

KCSE 2023 PREDICTION CYCLES



AGRICULTURE PAPER 1



KCSE 2023 TOP PREREDICTION CYCLE 1-10

CLASS OF KCSE 2023 NOVEMBER

The set Comprises of 10 Prediction Cycles prepared by a panel of Top Writers from KNEC Nairobi HQ

Kenya Educators Consultancy is proud to announce that in KCSE 2022 National Examination, More than 55% of our predictions from the same panelists appeared in the national exam (KCSE)

All KCSE 2023 November Candidates are advised to take the questions in this package of predictions serious as they prepare for the national exams!

FOR MARKING SCHEMES AND SIMILAR RESOURCES :

CONTACT:

MR MACHUKI - 0724333200

OR

ORDER ONLINE AT:

www.kenyaeducators.co.ke

Confidential!!!

All the best to all KCSE 2023 Candidates as they prepare for the national exams

KENYA EDUCATORS CONSULTANCY

Name: Index no

School: Candidate's sign

Class..... Adm No.....

AGRICULTURE 443/1

PAPER 1

TIME: 2 HOURS

KCSE 2023 TOP PREDICTION MASTER CYCLE 1

Kenya Certificate of Secondary Education (K.C.S.E.)

Agriculture

Paper 1

INSTRUCTIONS TO CANDIDATES:

- Write your name and index number in the spaces provided above.
- Sign and write the date of examination in the spaces provided above.
- This paper consists of three sections A, B and C.
- Answer all the questions in section A and B.
- Answer any two questions in section C.
- All answers should be written in the spaces provided.
- This paper consists of 13 printed pages.
- Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- Candidates should answer all the questions in English.

For Examiner's Use Only:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1-17	30	
B	18-21	20	
C		20	
		20	
	TOTAL SCORE	90	

SECTION A (30 MARKS)

1. State **two** conditions under which opportunity cost is zero. (1mk)

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

2. Name **three** branches of horticulture. (1½ mks)

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

3. State **four** factors a farmer should consider when choosing the farming system to undertake. (2mks)

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

4. State **four** disadvantages of communal land tenure system. (2mks)

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

5. Give **four** pieces of information found on a land title deed. (2mks)

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

6. State **four** reasons for deep ploughing during land preparation. (2mks)

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

7. State **four** characteristics of a good top soil. (2mks)

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

8. Give **three** reasons for sub soiling. ($1\frac{1}{2}$ mks)

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

9. Differentiate between seed inoculation and seed dressing. (1mk)

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

10. State **four** effects of soil erosion. (2mks)

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

11. Outline **four** practices necessary to improve and maintain permanent pastures. (2mks)

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

12. State **two** causes of poor drainage on farmland. (1mk)

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

13. State **four** reasons for mulching. (2mks)

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

14. Give the function of each of the following in the preparation of compost manure. (2mks)

a) Top soil

.....
.....

b) Well rotten manure

.....
.....

c) A thin layer of wood ash

.....
.....

d) Long pointed stick

.....
.....

15. State **four** deficiency symptoms of phosphorus. (2mks)

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

16. State **four** characteristics of nitrogenous fertilizers. (2mks)

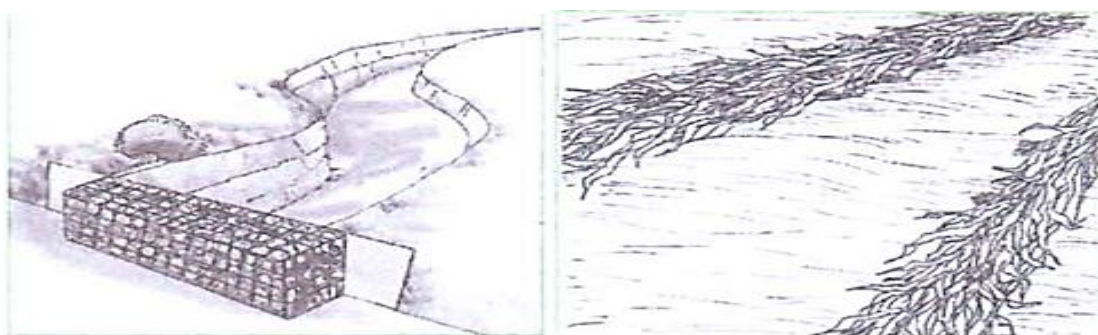
.....
.....
.....
.....
.....

17. State **four** reasons why a nursery is important in crop production. (2mks)

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

SECTION B (20 MARKS)

18. The illustrations labelled A and B show some farm structures used in soil and water conservation. Study them carefully and answer the questions that follow.



A

B

a) Identify structures A and B. (1mk)

A.....

B.....

b) Name the type of soil erosion controlled by structures A and B. (2mks)

A.....

B.....

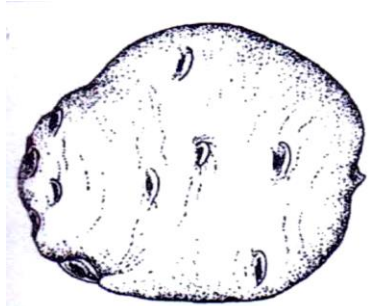
c) State **two** ways in which the structures help to control soil erosion. (2mks)

.....

.....

.....

19. 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. (1mk)

.....
.....

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

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

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

.....
.....

20. 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. (1mk)

.....
.....

b) Name the causative agent of the diseases. (1mk)

.....
.....

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

.....
.....

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

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

21. 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. (2mks)
 C.....
 D.....
- b) Classify weed D according to plant morphology. (1mk)

- c) State the major problem posed by each of the weeds above in pasture land. (2mks)
 C.....
 D.....

SECTION C (40MARKS)

22. a) State **four** benefits of sowing annual crops early. (4mks)
 b) Describe **eight** effects of fragmentation and sub division of land. (8mks)
 c) Explain **eight** effects of weeds. (8mks)
23. a) Describe the various field management practices for tomatoes. (8mks)
 b) State the precautions that should be observed when harvesting cotton. (4mks)
 c) Explain **four** importance of crop rotation. (8mks)

24. a) Explain **four** factors to consider in choosing the type of irrigation to use in the farm.

(8mks)

b) Explain **five** farming practices that destroy soil structure.

(5mks)

c) Describe **seven** reasons why farmers need to keep good farm records.

(7mks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

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

NAME ----- INDEX NO-----

DATE_____

CANDIDATES SIGNATURE _____

443/1

AGRICULTURE

TIME: 2 HRS

KCSE 2023 TOP PREDICTION MASTER CYCLE 2

Answer all the questions in this section in the spaces provided

1a) Distinguish between flood irrigation and basin irrigation (1mk)

b) Give two maintenance practices required in flood irrigation system. (1mk)

2) State the fate of water added to soil in crop field. (2mks)

3a) Name two crops which after harvesting are processed using a flail. (1mk)

b) What name is given to the practice in 3a above. (1/2mk)

4) State two conditions under which opportunity cost can be zero. (2mks)

5. Shown below is part of a record found in Nyali farm

Item	Quantity	Date Acquired	Original Unit Cost (KSH)
Watering trough	2	03.03.2006	3 600
Hand hoes	4	31.05.2005	250
Wheel barrow	1	04.01.2005	2 310
Machetes	6	11.07.2004	169
Buildings	2	Diverse dates	284 000
Milking shed	1	02.02.2004	32 600
Cattle	11	Diverse dates	66 000
Sheep	14	Diverse dates	2 100

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

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

b)What other column should be added to this record, to make it complete. (1mk)

6Give two disadvantages associated with burning as a land clearing method. (1mk)

7(a)Name three components of rooting mixture used in polythene sleeves in raising tree seedlings. (3mks)

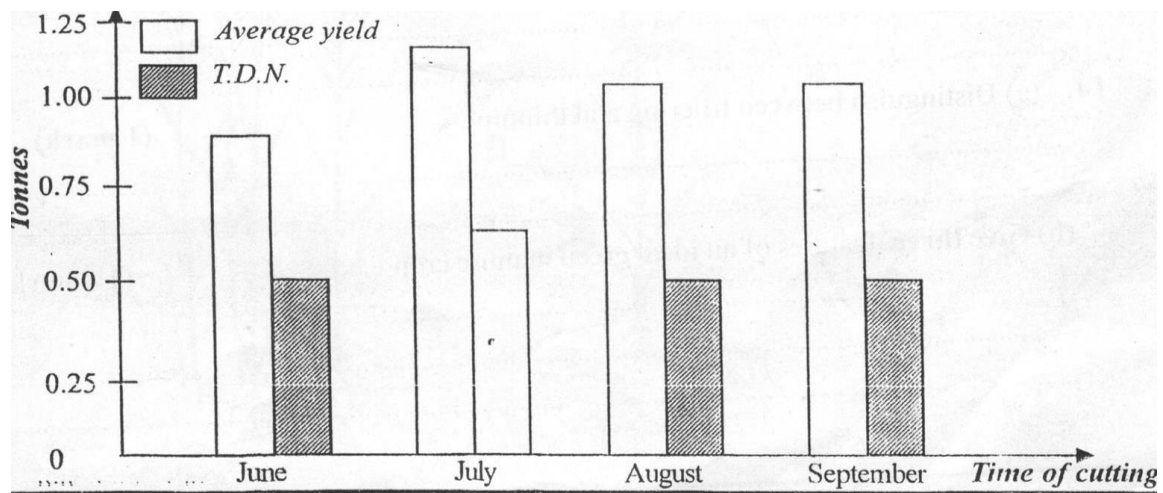
b) State two benefits of using polythene sleeves, in raising tree seedlings. (2mks)

8. a) Define tissue culture.

(1mk)

b) Give three advantages of tissue culture

9. Shown below is the average yield and total digestible nutrients (TDN) per hectare of hay cut in June, July, August and September



a) From the graph identify the relationship between average yield and total digestible nutrients of hay. (1mk)

a) From the graph, identify the most appropriate month of harvesting hay. (1mk)

10. Outline how the age of an animal influences the quality of farm yard manure production from it. (1mk)

11. List four soil requirements for tomatoes. (2mks)

12. Under what circumstance are beans referred to as vegetables. (1mk)

13a) State two conditions that may lead to land fragmentation. (1mk)

b) Give two benefits of land fragmentation. (1mk)

14a) Distinguish between tillering and thinning.

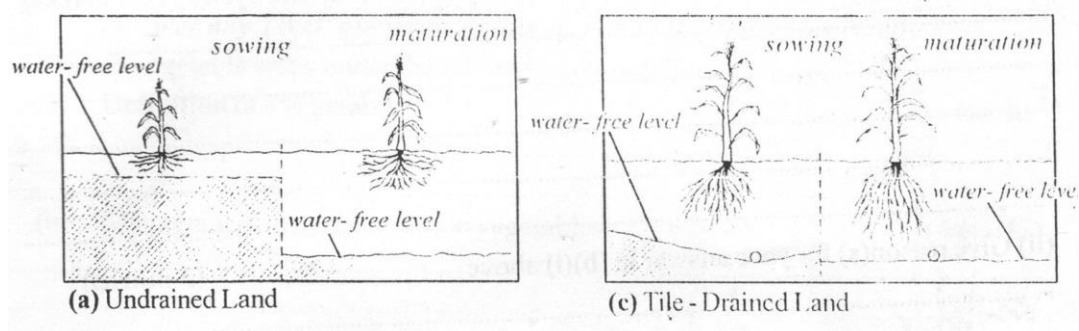
(1mk)

b) Give three features of an ideal green manure crop.

(11/2 mks)

SECTION B (20MKS)

15 Given below is an illustration of water levels of undrained and tile – drainage land in the sowing and maturation stage of cereal crop



a) What benefit of land drainage is shown in the illustration above?

(1mk)

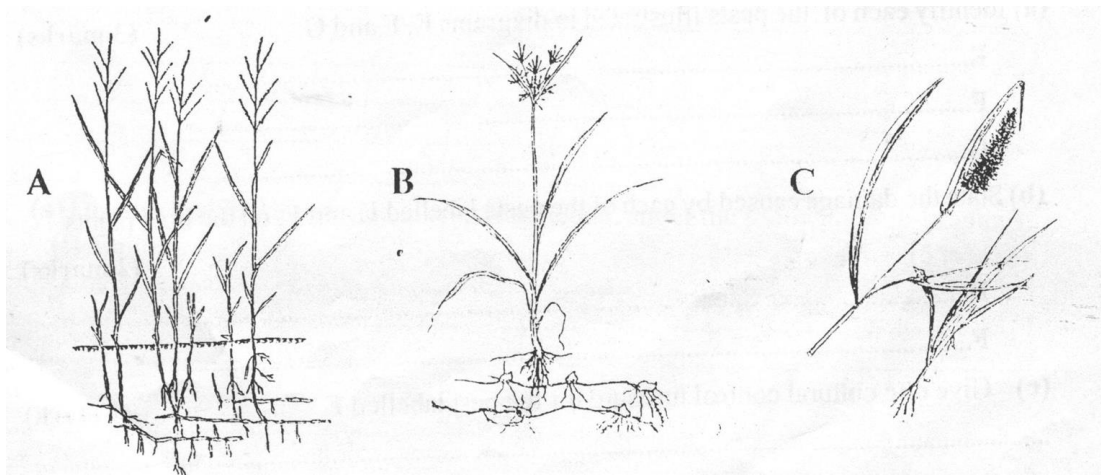
b) What three advantages may be associated with tile-drainage?

(11/2mks)

c) State two maintenance requirements of tile-drainage system.

(1mk)

16. The diagrams labeled A,B and C below illustrate some weeds. Study the diagrams carefully and then answer the questions that follow.



a) Identify each of the weeds illustrated in diagram A,B and C.

(3MKS)

A

B

C

B)i Classify the weeds into two groups, on the basis of their life cycles. (21/2marks)

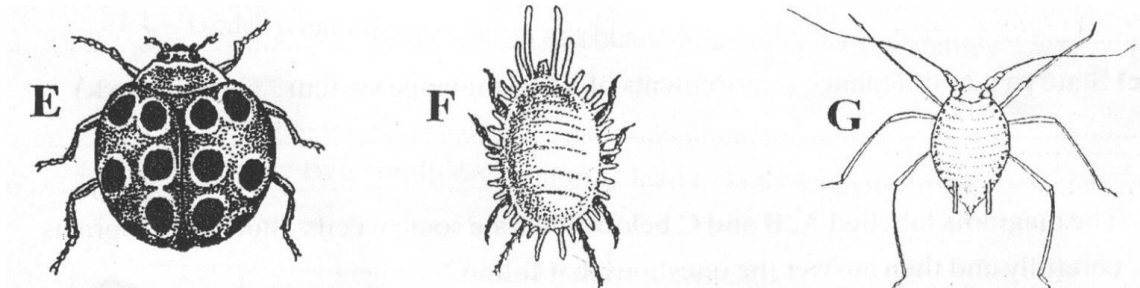
ii) Give reasons for you answer in (bi) above.

(3mks)

c)State two negative effects of weed C, on livestock.

(1mk)

17. The diagram labeled E, F and G below illustrate some pest found in vegetables study the diagrams carefully and then answer the questions that follow



a) Identify each of the pest illustrate in diagram E,F, and G. (3MKS)

B) State the damage caused by each of the pest labeled E and F, on the host plants. (mksa_

c)Give one cultural control measure for the pest labeled E (1mk)

d) Other than vegetables name two crop plants that may be infested with the pest labeled G

SECTION C (40MKS)

Answer an two question in this section the space provided

18 Discuss vegetable crops under the following sub- headings

a) Definition of vegetable. (1mk)

b) Management of perishability vegetables. (4mks)

c) Importance of vegetables. (6mks)

d) Common stem vegetables. (4mks)

e) Staking in tomatoes. (5mks)

19a) Discuss budding a applied in crop production under the following sub-headings

i) Timing (5mks)

ii) Advantages over grafting. (4mks)

iii) Materials used. (6mks)

iv) Briefly describe whip grafting. (5mks)

20 Discuss wind erosion under the following sub- headings

a) Destructive effects of wind erosion on crop plants. (5mks)

e) Factors affecting susceptibility of soil to wind erosion.

(15mks)

443/1 AGRICULTURE

PAPER 1

(THEORY)

DURATION:: 2HRS

KCSE 2023 TOP PREDICTION MASTER CYCLE 4

Kenya Certificate of Secondary Education (K.C.S.E.)

Name.....

Adm No.....

Stream.....

Date

Sign

Instructions to candidates

- Write your name and index in the spaces provided above
- Sign and write the date of examination in the spaces provided above
- This paper consists of **three** sections **A, B** and **C**.
- Answer **all** the questions in sections **A** and **B**.
- Answer any **two** questions in section **C**
- All** answers should be written in the spaces provided in the question paper.

For Examiner's Use Only

Section	Question	Maximum Score	Candidates Score
A	1 - 20	30	
B	21 - 26	40	
C	27-29	20	
Total Score		90	

1. State **two** methods which can be used to detect mineral deficiency in crops. (1mk)
.....
.....
2. State **two** conditions under which shifting cultivation is favourable. (1mk)
.....
.....
3. State **two** conditions under which seeds are seeded at a high seed rate. (2mks)
.....
.....
.....
.....
4. State **three** ways in which trees improve soil fertility. (1 1/2 mks)
.....
.....
.....
5. Give **three** causes of hardpans in cultivation. (1 1/2 mks)
.....
.....
.....
6. Under what **two** conditions does opportunity cost not exist? (1mk)
.....
.....
7. Give **two** roles of additives in silage making. (1mk)
.....
.....
8. Outline **four** advantages of mixed farming. (2mks)
.....
.....
.....

.....

9. Give **three** reasons why bulbils make good planting materials than suckers. (2mks)

.....

.....

.....

10. Give **three** reasons why agriculture is defined as a science. (1 1/2 mks)

.....

.....

.....

11. Give **four** characteristics of large scale farming system. (2mks)

.....

.....

.....

.....

12. State **four** farming practices which help to improve soil structure. (2mks)

.....

.....

.....

.....

13. Give **four** effects of top dressing on a pasture. (2mks)

.....

.....

.....

.....

14. What are the two reasons for inoculating legume seeds before planting . (1mk)

.....

.....

15. State **two** advantages of carrying out pruning in banana production. (1mk)

.....

.....

16. In maize hybrid 614 what do the following figures stand for? (1mk)

(i) 6.....

(ii) 4.....

17. Give **two** ways in which pastures are classified. (1mk)

.....
.....

18. Name **four** practices carried out to improve and maintain permanent pasture. (2mks)

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

19. Give **four** advantages of tissue culture. (2mks)

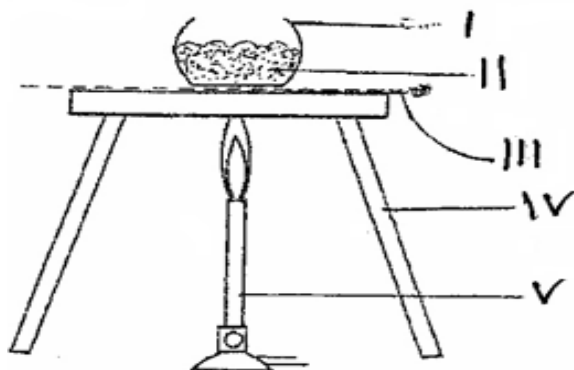
.....
.....
.....
.....

20. Give **three** stages of controlling devils horsewhip by mechanical means. (1½ marks)

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

SECTION B

21. The diagram below shows a set up of apparatus for finding the percentage of humus contents in a soil by ignition.

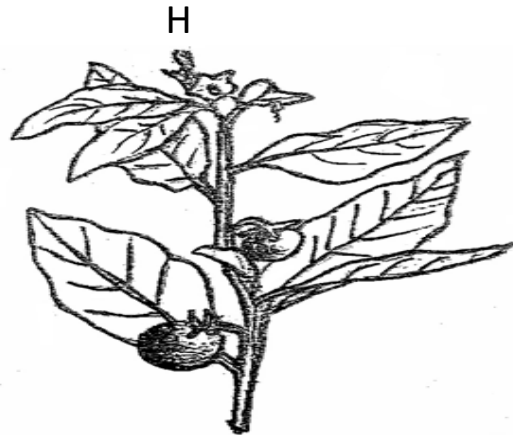
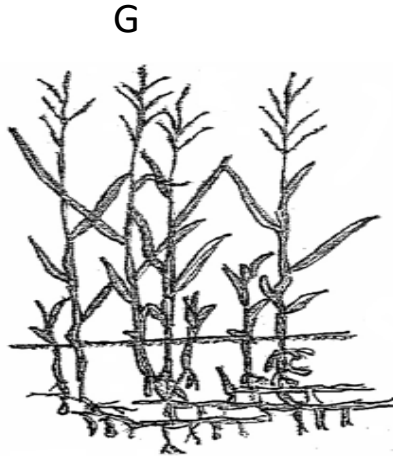


(a) Label the apparatus. (2 marks)

- I
- II
- III
- IV

(b) Outline the steps followed in carrying out the illustrated experiment. (3 marks)

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



22.

(i) Identify the weeds above. (2 marks)

G

H

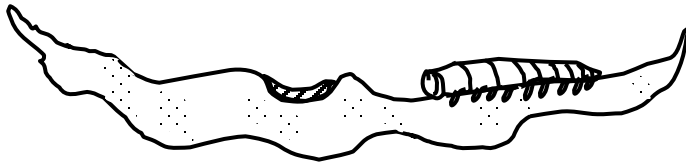
(ii) State the economic importance of the weed shown in diagram G. (2 marks)

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

(iii) Why is it difficult to control weed in diagram G? (1 mark)

.....
.....

23. Study the pest below and answer the questions below.



(a) Identify the pest (1 mark)

.....

(b) State two methods of controlling the pest. (2 marks)

.....
.....

(c) Name the crops attacked by the pest. (2 marks)

.....
.....

24. The diagram below illustrates a field management practices in tomatoes



(i) Identify the practice (1 mark)

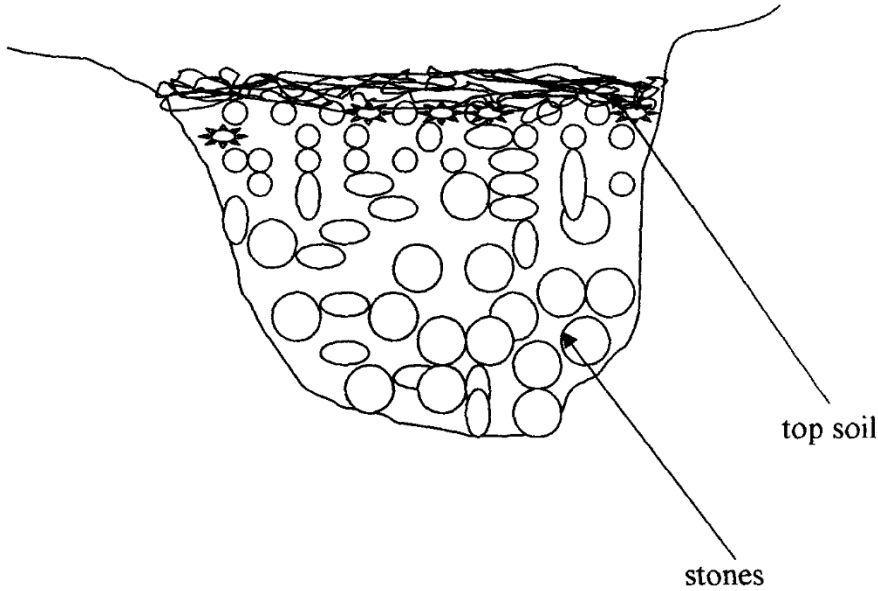
.....

(ii) State three reasons for carrying out the practice. (3 marks)

.....
.....

.....
(iii) Give another practice that could be carried out to give the same results. (1 mark)
.....

25. Study the diagram below then answer the questions that follow:



(a) Identify the method of drainage above. (1mk)

.....
.....

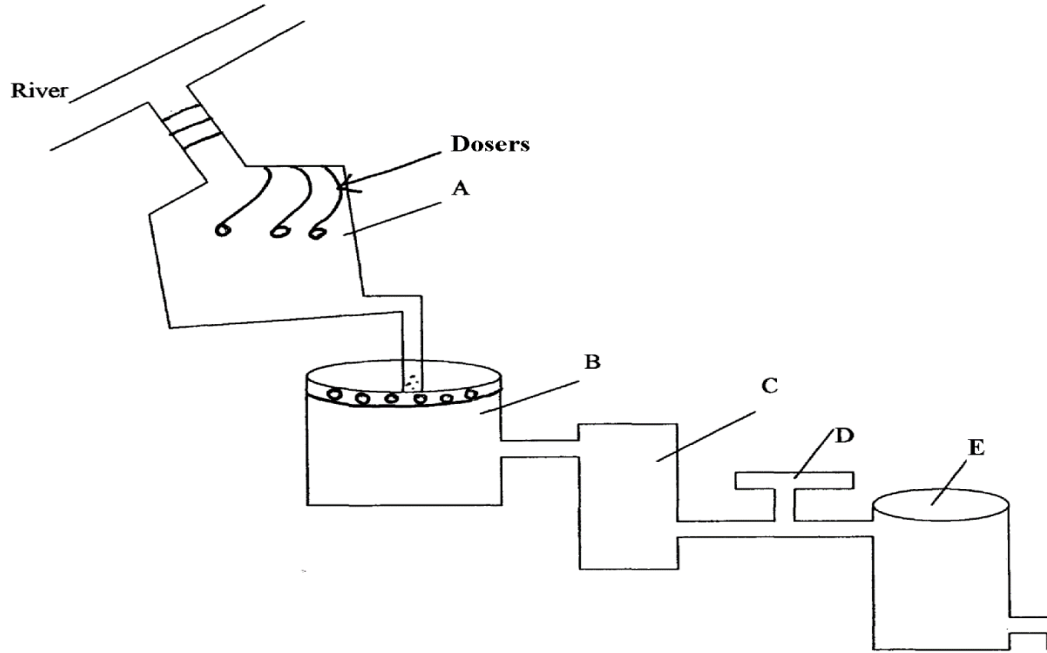
(b) State other **three** methods used to drain swampy areas. (3mks)

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

(c) Give **four** importance of drainage. (4mks)

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

26. Study the processes of chemical water treatment below and answer the questions that follow:



(a) Identify the parts labeled: (2mks)

- A
- B
- C
- D

(b) State **two** chemical substances added at part labeled B and give their functions. (2mks)

.....

(c) State **two** factors which influence the quantity of the chemical used in part labeled D. (2mks)

.....

(d) State **three** uses of water in crop production. (3 mks)

.....

.....
(e) State **three** types of production functions in agriculture. (3mks)

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

SECTION C (20MKS)

27. (a) Describe the cultural methods of weed control in crop production. (10mks)

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

(b) Describe the harmful effects of pests on crops (10mks)

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

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

28. (a) Discuss the human factors which influence agriculture. (10 marks)

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

(b) Explain **five** factors to consider when choosing the planting time. (10 marks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

29. Describe the production of carrots under the following sub headings

a) Seedbed preparation (3 marks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

b) Harvesting (4 marks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

c) Explain five cultural methods of weed control in beans production. (10 marks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

d) Outline three roles of sulphur in crop production. (3 marks)

.....

.....

.....

.....

.....

.....

.....

NAME..... ADM.NO..... CLASS/STREAM.....

SCHOOL..... SIGNATURE..... DATE

443/1

AGRICULTURE PAPER 1

TIME: 2 HOURS

KCSE 2023 TOP PREDICTION MASTER CYCLE 5

INSTRUCTIONS TO CANDIDATES:

- *This paper consists of three section A, B and C*
- *Answer all questions in section A and B*
- *Answer any two questions in section C*
- *All the questions should answered in the spaces provided*

FOR EXAMINERS USE ONLY

SECTION	QUESTIONS	MAX SCORE	CANDIDATES SCORE
A	1-15	30	
B	16-19	20	
C	20-22	20	
		20	
TOTAL SCORE		90	

SECTION A (30 MARKS)

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

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

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

2. Give **two** characteristics of small scale farming. (1mark)

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

2. Outline **four** qualities of a mother plant that should be considered when selecting vegetative materials for planting (2mks)

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

4. State four characteristics of a fertile soil. (2mks)

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

5. State two benefits of optimum soil temperature in crop production. (2 mk)

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

6. Give four soil factors that influence soil productivity. (2mks)

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

7. Give **two** reasons why root pruning is done in the nursery management in agro forestry.(1mk)

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

8. State **four** sources of nitrogen in the soil. (4 marks)

.....

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

9. State **four** factors that affect the rooting of cuttings in tea and sugar cane. (2 mks)

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

10. Outline **four** factors that determine the choice of a weed control measure to use in a crop field. (2mks)

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

11. List **four** types of terraces (2mks)

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

.....

12. State **two** ways by which organic mulches help to conserve moisture in the soil. (2mks)

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

13. Differentiate between under-sowing and over-sowing as used in forage Production.

(2mks)

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

14. State four factors that determine the quality of hay. (2mk)

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

15. State **three** ways of reclaiming water logged land.

(3 mks)

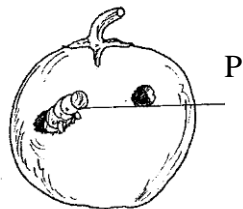
.....
.....

.....
.....

SECTION B (20 MARKS)

Answer All the questions in this section in the spaces provided

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



(a) Identify the pest labeled **P** (1mk)

.....

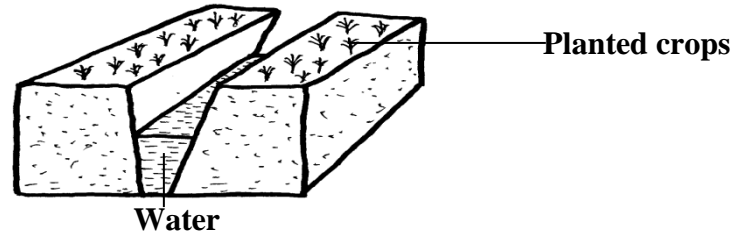
(b) State **one** method used to control the pest. (1mk)

.....
.....

(c) State any **three** factors to consider when selecting tomato fruits for marketing. (3mks)

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

17 . Below is a diagram showing a method of land reclamation. Study it carefully then answer questions that follow.



(a) Identify the method of drainage illustrated above (1mk)

.....

(b) State **two** reasons for carrying out drainage. (2mks)

.....
.....

18. (a) Money maker variety of tomatoes are spaced at 100cm by 60cm. Calculate the number of plants which would accommodate half an hectare of land. (3mks)

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

(b) Give **two** importance of suitable plant population

(2mks)

.....

.....

.....

.....

19. The diagram below illustrates a feature observed after digging the soil several meters deep. Study the diagram carefully and answer the questions that follow



a) Identify the feature that the diagram above represents

(1mk)

.....

b) Name the parts of the diagram labeled B,C and D (3mks)

B.....

C.....

D.....

c) Outline three characteristics of the part labeled A (3mks)

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

SECTION C (40 MARKS

Answer any two questions in this section

20. (a) Explain eight factors that can encourage soil erosion. (8 marks)

.....

.....

.....

.....

.....

.....

.....

.....

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

21 (a) Outline five ways in which high temperature affects agricultural production in Kenya. **(5 marks)**

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

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

(b) (i) Explain four precautions that should be observed when harvesting cotton. **(4 marks)**

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

(ii) Describe the harvesting of sugar cane. **(4 marks)**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(c) Explain how government policies affect agricultural production. (7mks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

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

22. (a) Explain six physical methods that can be used to control crop pests on the farm.(6 mks)

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

(b) Describe the production of bulb onions under the following sub-headings:

(i) Field management

(4 marks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(ii) Harvesting

(3 marks)

.....

.....

.....

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

(d) Explain seven factors that influence seed rates in crop production. (7 marks)

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

Compiled and Distributed by Kenya Educators Consultancy, P.O.BOX 15400-00500, Nairobi.
Tel 0724333200 E-mail kenyaeducators@gmail.com. ORDER MARKING SCHEMES AT
www.kenyaeducators.co.ke or Contact 0724333200/0768321553/0795491185

Name: Index no

School: Candidate's sign

Class..... Adm No.....

AGRICULTURE 443/1

PAPER 1

TIME: 2 Hours

KCSE 2023 TOP PREDICTION MASTER CYCLE 6

Kenya Certificate of Secondary Education (K.C.S.E.)

Agriculture

Paper 1

INSTRUCTIONS TO CANDIDATES:

- Write your name and index number in the spaces provided above.
- Sign and write the date of examination in the spaces provided above.
- This paper consists of three sections A, B and C.
- Answer all the questions in section A and B.
- Answer any two questions in section C.
- All answers should be written in the spaces provided.
- This paper consists of 13 printed pages.
- Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- Candidates should answer all the questions in English.

For Examiner's Use Only:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1-17	30	
B	18-21	20	
C		20	
		20	
	TOTAL SCORE	90	

SECTION A (30 MARKS)

1. State **two** conditions under which opportunity cost is zero. (1mk)

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

2. Name **three** branches of horticulture. (1½ mks)

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

State **four** factors a farmer should consider when choosing the farming system to undertake. (2mks)

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

3. State **four** disadvantages of communal land tenure system. (2mks)

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

4. Give **four** pieces of information found on a land title deed. (2mks)

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

5. State **four** reasons for deep ploughing during land preparation. (2mks)

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

.....
.....

6. State **four** characteristics of a good top soil. (2mks)

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

7. Give **three** reasons for sub soiling. ($1\frac{1}{2}$ mks)

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

8. Differentiate between seed inoculation and seed dressing. (1mk)

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

9. State **four** effects of soil erosion. (2mks)

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

10. Outline **four** practices necessary to improve and maintain permanent pastures. (2mks)

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

11. State **two** causes of poor drainage on farmland. (1mk)

.....

.....

.....

.....

12. State **four** reasons for mulching. (2mks)

.....

.....

.....

.....

13. Give the function of each of the following in the preparation of compost manure. (2mks)

a) Top soil

.....

.....

b) Well rotten manure

.....

.....

c) A thin layer of wood ash

.....

.....

d) Long pointed stick

.....

.....

14. State **four** deficiency symptoms of phosphorus. (2mks)

.....

.....

.....

.....

15. State **four** characteristics of nitrogenous fertilizers. (2mks)

.....

16. State **four** reasons why a nursery is important in crop production. (2mks)

.....

SECTION B (20 MARKS)

18. 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) (5mks)

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



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

- b) Describe the procedure followed in preparing the seed potatoes for planting. (3mks)

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

17. 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. (1mk)

- b) Name the causative agent of the diseases. (1mk)

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

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

18. 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. (2mks)

C.....D.....

- b) Classify weed D according to plant morphology. (1mk)

.....

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

C.....

D.....

SECTION C (40MARKS)

19. a) State **four** benefits of sowing annual crops early. (4mks)

- b) Describe **eight** effects of fragmentation and sub division of land. (8mks)

- c) Explain **eight** effects of weeds. (8mks)

20. a) Describe the various field management practices for tomatoes. (8mks)

- b) State the precautions that should be observed when harvesting cotton. (4mks)

- c) Explain **four** importance of crop rotation. (8mks)

24. The information below is on the financial and Asset valuation of school Farm at the end of the year 2002

Debts Payable	80,000/=
Dairy cattle	55,000/=
Maize in store	19,000/=
Buildings	125,000/=
Beans in store	4,000/=
Calves	5,000/=

Mature sheep	7,000/=
50 ha of land	260,000/=
Machinery	180,000/=
Cattle feed in store	4,000/=
Office Equipment	1,400/=
Tools in store	10,000/=
Bank Deposit	50,000/=
Debts receivable	11,000/=
KFA Loan	210,000/=
Bank Loan	100,000/=
Wages	41,200/=
Electricity Bills	100,500/

a) Draw up a balance sheet for the farm as at 31st Dec. 2002 using the above information.
(12mks)

b) Determine the solvency of the farm, giving reasons. (1mk)

c) Describe **seven** reasons why farmers need to keep good farm records. (7mks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

THIS IS THE LAST PRINTED PAGE.

443/1

AGRICULTURE

PAPER 1

Time: 2 hours

KCSE 2023 TOP PREDICTION MASTER CYCLE 7

NAME.....INDEX NUMBER.....

CANDIDATE'S SIGNATUREDATE.....

INSTRUCTIONS TO CANDIDATES

- (a). Write your name and index number in the spaces provided.
- (b) Sign and write the date of the examination in the spaces provided above.
- (c). This paper consists of three sections; A, B and C
- (d) Answer all the questions in section A and B
- (e) Answer any two questions in section C
- (f) All the answers should be written in the spaces provided.
- (g) Candidates should check the questions papers to ascertain that all the pages are printed as indicated and that no questions are missing.
- (h) Candidate should answer all questions in English.

Section	Question	Maximum score	Candidate's score
A	1-11	30	
B	12-15	20	
C		20	
		20	
	TOTAL	90	

SECTION A (30 MARKS)

Answer all questions in this section in the spaces provided.

1, State four factors determining farming systems (2 marks)

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

2. State four advantages of extensive farming system. (2 marks)

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

3. State four importance of optimum temperature in crop production. (2 marks)

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

4(a) Name three physical properties of the soil. (1 ½ marks)

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

b) State three importance of soil structure on production. (1 ½ marks)

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

c) State four reasons why burning of vegetation as a method of land clearing is discouraged. (2 marks)

.....

.....

.....

.....

5(a) State three factors influencing depth of cultivation. (1 ½ marks)

.....

.....

.....

b)i) What do you understand by the term sub-soiling. (½ marks)

.....

.....

ii) State two reasons for sub-soiling (1 mark)

.....

.....

.....

6. State four features of a productive soil. (2 marks)

.....

.....

.....

.....

7(a) State two deficiency symptoms of iron in crop production. (1 mark)

.....

.....

b) Name two roles played by iron in crop production. (1 mark)

.....

.....

.....
8. State four advantages of using inorganic fertilizers over organic fertilizers. (2 marks)

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

9(a) Name four sites to avoid when carrying out soil sampling. (2 marks)

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

b) State four advantages of using vegetative materials for planting. (2 marks)

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

10. Complete the table below (2 marks)

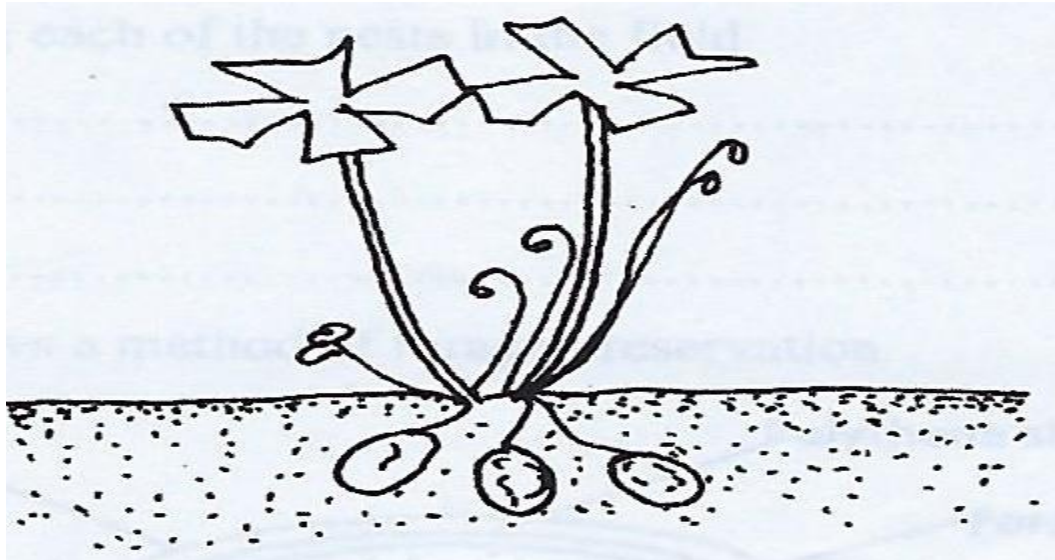
Plant part used for vegetative propagation material	Crop plant
1.Splits	
2.Bulbils	
3. Suckers	
4.Crowns	

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

.....
.....

.....
.....
SECTION B (20 marks)

12. Study the diagram below carefully and answer the questions that follows.



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

.....
b) State two factors which contributes to the competitive ability of the above weed. (2 marks)

.....
.....
.....
c) State two harmful affects of the weed named in (a) above. (2 marks)

.....
.....
d) Name one basis in which weed above is classified (1 mark)

.....
.....
13. Two maize pests are shown in the diagram below. Study them and answer the questions that follow.



a) Identify the pests in the diagrams labelled X and Y. (2 marks)

.....

.....

.....

.....

b).At what stage of maize production does each pest damage the crop. (2 marks)

.....

.....

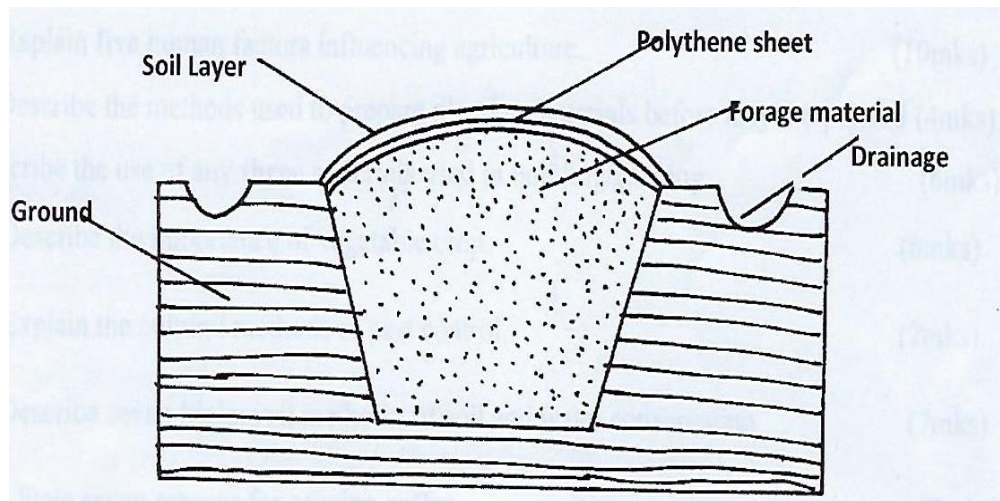
.....

c). Give two ways of controlling each of the pests in the field. (2 marks)

.....

.....

14. (a) The diagram below shows a method of forage preservation. (1 mark)



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

.....

.....

(b).State the form in which the forage is preserved as illustrated above. (1 mark)

.....

.....

(c), Name two other method of forage preservation apart from above. (2 marks)

.....

.....

15.(i) Define the following terms as used in agroforestry

a) coppicing (1 mark)

.....

.....

b).Pollarding (1 mark)

.....

.....

ii). Name any two forms of agroforestry (2 marks)

.....

SECTION C. 40 MARKS

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

16a) Explain five human factors influencing agriculture. (10 marks)

b). Describe the methods used to prepare planting materials before they are planted. (4 marks)

c) Describe the use of any three materials used in budding/grafting. (6 marks)

17a) Describe the importance of vegetable crop. (6 marks)

(b). Explain the cultural methods of pest control. (7 marks)

(c). Describe seven biological methods of soil and water conservation. (7 marks)

18(a) State seven reasons for pruning coffee . (7 marks)

(b) Highlight seven effects of land fragmentation (7 marks)

(c) Explain the basic concepts of economics. (6 marks)

443/1

AGRICULTURE

PAPER 1

Time: 2 hours

KCSE 2023 TOP PREDICTION MASTER CYCLE 8

Name: Index No:

Stream: Candidate's Signature: Date:.....

Instructions to candidates

- a) Write your name and index number in the spaces provided above.
- b) Sign and write the date of the examination in the spaces provided above.
- c) The paper consists of **three** sections **A, B and C**.
- d) Answer **all** questions in section **A and B**
- e) All answers should be written in the spaces provided.
- f) This paper consists of 12 printed pages.
- g) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- h) Candidates must answer the questions in English

For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1-18	30	
B	19-23	20	
C		20	
		20	
TOTAL SCORE		90	

SECTION A: (30 marks)

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

1. State **four** advantages of mixed farming to the farmer (2 marks)

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

2. State **two** reasons for forage conservation (1 mark)

.....
.....

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

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

4. State **four** activities carried out by young farmer’s club in Kenya (2 marks)

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

5. Give **two** benefits of possessing title deed to a farmer (1 mark)

.....
.....

6. State **four** ways of classifying crop pest (2 marks)

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

7. State **four** observable indicators of economic development of a Nation. (2 marks)

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

.....
.....
8. State **two** effects of HIV /AIDS on agricultural production. (1 mark)

.....
.....
9. State **four** factors which may affect the quality of Hay. (2 marks)

.....
.....
10. State **four** reasons why burning is discouraged as a method of land clearance. (2 marks)

.....
.....
11. Give **two** forms in which nitrogen is absorbed by crops from the soil. (1 mark)

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

.....
.....
13. Name **two** types of non-competitive markets (1 mark)

.....
.....
14. State **four** agricultural activities that may pollute water (2 marks)

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

.....
.....

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

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

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

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

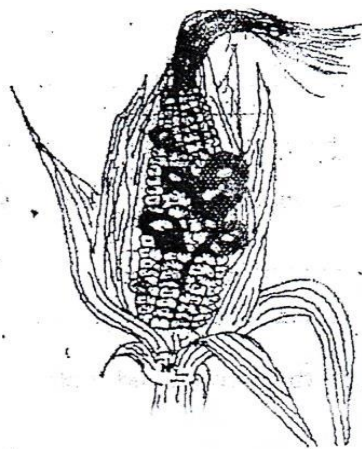
18. Name any **two** types of labour records. (1 mark)

.....
.....

SECTION B: (20 marks)

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

19. below is a diagram showing a crop disease



a. Identify the crop disease (1 mark)

.....

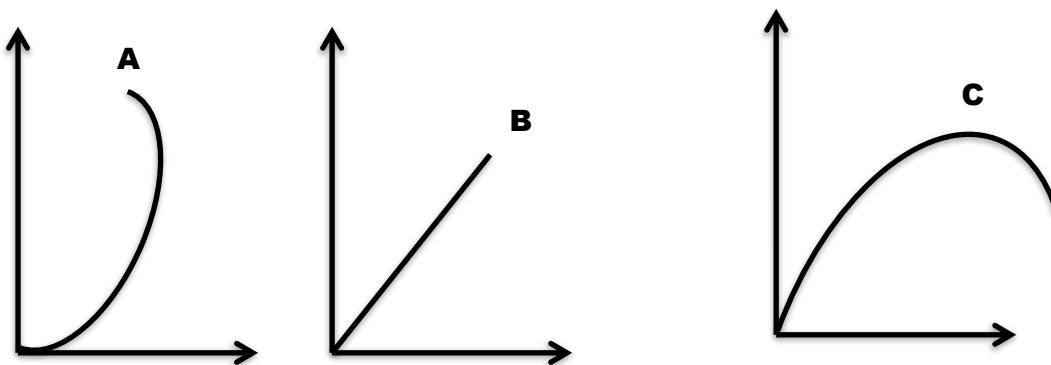
b. State **three** control measures for the crop disease (3 marks)

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

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

.....

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



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

A.....
B.....

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

.....
.....

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

.....

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

.....
.....

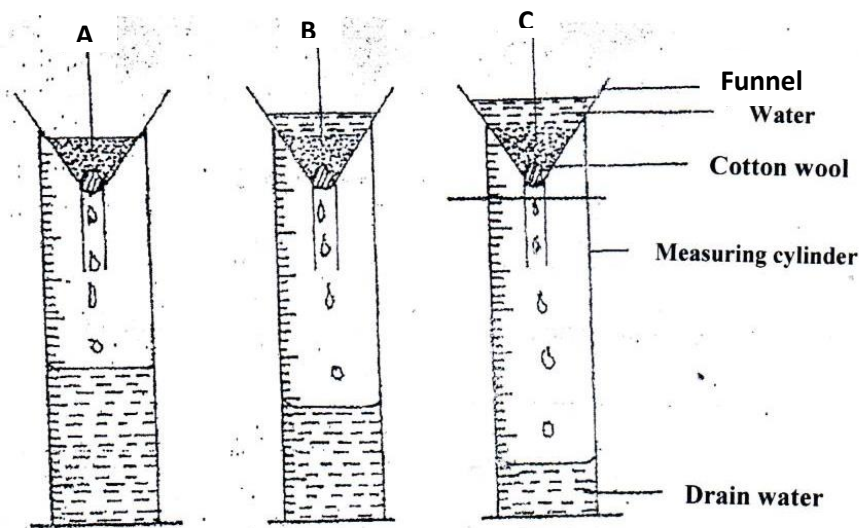
21. The following is a farm record Mrs. Sanda had kept as at 30th June 2006.

Study it carefully and answer the questions that follow

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

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

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



a. State the aim of the experiment

(1 mark)

.....

If the volume of water illustrated in the measuring cylinder was observed after one hour, identify the soil samples labeled

A: (1 mark)

B: (1 mark)

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

.....

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



a. Identify the weed labeled

C..... (1 mark)

D..... (1 mark)

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

.....

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

.....

443/1

AGRICULTURE

PAPER 1

Time: 2 hours

KCSE 2023 TOP PREDICTION MASTER CYCLE 9

Name Index Number.....

Candidate's Signature Date

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 on foolscaps provided

FOR EXAMINER'S USE ONLY

Section	Question	Maximum score	Candidate's score
A	1-17	30	
B	18	20	
	19		
	20		
	21		
	22		
	23		
c	24-26	40	
	TOTAL	90	

SECTION A (30 MARKS)

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

1. Define organic farming (1mark)
.....
.....
.....
2. List THREE soil constituents (1 ½ mark)
.....
.....
.....
3. Give FOUR benefits of crop rotation (1mark)
.....
.....
.....
4. State TWO disadvantages of using hydram pumps in pumping water in the farm (1mark)
.....
.....
.....
5. List FOUR benefits of land consolidation in farming (2marks)
.....
.....
.....
.....
6. Name a crop weed that is:
- (i) Parasitic to maize crop (½ mark)
.....
- (ii) Alternate host for rusts (½ mark)
.....
- (iii) Aquatic (½ mark)

.....
(iv) Has medicinal value (1/2 mark)

7. State THREE ways in which nitrogen is lost from the soil (1½ marks)

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

8. State FOUR benefits of mulching in soil and water conservation (2marks)

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

9. Give FOUR disadvantages of using organic manures in crop production (2marks)

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

10. (i) Define opportunity cost (1mark)

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

(ii) Name Two types of inventory records kept by farmers (1mark)

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

11. (a) Give TWO importance of sub-soiling (1mark)

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

12. Give THREE ways in which nutrients can be lost from silage in a silo (1½ mark)

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

13. (i) Give TWO destructive effects of moles in crop production (1mark)

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

(ii) Apart from moles, name TWO other rodent pests (1mark)

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

14. Give THREE characteristics of fixed inputs (1½ marks)

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

15. List FOUR financial documents kept by farmers (2marks)

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

16. State FOUR field pests that attack maize (2marks)

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

17. Differentiate between apiculture and aquaculture as used in Agriculture (1mark)

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

18. State TWO ways in which burning leads to loss of soil fertility (1mark)

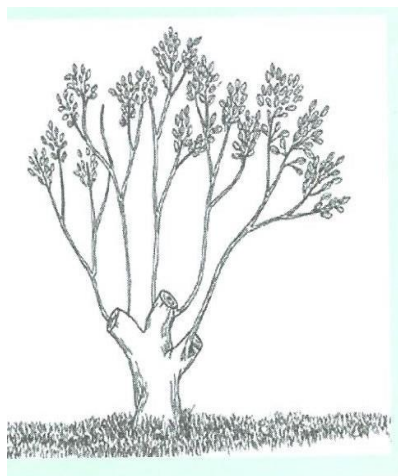
.....
.....
.....

19. State TWO benefits of hardening off seedlings before transplanting (1mark)

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

SECTION B (20 MARKS)
Answer all questions in this section.

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



A



B

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

.....

.....

.....

.....

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

.....

.....

.....

.....

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

DAIRY CATTLE							
DR				CR			
Date	Particulars	Folio	Amount Sh cts.	Date 2003	Particulars	Folio	Amount Sh cts.

Feb 20 th	Bought 2 bags of dairy meal	1	18,000.00	Feb 10 th	Sold 2 heifers	1	12,000.00
Feb 30 th							

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

.....

.....

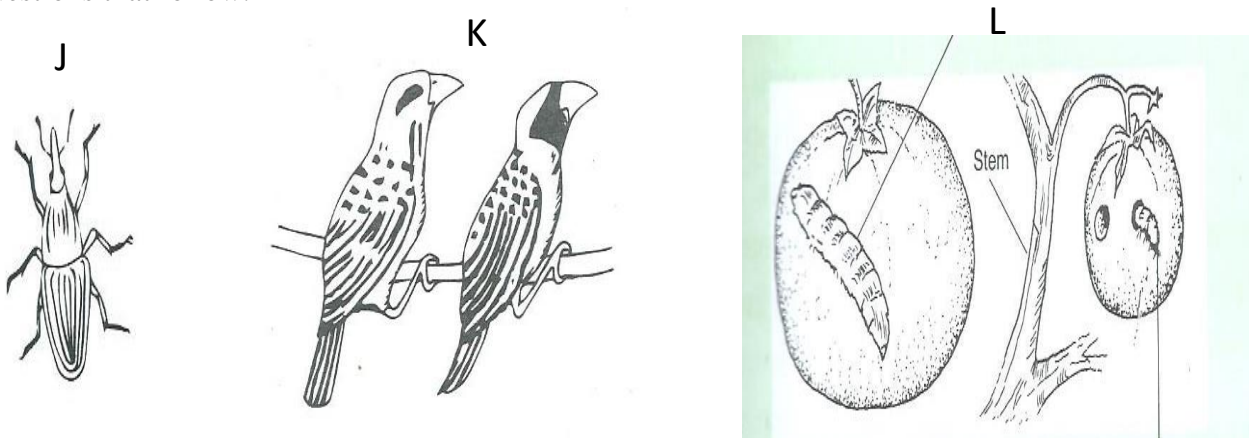
b) State four importance of keeping proper farm account records. (2marks)

.....

.....

.....

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



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

.....

.....

.....

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

.....

.....

.....

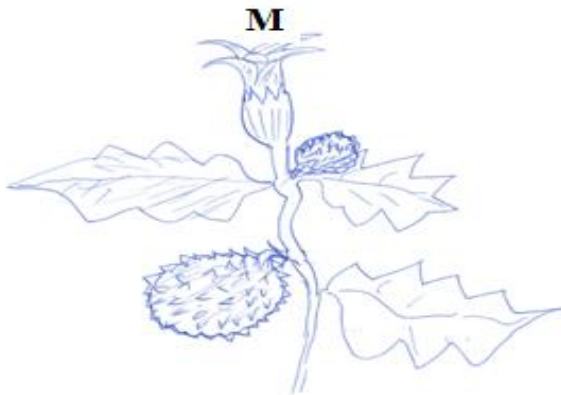
c) State one crop attacked by the pest labeled J and K above. (2marks)

.....

.....

.....

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



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

(3marks)

.....

.....

.....

.....

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

(2marks)

(i) X

.....
.....
(ii) Z
.....
.....

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

SECTION C (40 MARKS)

Answer any two questions from this section in the spaces provided

24. (i) Describe the field production of irrigated rice under the following sub-headings:

- (a) Field preparation. (6marks)
- (b) Water control (3marks)
- (c) Field management (5marks)

(ii) Describe the precautions taken while harvesting:

- (a) Pyrethrum (3marks)
- (b) Tea (3marks)

25. (a) Name **two** types of inventory records in the farm. (1mark)

(b) Explain **six** importance of farm budgeting. (6marks)

(c) The inventory for Mama Joan's farm as at 01.06.2011

	Kshs.
Cash at hand	5,000
Broilers	30,000
Maize in store	7,000
Calves	15,000
Dairy cattle	120,000
Buildings	75,000
Machinery	95,000

Land 200,000

On the same day, the following information was obtained from the farmers records

Kshs.

Interest payable	2,000
Cash in the bank	20,000
Taxes payable	750
Wages payable	5,600
Bank loan	213,000
Egg sales on credit	10,000
Milk sales on credit	13,000
Farm inputs purchased on credit	19,800
Vegetable sales on credit	5,000

Required: Prepare a balance sheet for the farm. (13mks)

- 26. (a) Outline the process of treating water for domestic use using chemical treatment system. (12mks)
- (b) Explain **five** physical factors that increases the rate of soil erosion in a farm. (5mks)
- (c) Explain how monoculture leads to loss of soil nutrients. (3mks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

THIS IS THE LAST PRINTED PAGE

443/1
AGRICULTURE
PAPER 1
Time: 2 hours
KCSE 2023 TOP PREDICTION MASTER CYCLE 10

NAME.....ADM NO..... CLASS.....

SECTION A ANSWER ALL QUESTIONS 30MARKS

1. Define organic farming (1mk)

.....
.....

2. State **Four** reasons why agriculture is regarded as a science. (2mks)

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

3. Give **four** effects of HIV/Aids on agricultural production and development. (2mks)

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

4.a) State **two** farming practices that help in reducing the effects of water shortage in crop production (2mks)

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

b) Give **four** advantages of rotational grazing in cattle farming. (2mks)

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

5. State **two** disadvantages of small scale farming. (1mk)

.....
.....

.....
.....
.....
.....
6. State **four** ways of treating water for use in the farm. (2mks)

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

7.State **four** benefits of using organic materials for mulching. (2mks)

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

8.State **four** disadvantages of non-capped multiple stem pruning in coffee. (2mks)

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

10.State **four** factors considered in selecting the site for making compost manure. (2mks)

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

11.Give **two** reasons for flooding in the growing of paddy rice. (1mk)

.....
.....

12.Give **two** appropriate situations under which foliar spraying is most suitable. (1mk)

.....
.....

.....
.....
13.State **four** factors contributing to the competitive ability of weeds (2mks)

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

14.Give **four** conditions of land which may make it necessary to carry out reclamation practices (2mks)

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

15.Name **two** physical weathering agents in the soil formation process (1mk)

.....
.....

16.State **two** Mechanical methods of separating soil particles according to size during soil analysis (1mk)

.....
.....

17.State **four** functions of Boron in crop development (2mks)

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

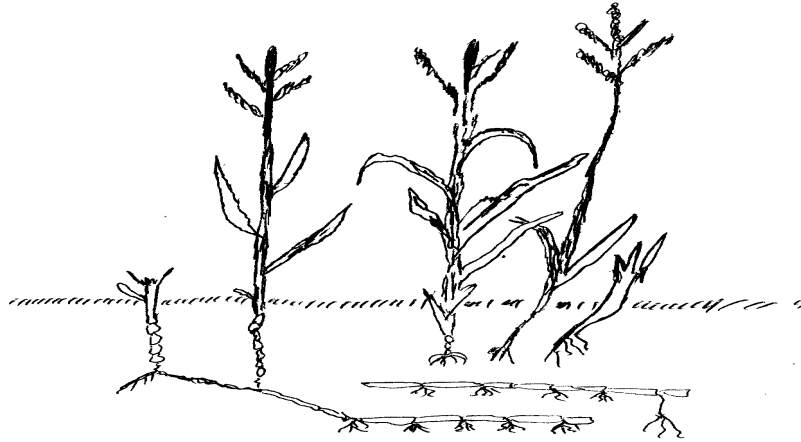
18.State **four** factors that should be considered when classifying crop pests (2 mks)

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

SECTION B 20 MARKS

ANSWER ALL QUESTIONS IN THIS SECTION

19. The diagram below shows a weed study it carefully.



(a) **Identify** the weed. (1mk)

.....

(b) **State two** economic importance of the weed. (2mks)

.....

.....

(c) **Why** is it difficult to control the weed? (1mk)

.....

20. The diagrams below labeled A and B illustrate field pests. Study the diagrams carefully and answer the questions that follow.



a) Identify the field pests illustrated in the diagrams A and B. (2mks)

A

B

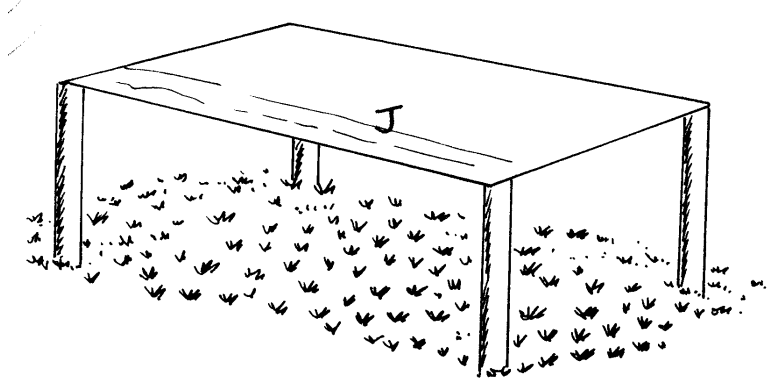
b) Classify the pests A and B (2mks)

A.....

B

c) State ONE control measure of pest B (1mk)

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



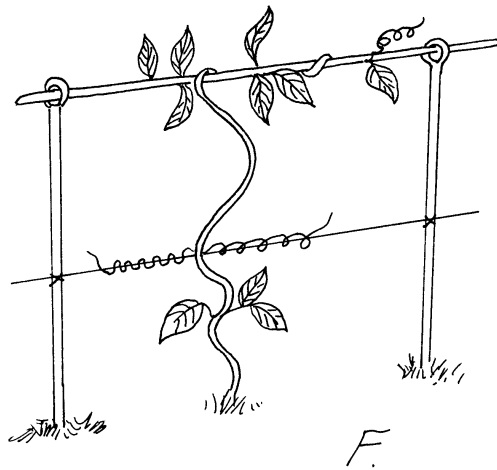
(a) State two advantages of having the part labeled J (2mks)

.....
.....

(b) State any **three** management practices that should be carried out on the nursery from the time seedlings emerge to the stage of transplanting (3mks)

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

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



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

ii) Name **two** other methods used in training in crop production. (2mks)

.....
.....
iii) State two advantages of training in crop production. (2mks)

.....
.....
iv) List **two** crops that require training. (1mk)

.....
.....

SECTION C 40 MARKS
ANSWER ANY TWO QUESTION

23a) i) Define the term land tenure (2mks)

ii) Give three benefits of a Title deed to a farmer. (3mks)

iii) State five effects of land fragmentation in crop farming. (5mks)

b) Describe the production of onions under the following sub-headings:

i) Seedbed preparation. (3mks)

ii) Field management practices. (5mks)

iii) Harvesting. (2mks)

24a) Describe **seven** harmful effects of crop pests. (7mks)

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

c) Describe the harvesting of cotton. (5mks)

25.a) Describe the importance of vegetable crop. (6mks)

b) Explain the cultural methods of pest control. (7mks)

c) **Discuss** the management practices in the production of maize grains from planting to harvesting. (7mks)

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

