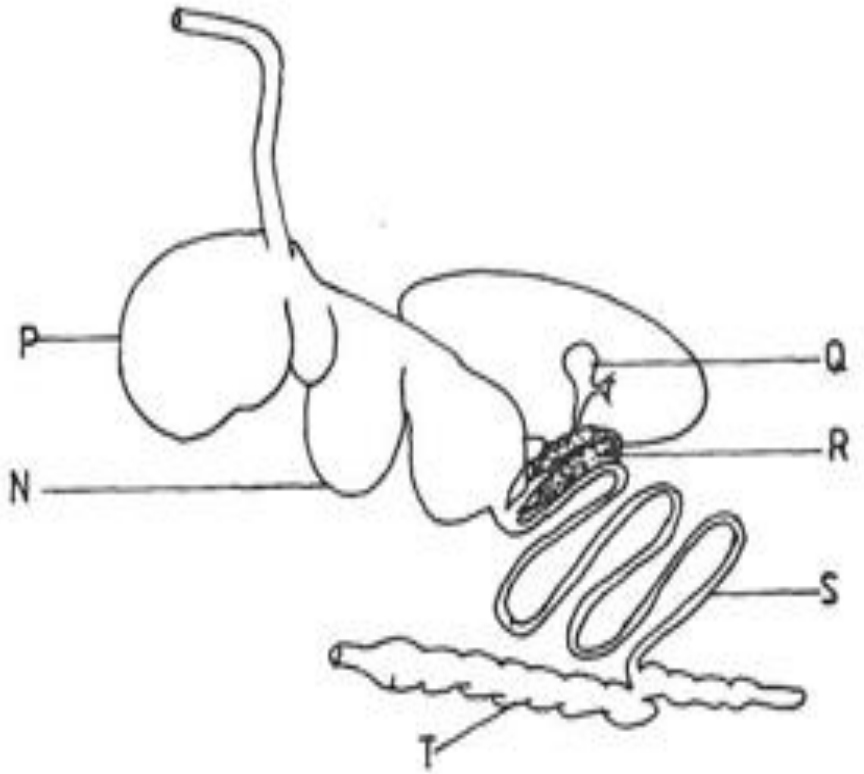
16. State the factors that determine the amount of water an animal drinks. **(2marks)**

17. State **five** causes of stress in a flock of layers**.** **(2½ marks)**

SECTION B (20MARKS)

Answer all answers to this section in the spaces provided.

18. The diagram below shows part of the digestive system of livestock

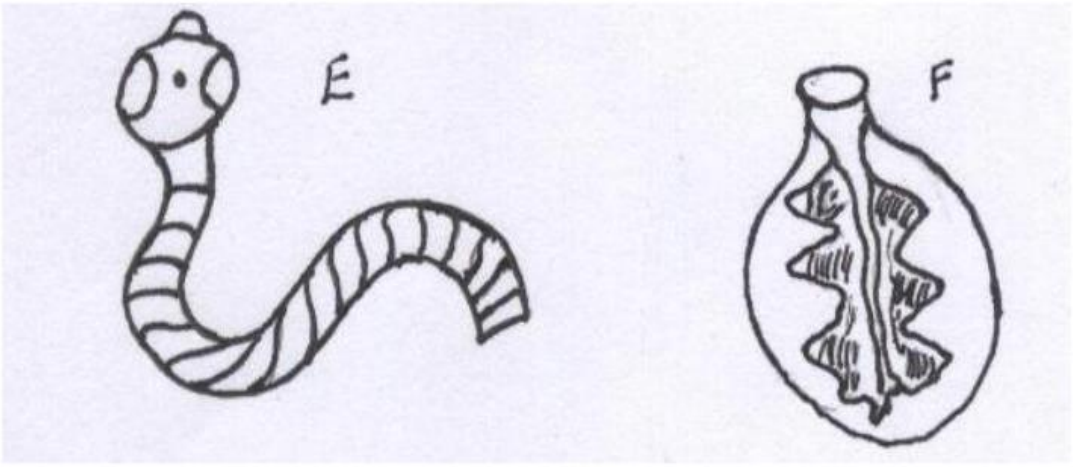


a. Name **one** livestock with the above digestive **system** **(1mark)**

b. Name parts labelled P and N **(2marks)**

c. State two functions of part labelled P **(2marks)**

19. Below shows livestock parasites study them and answer questions that follow



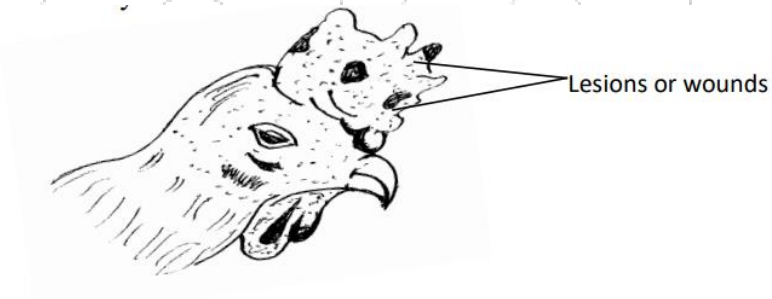
a) Identify parasite labeled E and F**.** **1mark)**

b) Name the organ in which each parasite is commonly found. (**1mark)**

c)Name the intermediate host of the parasite labeled E. **(1mark)**

d) State two control measures of the parasite labeled F in livestock production**.** **(2mark)**

20. The diagram below shows a poultry disease. Study it and answer the question that follow



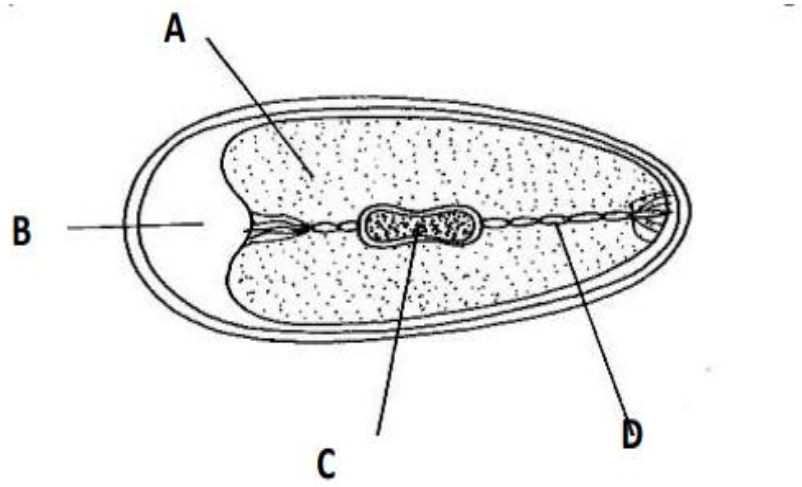
a) Identify the disease**.** **(½ mark)**

b) State the causative agent of the above**.** **(½ mark)**

c) Apart from wounds or lesions or state any other two symptoms of the above disease **(2marks)**

d) State two control measures of the above **(2marks)**

21. The diagram below is an illustration of an egg. Study it carefully and answer the questions that follow.



a) Name the parts labelled **A, B, C, and D.** **(2 mark)**

b) State two qualities that should be considered when selecting eggs for incubation **(2mark)**

c) What is the function of the part labelled C in a fertilized **egg** **(1mark)**

SECTION C (40 MARKS)

Answer any two questions from this section in the spaces provided

22. a) Describe the process of milk **secretion** **(5marks)**

b) outline the advantages of battery cage system of rearing **poultry** **(8marks)**

c) Describe various management carried out in a fish pond to ensure maximum harvest of fish **(7marks)**

23. a) Describe general methods of controlling livestock **diseases** **(10marks)**

b) Give eight differences between a petrol and diesel engine **(10marks)**

24. a) Describe the process of egg formation in the reproductive system of a hen **(12marks)**

b) Describe the ideal characteristics of an ideal calf pen **(8marks)**

THE END

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CAUTION TO KCSE 2023 CANDIDATES:

IN CASE / ON EVENT YOU REALIZE PART OF THESE QUESTIONS WERE DIRECTLY OR INDIRECTLY LIFTED IN THE FINAL KCSE 2023 EXAMINATIONS PLEASE DO NOT PANIC!

KILA LA HERI