



# **GOLDLITE ONLINE SUPPLIES**



**KCSE NATIONAL SCHOOLS TRIALS AND JOINT SERIES 2025**

## **AGRICULTURE PAPER 1**

**KABARAK HIGH  
ALLIANCE BOYS  
ALLIANCE GIRLS  
ASUMBI GIRLS  
KISII SCHOOL  
KENYA HIGH  
MANGU SCHOOL  
MARANDA SCHOOL  
MASENO SCHOOL  
MERU SCHOOL  
MOKASA JOINT 1  
STAREHE GIRLS  
STAREHE BOYS  
LENANA SCHOOL  
MOI GIRLS ELDORET  
NAIROBI SCHOOL  
FRIENDS SCHOOL KAMUSINGA**

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national schools' trials and joint series*

## ***KNEC COMPLIANT***

**GOLDLITE ONLINE SUPPLIES**  
*Kenya Certificate of Secondary Education*  
**KCSE TOP NATIONAL SCHOOLS TRIAL SERIES 2025**

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Name ..... Admission number .....  
Candidate's Signature.....Date.....

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**ALLIANCE BOYS TRIAL EXAMS**

**413/1**

**AGRICULTURE**

**PAPER 1**

**TIME: 2 hours**

**Instructions to Candidates**

- Write your **name, index number** in the spaces provided.
- This paper has three sections A, B and C.
- Answer **all** the questions in section A and B in the spaces provided.
- Answer any **two** questions in section C.

**For Examiner's Use Only**

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 13	30	
B	14 – 17	20	
C	18	20	
	19	20	
	20	20	
	<b>Total Score</b>	<b>90</b>	

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**FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEMES**

## SECTION A (30 Marks)

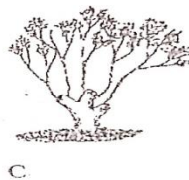
**Answer ALL questions in the spaces provided**

1. What is the meaning of the following terms as used in economics?
  - a) Scarcity. (1 mark)
  - b) Opportunity cost. (1 mark)
2. Give **four** advantages of intensive farming. (2 marks)
3. List **three** aspects of light that influence crop growth. (1 ½ marks)
4. State **four** advantages of pruning coffee. (2 marks)
5. State **four** ways through which pests affect agriculture. (2 marks)
6. Give **four** methods of controlling maize stalk borer in maize. (2 marks)
7. Give **four** factors that influence the number of secondary cultivations carried out in seedbed preparation. (2 marks)
8. Give **four** diseases that can affect maize in the field. (2 marks)
9. State **four** characteristics of phosphatic fertilizers. (2 marks)
10. Give **four** factors that would determine the stage at which a crop is harvested. (2 marks)
11. Give **four** natural factors that encourage soil erosion. (2 marks)
12. State **four** advantages of zero grazing. (2 marks)
13. Give **two** methods used in the establishment of pasture. (1 mark)
14. Name one crop that is propagated by each of the following.
  - a) Split ( ½ mark)
  - b) Bulbil ( ½ mark)
15. Name **two** categories of pests on the basis of each of the following.
  - a) Mode of feeding (1 mark)
  - b) Place where they are found/ habitat (1 mark)
16. Calculate the plant population per hectare of a maize crop planted at a spacing of 100cm by 50cm. show your working. (3 marks)

## **SECTION B ( 20 MARKS)**

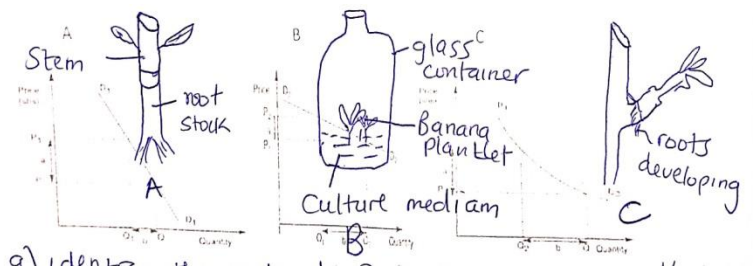
**Answer all the questions in this section in the spaces provided.**

17. The illustrations below are methods of harvesting agroforestry tree. Study them carefully then answer the questions that follow.

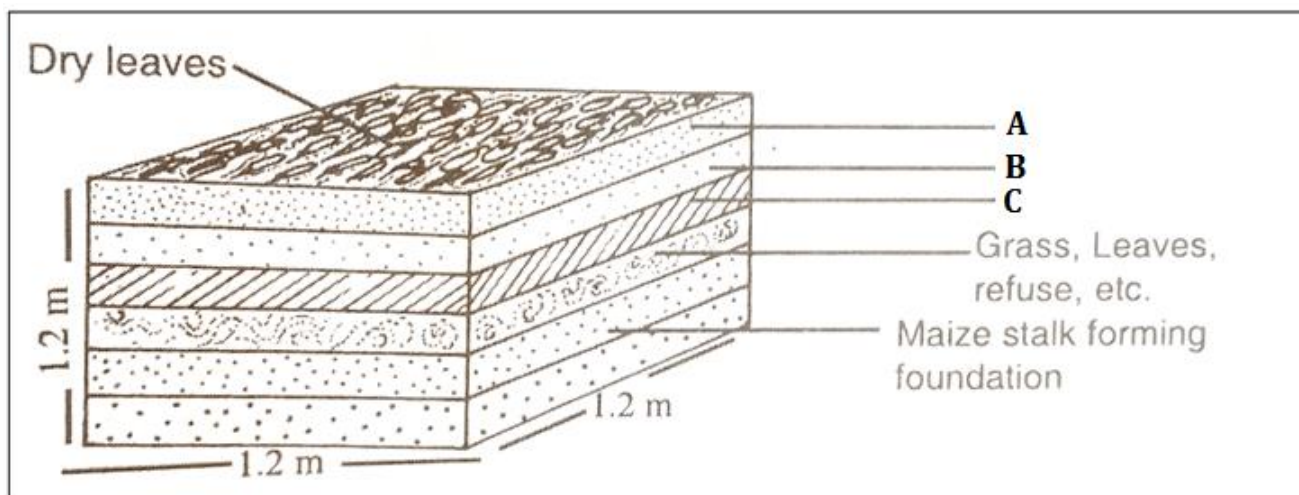


- a) Identify the method illustrated in diagrams A, B and C. (3 marks)
- b) What are the objectives of carrying out three harvesting shown in A? (2 marks)

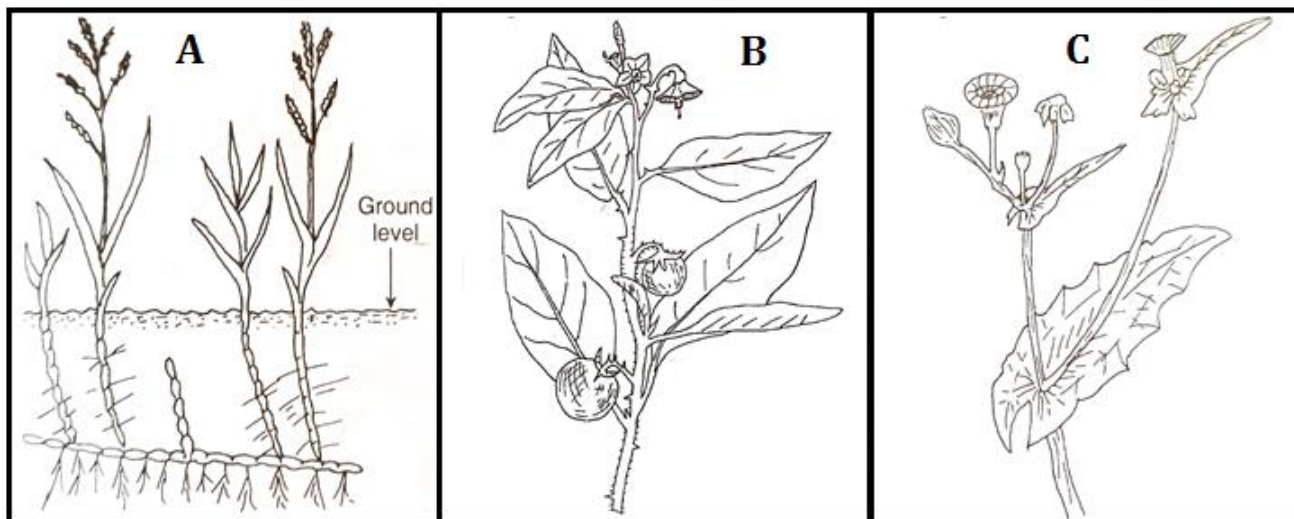
18. Study the methods of crop propagation illustrated below then answer the questions that follow.



- Identify the method of crop propagation illustrated above. (3 marks)
  - Give one required condition under which method A above is carried out for it to be successive. (1 mark)
  - State one advantage of using stem cuttings for propagation. (1 mark)
19. The following is an illustration of a compost pit. Study it carefully and answer the questions that follow.



- Identify the material that make up the part labeled A, B and C. (3 marks)
  - Give the importance of the materials in part A and C in the preparation of a compost manure. (2 marks)
20. Below is an illustration of common weeds in arable land. Study them and answer the questions that follow.



- Identify each of the weeds labeled A and C. (2 marks)

- b) State one reason why it's difficult to control the weed labeled A. (1 mark)
- c) Give two harmful effects of the weed labeled B. (2 marks)

### SECTION C (40 MARKS)

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

21. a) Describe the production of cabbages under the following subheadings. (2 marks)
- i) Varieties
- ii) Transplanting of seedlings
- b) Describe the selection and preparation of planting materials in the production of dry beans. (4 marks)
- (phaseolus vulgaris) (4 marks)
- c) State **four** advantages of land consolidation. (4 marks)
- d) State and explain **three** factors that determine the correct depth of planting. (6 marks)
22. a) Outline the procedure used to prepare a nursery bed. (8 marks)
- b) Explain **six** cultural methods of soil and water conservation. (6 marks)
23. a) Describe how water is treated to remove soil impurities. (5 marks)
- b) Explain **five** factors that should be considered when setting a vegetable nursery. (10 marks)
- c) Give **five** ways of controlling weeds in a field of maize. (5 marks)

**GOLDLITE ONLINE SUPPLIES**  
*Kenya Certificate of Secondary Education*  
**KCSE TOP NATIONAL SCHOOLS TRIAL SERIES 2025**

Name ..... Admission number .....

Candidate's Signature.....Date.....

**ALLIANCE GIRLS TRIAL SERIES**

**413/2**

**AGRICULTURE**

**PAPER 2**

**TIME: 2 hours**

**Instructions to Candidates**

- Write your *name*, *index number* in the spaces provided.
- This paper has three sections A, B and C.
- Answer *all* the questions in section A and B in the spaces provided.
- Answer any *two* questions in section C.

**For Examiner's Use Only**

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B	14 – 17	20	
C	18	20	
	19	20	
	20	20	
	<b>Total Score</b>	<b>90</b>	

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**FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEMES**

**Answer all Question in A and B**

1. Explain the following terms as used in Agriculture  
  - i. Agricultural economics. ( ½ mk)
  - ii. Agricultural Engineering. ( ½ mk)
2. State two methods that can be used to detect mineral deficiency in crops. (1mk)
3. State two conditions under which shifting cultivation is favorable . (1mk)
4. State two conditions under which seeds are seeded at high rate. (2mks)
5. How do trees help in maintaining soil fertility. (2mk)
6.
  - i. Explain the meaning of opportunity cost. (1mk)
  - ii. Outline condition at which opportunity cost is zero. (2mks)
7. Give three causes of hard pan in soil. (2mks)
8.
  - i. Explain the meaning of additives as used in animal feeds. (1mk)
  - ii. What are the role of additive in making silage. (2mks)

9. Give four advantages of diversification in farming as a method of farming.(2mks)
10. Give reasons why Agriculture is regarded as S|cience. (2mks)
11. Differentiate between Extensive farming system and intensive farming system.(2mks)
12. Why should top dressing be done on pasture. (2mks)
13. Give reasons for inoculating legume seeds before planting. (1mk)
- 14.
- i. Outline the classification of pasture. (1mk)
  - ii. Name four practices carried out to improve and maintain permanent pasture. (2mks)
15. Name four advantages of tissue culture procedure in plant species. (2mks)
16. Outline four mechanical methods used in control of weeds. (2mks)

### **SECTION B**

17. The diagram below shows a set of apparatus for finding the % of humus in the soil by heating.
- a. Label the apparatus. (2mks)
- i.
  - ii.



- iii.
- iv.
  - b. Explain the steps followed in carrying out the illustrated experiment. (3mks)

18. Explain why it is difficult to control weeds that have rhizoid roots. (1mk)

19. Outline the practices that are used to train weak stem plants. (3mks)

20. Study the diagram below then answer the question that follows.

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

b. State other method used in draining a swampy area. (3mks)

21. Study the process of chemical water treatment below and answer the question

- a. Identify the labeled parts
  - A (½ mk)
  - B (½ mk)
  - C (½ mk)
  - D (½ mk)
- b. Mention two substances added at B and give the function. (2mks)
- c. Give three uses of water in crop production. (3mks)
- d. Outline two source of water. (2mks)

**SECTION C(Select only two question)**

- 22.
- i. Explain what is planting. ( ½ mk)
  - ii. Outline the materials used in planting. (3mks)
- 23.
- i. Explain five factors that affects rooting of cutting. (10mks)
  - ii. Outline and explain factor that must be considered when selecting planting materials. (10mks)
- 24.
- i. Explain what is meant by the term seed dorminancy. (2mks)
  - ii. Outline four methods of breaking seed dorminancy and explain them briefly. (8mks)
  - iii. Explain five factors that should be considered in choosing seed rate. (10mks)
- 25.
- i. Discuss production of guatemala (*trypsacum laxum*) under the following sub-topics.
    - a. Ecological requirement. (2mks)
    - b. Establishment and management. (6mks)
    - c. Harvesting. (2mks)
  - ii. Discuss methods of sowing in pasture. (10mks)

# GOLDLITE ONLINE SUPPLIES

*Kenya Certificate of Secondary Education*

## KCSE TOP NATIONAL SCHOOLS TRIAL SERIES 2025

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Name ..... Admission number .....

Candidate's Signature.....Date.....

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**AGRICULTURE 443/1**

**TIME: 2 HOURS**

### MOI HIGH SCHOOL-KABARAK

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

#### **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 11 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	1-19	30	
B	20-23	20	
C		20	
		20	
	<b>TOTAL SCORE</b>	<b>90</b>	

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FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEMES

**SECTION A (30 MARKS)**

1. Give **two** factors which characterize small scale farming. (1mk)  
.....  
.....
2. State **four** farming practices which help to improve soil structure. (2mks)  
.....  
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.....  
.....
3. Give **four** steps followed in land adjudication. (2mks)  
.....  
.....  
.....  
.....
4. Name the vegetative part of each of the following crops which is propagated. (1mk)
  - a) Sweet potatoes.  
.....
  - b) Sugarcane.  
.....
5. Name **two** viral diseases which attack citrus plants. (1mk)  
.....  
.....
6. State **three** advantages of single stem pruning over multiple stem pruning. ( $1\frac{1}{2}$  mks)  
.....  
.....  
.....
7. Give **two** methods of applying nitrogenous fertilizers to crops. (1mk)  
.....  
.....
8. State **four** factors one should consider when siting a nursery for kales. (2mks)  
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9. State **four** reasons why staking as a field management practice should be carried out in tomatoes. (2mks)  
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10. Give **four** problems associated with the use of herbicides in crop production. (2mks)  
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.....  
11. State **four** factors that influence spacing when planting a pure stand of maize. (2mks)

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.....  
12. Give **four** activities that may be undertaken in organic farming. (2mks)

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.....  
13. State **four** reasons for ridging in potato production. (2mks)

.....  
.....  
14. State **four** characteristics that make a crop suitable for green manuring. (2mks)

.....  
.....  
15. State three factors to consider when grading tomatoes for fresh market. ( $1\frac{1}{2}$  mks)

.....  
.....  
16. Give **four** advantages of using grafting and budding as methods of improving the production of citrus fruits. (2mks)

.....  
.....  
17. State **three** advantages of using metal pipes to convey water on a farm. ( $1\frac{1}{2}$  mks)

.....  
.....  
18. Why is it not advisable to use manure in carrot production? ( $\frac{1}{2}$  mk)

.....  
.....  
19. Give **two** conditions in agricultural production under which opportunity cost is zero. (1mk)

## **SECTION B (20 MARKS)**

20. The diagram below illustrates a method of irrigation. Observe it carefully and answer the questions that follow.



a) Identify the method of irrigation. (1mk)

b) Give **four** disadvantages of using the above method of irrigation. (4mks)

21. A member of the young farmers' club was advised to apply a complete compound fertilizer 30-20-10 in a tomato plot measuring 10m long by 5m wide at the rate of 300kg per hectare.

a) State the percentage of  $P_2 O_5$  in the complete compound fertilizer. (1mk)

b) What does  $P_2 O_5$  refer to. (1mk)

c) Calculate the amount of fertilizer the member would require for the plot. (3mks)

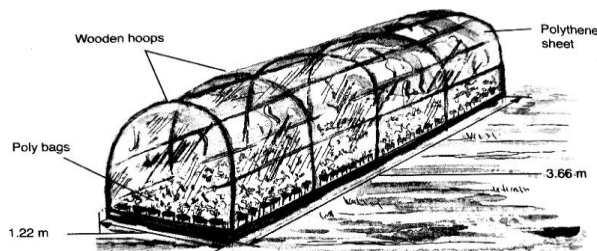
22. The photograph below shows a method of forage conservation.



a) Identify the method. (1mk)

a) Give **four** factors that determine the quality of the above forage. (4mks)

23. The diagram below illustrates a vegetative propagation unit. Study it carefully and answer the questions that follow.



- a) What is the function of the polythene sheet? (1mk)
- b) Give **four** management practices carried out on the above structure. (4mks)

### **SECTION C (40 MARKS)**

24. a) Describe the production of dry beans (*Phaseolus vulgaris*) under the following sub headings.
  - i) Varieties common in Kenya. (2mks)
  - ii) Selection and preparation of planting materials. (3mks)
  - iii) Planting and weeding. (5mks)
- b) Give **five** entries that can be made on a cattle breeding record. (5mks)
- c) State **five** reasons for pruning coffee. (5mks)
25. a) Explain the precautions that should be observed during harvesting of pyrethrum. (5mks)
- b) State **six** effects of fragmentation and sub division of land. (6mks)
- c) List **four** effects of high temperature on crops. (4mks)
- d) Explain **five** cultural methods of soil and water conservation. (5mks)
26. a) State and explain **five** factors influencing soil erosion. (5mks)
- b) Describe **ten** cultural measures of controlling pests. (10mks)
- b) Explain **five** ways in which plant morphology and anatomy influence the selectivity and effectiveness of herbicides. (5mks)

# GOLDLITE ONLINE SUPPLIES

*Kenya Certificate of Secondary Education*

## KCSE TOP NATIONAL SCHOOLS TRIAL SERIES 2025

Name ..... Admission number .....

Candidate's Signature.....Date.....

### KENYA HIGH TRIAL 1

**413/1**

**AGRICULTURE**

**PAPER 1**

**TIME: 2 hours**

#### INSTRUCTION TO CANDIDATES

- a) *Write your name , class and admission number in the space provided*
- b) *Sign and write the date of examination in the space provided above*
- c) *This paper consist of three sections A,B and C (90mks)*
- d) *Answer all the questions in sections A and B*
- e) *Answer any two questions from section C*
- f) *All answers should be written in the spaces provided in English.*
- g) *Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no question are missing*

#### For Examiners' Use Only

Section	Questions	Maximum score	Candidates score
A	1-15	30	
B	16-19	20	
C	20	20	
	21	20	
	22S	20	
Total score		90	



## **SECTION A 30 MARKS**

*Answer all question in this section*

- 1) a. Name two forms of collective land tenure system in Kenya (1mk).  
b. Distinguish between land settlement and land resettlement (1mk)  
c. Name four methods of land reforms practiced in Kenya. (2mks)
- 2) State four reasons why burning of bushes when clearing land would be discouraged. (2mks)
- 3) a. Differentiate between over sowing and under sowing in planting of crops. (1mk) ...  
b. State four factors that can promote rooting of cuttings. (2mks)
- 4) State four factors you would consider when identifying a farming system to use. (2mks) 5.
- 5) Define the following terms. (1mk)  
a. Olericulture  
b. Pomology
- 6) Name four methods of draining swamps for vegetable production. (2mks) ...
- 7) State four factors that determine the quality of farmyard manure. (2mks)
- 8) Name four pieces of information recorded in a master roll. (2mks)
- 9) State four ways in which soil PH influences crop production. [2mks]
- 10) State four symptoms of viral diseases in crops. (2mks)
- 11) what do you understand by the following terms as used in the nursery practices.  
a) Pricking out (1mk)  
b) Hardening off (1mk)
- 12) 12. Name four practices that determine the stage of harvesting in crops. (2mks)

13) a. Define the term opportunity cost as used in Agriculture economics. (1mk]

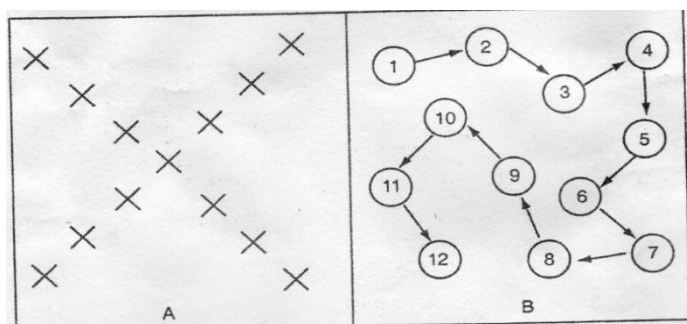
b. Name two concepts of economics in Agriculture. (1mk)

14) Name two factors that contribute to formation of soil. (1mk)

15) Give two sub branches of arable farming. (1mk)

**SECTION B (20MKS) ANSWER ALL QUESTIONS IN THE SPACES PROVIDED.**

16) The following illustrations show two different methods of carrying out a certain activity in the farm.

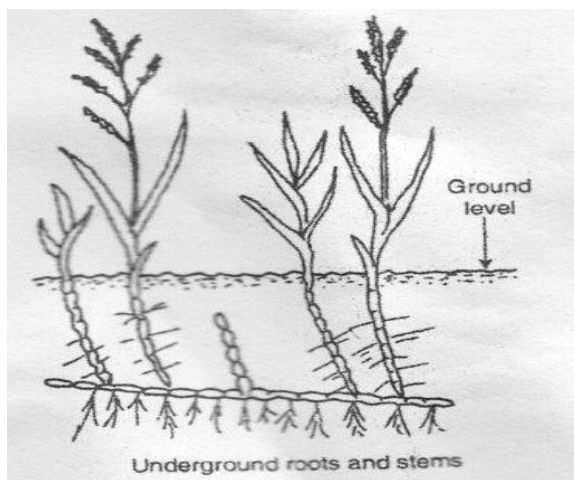


a) Identify the activity represented by the illustrations (1mk)

b) Name the methods represented by the illustrations A and B. (1mk)

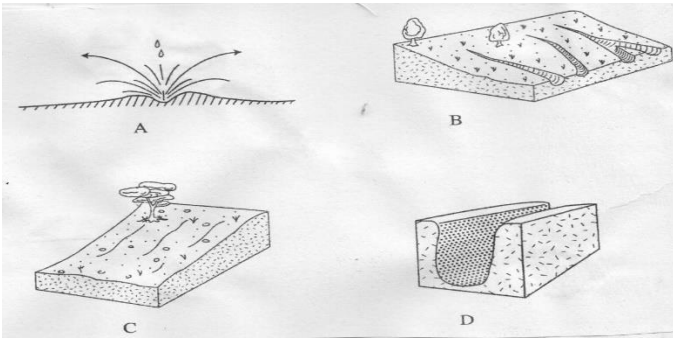
c) Mention six areas where the activity should not be carried out. (3mks)

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

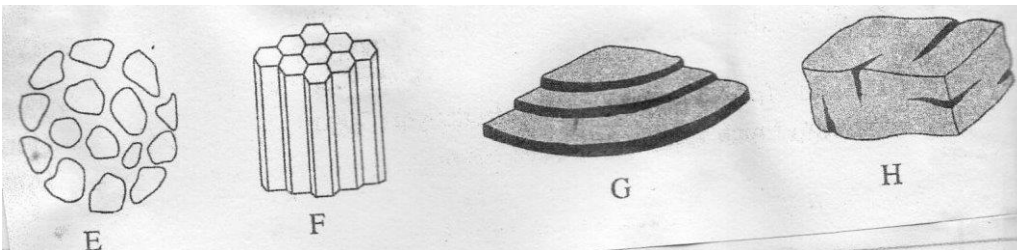


- Identify the weed. [1mk)
- Why is it difficult to control the weed (1mk)
- State one harmful effect of the weed on crop production. (1mk)
- Give two measures used to control the weed. (2mks)

**18)** The illustration below indicate types of soil erosion that take place on cultivated farm land. Study them and then answer the following questions.



- Identify the type of erosion represented by each of the illustrations. (2mks)
  - Name two factors that may accelerate the rate of the type of erosion represented by A. (1mk)
  - Give two practices that may reduce the impact of the type of erosion represented by A. (1mk)
  - Apart from loss of soil, what type of destruction are caused by the type of erosion represented by A. (1mk)
- 19)** The illustration below represent types of soil structures. Study them carefully and answer the questions that follow.



- Identify the soil structures labeled E,F,G,H in the illustrations. (2mks)
- State one distinguishing characteristic for each structure. (2mks)
- State one method of improving the structure labeled E. (1mk)

**SECTION C (40MKS) ANSWER ANY TWO QUESTIONS FROM THIS SECTION.**

**20)** Describe the production of Napier grass under the following sub headings.[20 marks]

- a) Ecological requirements [4 marks]
- b) establishment [12 marks]
- c) Utilization[4 marks]

**21)** Describe the production of cabbage seedlings under the following sub headings,

- a) Nursery establishment
- b) Management of the seedlings up to transplanting

**22)** Describe the production of maize for dry grains under the following sub headings.

- a) Ecological requirements
- b) Varieties
- c) Pest control
- d) Disease control

**GOLDLITE ONLINE SUPPLIES**  
*Kenya Certificate of Secondary Education*  
**KCSE TOP NATIONAL SCHOOLS TRIAL SERIES 2025**

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Name ..... Admission number .....  
Candidate's Signature.....Date.....

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**MANGU SCHOOL TRIAL 1**

**413/1**

**AGRICULTURE**

**PAPER 1**

**TIME: 2 hours**

**Instructions to Candidates**

- Write your *name, index number* in the spaces provided.
- This paper has three sections A, B and C.
- Answer *all* the questions in section A and B in the spaces provided.
- Answer any *two* questions in section C.

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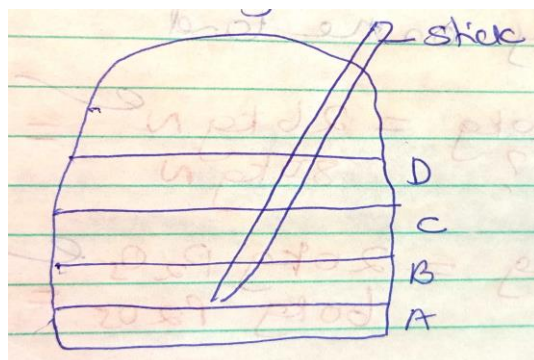
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**SECTION A (30 MARKS)**

1. State four advantages of mixed farming (2 mks)
2. State four disadvantages of shifting cultivation (2 mks)
3. State four aspects of rainfall considered when choosing a crop to grow in an area (2 mks)
4. Give four reasons for treating water on the farm (2 mks)
5. State four features that should be considered when choosing water pipes for use on the farm (2 mks)
6. a). Give four entries that are made on a cattle breeding record (2 mks)  
b). State two conditions under which opportunity cost is zero in a farming enterprise (1 mk)
7. Give two reasons for testing soil (1 mk)
8. a). What is budding as used in vegetative propagation (1 mk)  
b). Give four advantages of budding and grafting in crop production (2 mks)
9. What is meant by the following terms in crop production [3 MKS ]
  - i. Mixed cropping
  - ii. Inter – cropping
  - iii. Crop rotation
10. a). What is meant by the term land tenure system? (1 mk)  
b). State four advantages of land registration (2 mks)
11. State two weeds in each case (3 mks)
  - a. . Poisonous
  - b. . Reduce quality of animal products
  - c. . Has underground structures
12. State four causes of crop diseases (2 mks)
13. List four post – harvest practices that are carried out in maize production (2 mks)

**SECTION B (20 MARKS)**

14. The diagram below shows a compost heap



a). Label parts A – D (2 mks)

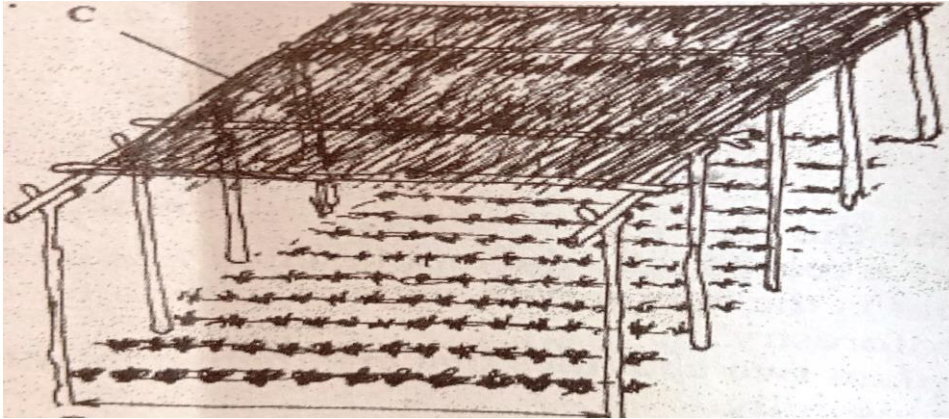
b). Identify the importance of parts C and D (2 mks)

c). Give one reason why compost manure is not commonly used (1 mk)

15. a). A farmer was advised to apply 60 kg N, 60 kg  $P_2O_5$  and 30 kg  $K_2O$  per hectare. Calculate the quantity of ammonium sulphate nitrates, 26%N, single super phosphate 20%  $P_2O_5$  and potassium chloride KCl 50%  $K_2O$  the farmer should apply on the land. (3 mks)

b). Differentiate between fertilizer ratio and fertilizer grade. (2 mks)

16. The illustration below shows a structure used in crop production



a). Identify the structure (1 mk)

b). What is the function of the part labelled C? (1 mk)

c). State three management practices that should be carried out in the nursery from the time the seedlings emerge to the stage of transplanting (3 mks)

17. The diagram below shows a weed



a). Identify the weed (1 mk)

b). Give two reasons why the weed is difficult to control (2 mks)

- c). State two ways in which the above weed is economically important (2 mks)

**SECTION C (40 MARKS)**

18. a). Describe four ways in which each of the following limits agricultural production (4 mks)

i. HIV / AIDS

ii. Low levels of education and technology (4 mks)

- b). Describe five reasons for deep ploughing during land preparation (5 mks)

- c). Explain seven physical methods of pest control (7 mks)

19. a). i]. Give two varieties of sorghum grown in Kenya [2 MKS]

ii). Explain factors considered when selecting seeds for planting (8 mks)

b). Describe importance of land consolidation (5 mks)

- c). Explain five considerations when designing a crop rotation programme. (5 mks)

20. a). Describe production of tomatoes under the following sub – headings

i. Land preparation [3MKS]

ii. Field management practices [5 mks ]

b). Explain eight cultural methods of soil and water conservation (8 mks)

c). Explain four factors that determine quality of hay (4 mks)



# GOLDLITE ONLINE SUPPLIES

*Kenya Certificate of Secondary Education*

## KCSE TOP NATIONAL SCHOOLS TRIAL SERIES 2025

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Name ..... Admission number .....

Candidate's Signature.....Date.....

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### STAREHE BOYS CENTER KCSE TRIAL EXAMINATIONS

413/1

AGRICULTURE

PAPER 1

TIME: 2 hours

#### Instructions to Candidates

- Write your **name**, **index number** in the spaces provided.
- This paper has three sections A, B and C.
- Answer **all** the questions in section A and **B** in the spaces provided.
- Answer any **two** questions in section C.

#### For Examiner's Use Only

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 13	30	
B	14 – 17	20	
C	18	20	
	19	20	
	20	20	
	Total Score	90	

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*For more papers for all subjects and marking schemes*

**SECTION A (40 MKS)**  
**ANSWER ALL QUESTIONS IN THE SPACES PROVIDED**

1. Name three forms of horticulture practiced in Kenya (3 mks)  
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.....  
.....
2. State four conditions when land cleaning should be done (4mks)  
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.....
3. Give four reasons for treating water before use (4mks)  
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4. State four factors to consider when siting a compost manure pit (4mks)  
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.....
5. Give three reasons why farmers should keep health records (3mks)  
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.....
6. State two functions of potassium in plants (2mks)  
.....  
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7. State four post-harvesting management practices carried out on various crops (4mks)  
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.....
8. State four advantages of communal land tenure system (4mks)  
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9. (a) What is soil erosion (1mk)  
.....  
.....
- (b) State four factors influencing soil erosion (2mks)  
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.....
10. State four qualities of good silage (2mks)  
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.....
11. State three roles of soil microorganisms ( 1 ½ mks)  
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.....
12. State four method that can be used to clear land (4mks)  
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.....
13. State four importance of soil PH to crops (2mks)  
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14. Name three crops propagated by use of suckers ( 1 ½ mks)  
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15. State two limitations of tissue culture in crop production (1mk)  
.....  
.....
16. Give four benefits of mulching (2mks)

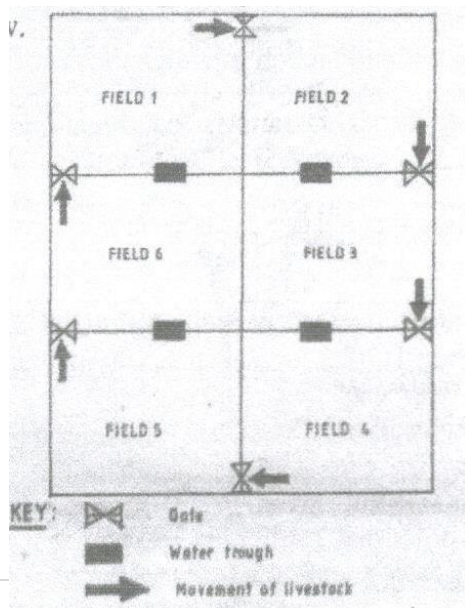
**SECTION B (20 MKS)**  
**ANSWER ALL QUESTIONS IN THE SPACES PROVIDED**

17. The diagrams below illustrate common weeds in arable land. Study them carefully and answer the questions that follow



- a) Identify the weed labeled D (1mk)  
.....
- b) Classify the weed labeled C according to plant morphology (1mk)  
.....
- c) Give one reason why it is difficult to control the weed labeled D (1mk)  
.....
- d) State two cultural ways of controlling couch grass (*Digitaria scalarum*) (2mks)  
.....

18. The diagram below illustrates a grazing system. Study it carefully and answer the questions that follow



a) Identify the grazing system illustrated above

(1mk)

.....

b) State your advantages of the grazing system illustrated above

(4mks)

.....

.....

.....

.....

19. A farmer is advised to apply 60kg (N) , 20kg  $P_2O_5$  and 30kg  $K_2O$  per hectare. Calculate the quantity of urea (46%N) , single superphosphate (20% $P_2O_5$ ) and mutiate of potash (50%  $K_2O$ ) the farmer should apply on his 10 hectares land

(5mks)

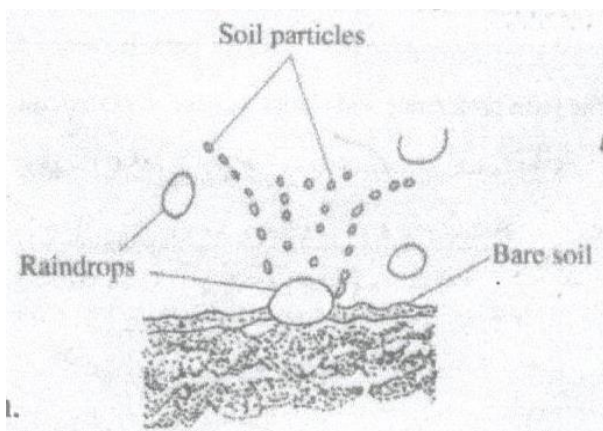
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20. The diagram below illustrates a type of soil erosion



a) Identify the type of erosion

(1mks)

.....

b) How does the type of erosion shown above occur?

(2mks)

.....

c) How does cover cropping help control the type of erosion shown above

(2mks)

.....

.....

**SECTION C (40 MKS)**  
**ANSWER ANY TWO QUESTIONS**

21. (a) Discuss six biotic factors that influence agricultural production (6mks)  
(b) Describe four methods of breaking seed dormancy (4mks)  
(c) Describe five nursery management practices (5mks)  
(d) Explain five reasons why use of chemicals to control pests should be discouraged (5mks)
22. (a) Describe the harvesting of pyrethrum (5mks)  
(b) State four precautions when harvesting pyrethrum (4mks)  
(c) Explain six cultural methods of disease control (6mks)  
(d) Explain five methods of water harvesting (5mks)
23. (a) Describe carrot production under the following sub-headings  
(i) Field management practices (3mks)  
(ii) Land Preparation (3mks)  
(b) Explain five factors that determine the stage in which crops are harvested (3mks)  
(c) Explain four factors determining the depth of planting (4mks)  
(d) Describe five effects of strong wind on agricultural production (5mks)

# GOLDLITE ONLINE SUPPLIES

*Kenya Certificate of Secondary Education*

## KCSE TOP NATIONAL SCHOOLS TRIAL SERIES 2025

Name ..... Admission number .....

Candidate's Signature.....Date.....



### STAREHE GIRLS' CENTRE MOCK EXAMINATION

#### AGRICULTURE

#### PAPER 1

TIME: 2HOUR

#### INSTRUCTIONS

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

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATES' SCORE
A	1 - 17	30	
B	18 – 21	20	
C		20	
		20	
	<b>TOTAL SCORE</b>	<b>90</b>	

*This paper consists of 12 printed pages. Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing*

**SECTION A (30 MARKS)**

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

1. What is the importance of taking farm inventory?

(1 mark)

.....

2. State **four** factors that determine the choice of a crop enterprise.

(2 marks)

.....

3. Calculate the amount of  $P_2O_5$  in 1000 kg of a compound fertilizer 20:10:10

(2 marks)

4. Give **four** farming practices leading to soil loss.

(2 marks)

.....

.....

5.a) What is organic farming?

( ½ mark)

.....

b) Give any **two** conditions that lead to small scale farming.

(1 mark)

.....

6. List **three** factors that contribute to competitive ability of weeds.

(1 ½ marks)

.....

.....

7. State **three** ways in which pruning helps to control diseases in tomatoes.

(1 mark)

.....

.....

8.a) Give **three** ways through which minerals can be lost in the soil.

(1 mark)

.....

.....

b) State any **three** deficiency symptoms of phosphorous in crop production.

(1 ½ mark)

.....

.....

9. Give **four** reasons for using certified seeds for planting.

(2 marks)

.....

.....



10.a) State **three** effects of plant diseases on crop production. (1 ½ mark)

.....

.....

b) Name **two** diseases of maize. (1 mark)

.....

11. List **four** functions of Coffee Board of Kenya. (2 marks)

.....

.....

12.a) Define the term land reform. (½ mark)

.....

b) State **three** advantages of land consolidation (1 ½ mark)

.....

.....

13.a) Distinguish between a dam and a weir. (1 mark)

.....

b) Give any **four** cultural methods used in soil and water conservation. (2 marks)

.....

.....

14. Differentiate between hybrids and composites as used in maize breeding. (1 mark)

...../.....

15. What is rogueing as used in crop production. (½ mark)

.....

16. State **three** reasons why a farmer should diversify his farm enterprises. (1 ½ mark)

.....

.....

17. State **four** advantages of organic mulches. (2 marks)

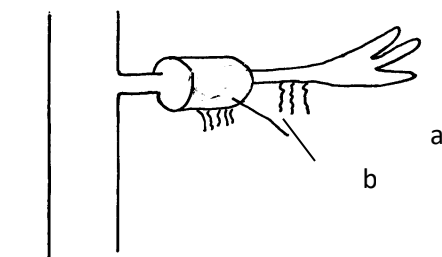
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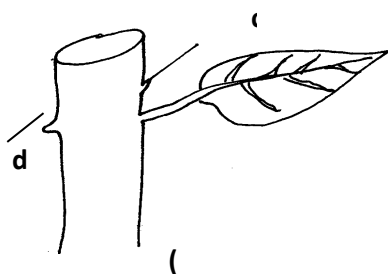
## SECTION B (20 MARKS)

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

18. Study the illustration below and answer the questions underneath.



(i)



(ii)

a) Identify the above illustrations

(1 mark)

i) .....

ii).....

b) Name the parts labelled a,b,c and d

(2 marks)

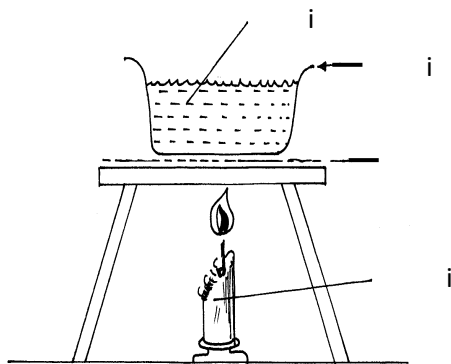
a) ..... c) .....

b)..... d).....

c) Name **two** other methods of vegetative propagation in each case give an example of a crop propagated using the method.

(2 marks)

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



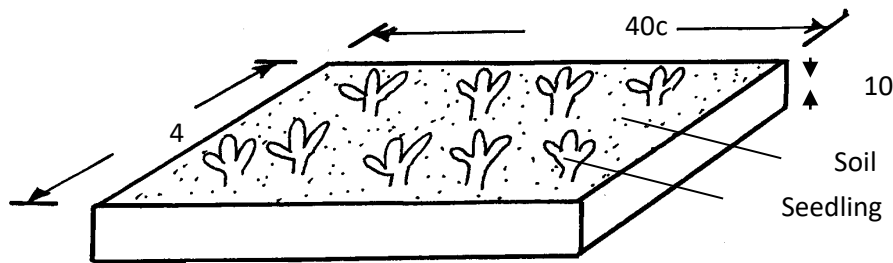
a) Label the apparatus

(2 marks)

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

(3 marks)

20. Observe the following diagrams and answer the questions that follow.



a) i. Name the type of structure above used to prepare seedlings.

(1 mark)

ii. State **three** advantages of this method of preparing seedlings.

(1  $\frac{1}{3}$  marks)

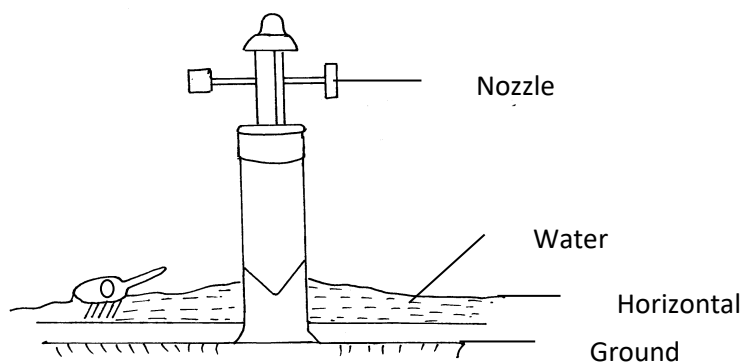
b)i. After sowing seeds give two practices carried out before seedling germinate.

(1 mark)

ii. Give **three** management practices that should be carried out to increase the survival of seedling in the seedbed before transplanting.

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

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



a) Name the method of irrigation illustrated above. (½ mark)

.....

b) State **two** advantages of this method of irrigation. (1 mark)

.....

.....

c) State **three** problems encountered by farmers using this method of irrigation (1½ marks)

.....

.....

.....

.....

d) Give **four** factors which determine the choice of the method named in (a) above. (2 marks)

.....

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.....

.....

### SECTION C (40 MARKS)

**Answer any two questions in this section in the spaces provided after question 24.**

22.a) Describe field production of tomatoes under the following sub-headings.

i) Ecological requirements (5 marks)

ii) Land preparations (4 marks)

iii) Transplanting (7 marks)

iv) Disease control (4 marks)

23.a) Outline the factors a farmer would consider before selecting a farm enterprise to undertake.(10 marks)

b) The farm manager of Kilimo farm made the following purchases in December 2004.

- Seeds and fertilizers     2,500/=
- disc plough                80,000/=
- Fuel                         5,000/=
- Poultry feeds             4,500/= and
- Cattle drugs              2,000

During the year the farm sold maize to Njoro girls for 20,000; milk processor for Shs. 40,000. Kilimo farm also expected Shs. 8,000 from a prominent neighbouring farmer for ploughing the land. The opening valuation was Shs. 50,000 and closing valuation Shs. 80,000.

Using the information provided above, prepare Profit and Loss account for Kilimo farm. (10 marks)

24.a) Discuss factors that should be put into consideration while choosing suitable implements for primary cultivation. (10 marks)

b) Describe how you would establish grass pasture seeds on land that is already ploughed using a Mouldboard plough, up to when the pasture is ready for grazing. (10 marks)

# GOLDLITE ONLINE SUPPLIES

*Kenya Certificate of Secondary Education*

## KCSE TOP NATIONAL SCHOOLS TRIAL SERIES 2025

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### CEKANAS JOIN EXAMS

**413/1**

**AGRICULTURE**

**PAPER 1**

**TIME: 2 hours**

#### Instructions to Candidates

- Write your **name, index number** in the spaces provided.
- This paper has three sections A, B and C.
- Answer **all** the questions in section A and **B** in the spaces provided.
- Answer any **two** questions in section C.

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	19	20	
	20	20	
	<b>Total Score</b>	<b>90</b>	

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**FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEMES**

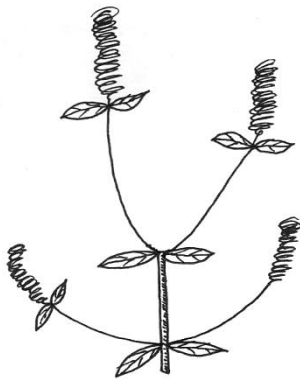
1. What is the meaning of seed dressing? (1mk)
2. Give four advantages of row planting. (2mks)
3. List four factors to be considered when choosing site for tomato nursery. (2mks)
4. State three reasons of treating water in the farm. (1 ½ mks)
5. Give three ways through which HIV/AIDS affect agriculture. (1 ½ mks)
6. State four advantages of overhead irrigation. (2mks)
7. State three ways of conveying water in the firm. (2mks)
8. A farmer in Premier was advised to apply 150kg C.A.N/ha while top dressing the maize crop. CAN, contains 21% N. Calculate the amount of nitrogen applied per ha. (2mks)
9. Give two reasons why opportunity cost is zero. ( 1mk )
10. Give three importance of tissue culture in crop production. (2mks)
11. State four principles which govern agricultural economics. (2mks)
12. Highlight four problems facing the marketing of cabbages. (2mks)
13. State four variable costs in maize production. (2mks)

14. State four constituents of soil. (2mks)
15. Give four types of product -product relationships. (2mks)
16. Differentiate between topping and top-dressing as used in pastures. (1mk)
17. State five factors which influence the spacing of crops. (2mks)

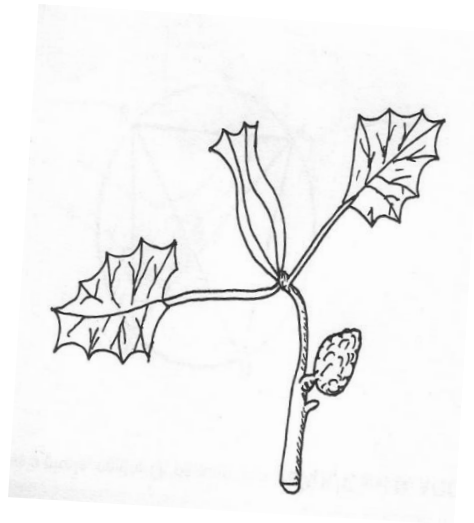
### SECTION B (20 MKS)

*Answer ALL Questions in this section*

18. Below are illustrations of common weeds. Study them and answer the questions that follow



**B**



- (a) Identify the weeds (2mks)

**A**.....

**B**.....

- (b) State the harmful effects of the weed B above (1mk)

.....

- (c) Give **four** advantages of leasehold tenure systems (2mks)

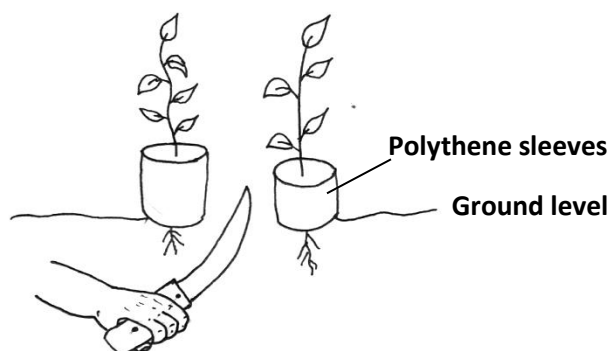


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19. Describe the procedure which should be followed when spraying a crop of onions using a fungicide in powder form, water and a knapsack sprayer (5mks)

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20. The diagram below illustrates a nursery practice carried out on tree seedlings before transplanting. Study it carefully and then answer the questions below



- (a) Identify the practice being carried out on the diagram (1mk)

.....

- (b) Give **three** reasons why the practice is encouraged when raising tree seedlings (3mks)

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.....  
.....

- (c) Give **two** reasons why the polythene sleeves are used in the nursery bed as shown in the diagram (2mks)

.....  
.....

21. (a) Calculate the elasticity of demand when 20 bags of potatoes are demanded at a price of Kshs.1000 while 22 bags were demanded at Kshs.800. (4mks)

(b) Identify the type of elasticity of demand resulting from the situation above (1mk)

.....

### SECTION C (40MKS)

*Answer any two Questions in this section*

22. (a) Describe harvesting of pyrethrum under the following sub-headings
- (i) Procedure (4mks)
  - (ii) Precautions (6mks)
- (b) Describe the safety measures observed when handling farm herbicides (10mks)
23. Describe the production of Rhodes grass (*Chloris gayana*) under the following sub-headings
- (a) Land preparation (5mks)
  - (b) Pasture establishment (8mks)
  - (c) Maintenance (7mks)
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) Mzee mkulima has 5 hectare of arable land which is under maize. He wishes to know whether replacing 0.3 ha of maize with beans the following season would be worthwhile. The fertilizer rate would have to be increased from 2 bags per hectare for maize to 2.5 bags per hectare, for beans and an extra 40 man days of casual labour per hectare would be necessary as a result of the change. Average yield of maize and beans are 56 and 90 bags per hectare respectively. The prices are ksh 1200 per bag of maize and ksh 300 per bag of beans. Seed costs are ksh 1350 per 10 kg of maize ksh 200 per 50 kg beans DAP fertilizer costs ksh 1400 per 50 kg bag. Labour is paid at ksh 150 per man day . he would require ten bag of beans seed and 1 bag of maize seed to caver 0.3 of ha.

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

**GOLDLITE ONLINE SUPPLIES**  
*Kenya Certificate of Secondary Education*  
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Candidate's Signature.....Date.....

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**CRESCENDO JOINT TRIAL 1**

**413/1**

**AGRICULTURE**

**PAPER 1**

**TIME: 2 hours**

**Instructions to Candidates**

- Write your **name**, **index number** in the spaces provided.
- This paper has three sections A, B and C.
- Answer **all** the questions in section A and **B** in the spaces provided.
- Answer any **two** questions in section C.

**For Examiner's Use Only**

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A	1 – 13	30	
B	14 – 17	20	
C	18	20	
	19	20	
	20	20	
	<b>Total Score</b>	<b>90</b>	

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**FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEMES**

**SECTION A (30 MARKS)**

*Answer ALL the questions in the spaces provided.*

1. Give **four** factors which characterize large scale farming. (2marks)  
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2. Name **four** methods used for clearing land. (2marks)  
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3. What is the importance of taking a farm inventory? (1mark)  
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.....
4. State **two** effects of aphids on plants. (2marks)  
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.....
5. Give **four** reasons why it is undesirable to carry out minimum soil tillage operations before planting. (2marks)  
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6. Why is it advisable to apply straight nitrogeous fertilizer to a crop of maize at a height of 30-45 cm? (2marks)  
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7. List **four** different problems brought by water in the farm. (2marks)  
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8. Give **four** reasons why the use of herbicides is discouraged during land clearing. (2marks)

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9. State **four** management practices carried out on Agroforestry trees from planting to ageing of the same tree. (2marks)

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10. List **four** environmental conditions that may lead to low crop yields. (2 marks)

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11. State **two** activities carried out during hardening-off of tomato plants in the nursery. (1mark)

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12. Outline **two** ways through which rain drop erosion initiates the process of soil erosion. (2marks)

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13. State **two** reasons for carrying out soil conservation in the farm. (1mark)

14. Name **four** factors that determine the depth of planting seeds in crop production C. (2marks)

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15. Give **four** conditions that have led to fragmentation and sub-division of agricultural land in Kenya. (2marks)

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16. State **two** advantages of organic farming. (1marks)

.....

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.....

17. State **four** advantages of a good crop rotational programmed. (2marks)

.....

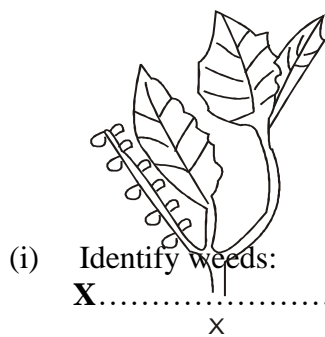
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**SECTION B (20MARKS)**  
*Answer ALL questions in this section*

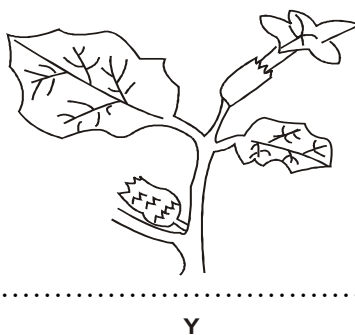
18. Diagram **X** and **Y** represent two weeds



(i) Identify weeds:

**X**.....

**Y**..... (1mark)

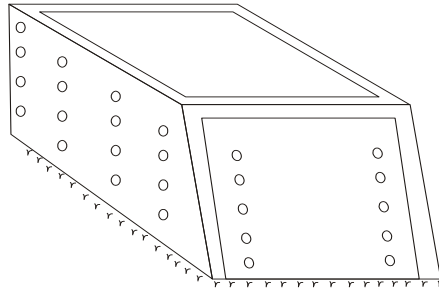


(ii) Give **two** economic importances of each of the weeds above. (1mark)

.....

(iii) Name **two** kinds of herbicides used to control the above weeds C. (1mark)

19. The diagram shows a method of conserving forage.



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

(b) Outline **two** qualities of a good quality silage. (2marks)

(c) Briefly explain the **two** main categories of silage losses. (2marks)

20. A farmer has a piece of land on which he can produce wheat, maize, and barley.

The yields and selling prices of the three crops as shown below:

Crop	Yield 90 kg bag	Selling price Kshs. Per bag
Maize	2000	750
Wheat	1400	900
Barley	1500	1200

The farmer decides to produce barley. Assuming the cost of producing any of the crops is the same.

(i) Calculate the farmer's opportunity cost. **Show your working.** (1½marks)

(ii) Give reasons for your answer in (i) above. (½mark)



.....  
.....  
21. Study the illustration below of a tomato fruit and answer the questions that follow



(a) Name the pest labelled **Z**. (1mark)

.....

(b) State **two** characteristics symptoms of attack by the pest named in (a) above. (2marks)

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

(c) State **two** cultural control measures of the pest named in (a) above. (2marks)

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

(d) Apart from pest **Z** identified above name **two** insect pests of tomatoes. (2marks)

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

22. **Describe** the procedure used during harvesting of sugarcane. (2marks)

.....

**SECTION C (40 MARKS)**

*Answer any TWO questions from this section in the foolscaps provided after question 25.*

- 23.
- (a) What are the uses of farm records. (6 marks)
  - (b) **Explain** the problems farmers face in marketing agricultural produce. (9marks)
  - (c) **Describe** various agencies and institutions involved in the marketing of agriculture produce. (5marks)
- 24.
- (a) **Describe** the methods used in preparing planting materials in readiness for planting. (8marks)
  - (b) **Explain** the factors that may determine spacing of crops in the farm. (8 marks)
  - (c) **Briefly explain** the *factors* that influence timely planting. (4 marks)
- 25.
- (a) **Describe** the establishment of grass pasture from the time the land is ploughed using a mould board plough to the time the pasture is ready for grazing. (10marks)
  - (b) What are the **advantages** of a mixed grass legume pasture over a pure grass pasture? (10marks)

***This is the last printed page.***

# GOLDLITE ONLINE SUPPLIES

*Kenya Certificate of Secondary Education*

## KCSE TOP NATIONAL SCHOOLS TRIAL SERIES 2025

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Name ..... Admission number .....

Candidate's Signature.....Date.....

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### KALA JOINT EXAMS

**413/1**

**AGRICULTURE**

**PAPER 1**

**TIME: 2 hours**

**Instructions to Candidates**

- Write your **name, index number** in the spaces provided.
- This paper has three sections A, B and C.
- Answer **all** the questions in section A and B in the spaces provided.
- Answer any **two** questions in section C.

**For Examiner's Use Only**

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	<b>Total Score</b>	<b>90</b>	

**CONTACT US ON 0724351706/0726960003**

**FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEMES**

**SECTION A (30 MRKS)**

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

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

.....

.....

.....

2) List the physical weathering agents in soil formation process (1 ½ mrks)

.....

.....

.....

3) Give four method of farming (2mrks)

.....

.....

.....

4) Give two examples for each of the following types of cost incurred in broiler production .

a) Variable cost ( 2 marks)

.....

.....

.....

b) fixed cost (2 marks)

.....

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.....

5) Give four advantages of crop rotation .(2mrk)

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6) State four factors that that should be considered when classifying crop pest (2mrks)

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7) Give three reasons why a water logged soil is unsuitable for most crops(1 ½ )

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8. Give four advantages of tissue culture (2mrks)

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9. Outline four observable indicators of economic development of a nation (2mrks)

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10. Outline four indicators of well decomposed manure (1 ½)

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11. Give two conditions where opportunity cost does not exist (2mrks)

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12. Give four management practice that promote high herbage yields in pasture production (2mrks)

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13. Give three reasons why primary cultivation should be done early before the onset of the rains(1 ½ )

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.....  
14. Give two examples of farm records that are general in nature .(1mrk)

15. Give four role of nitrogen in plants (2mrks)

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16. Give four benefits of possessing a land title deed (2mrks)

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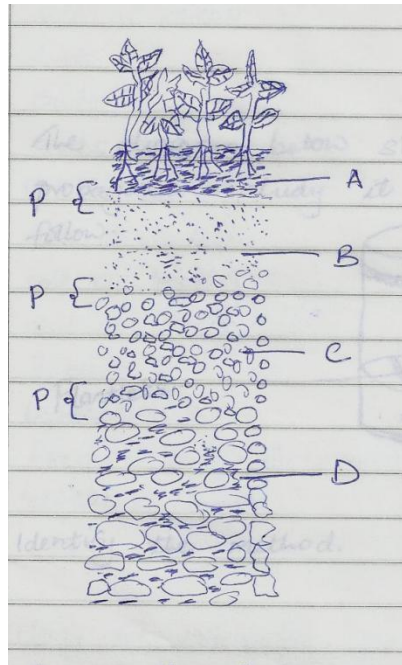
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### **SECTION B (20 MRKS)**

Answer all the questions in this section in the spaces provided

17. The diagram below illustrates a feature observed after digging the soil several metres deep Study the diagram carefully and answer the question that follow



- a) Identify the feature that the diagram above represents in the study of soil (1mrk)
- b) What is the name given to the part labeled p(1mrk)
- c) Give a reason why part b is also referred to as layer of accumulation (1mrk)
- d) State two ways in which the knowledge of the above feature would be of benefit to farmer (2mrks)

18. The diagram below shows a method of crop propagation .Study it and answer the questions that follow



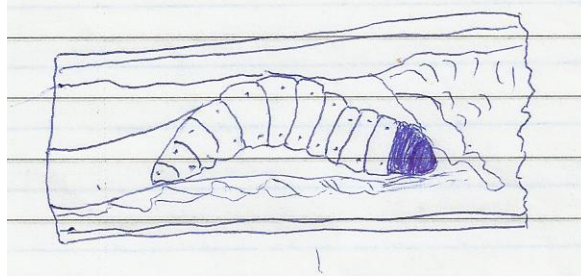
- Identify the method (1mrk)
- Name two crops that can be propagated using this method.(1mrk)
- Give three ingredients used when preparing the tissue culture.(1 ½ )

**19.** The following information was obtained from the records of Mr Juma's farm for the year ended on 31<sup>st</sup> march 2011

<u>Particulars</u>	<u>kshs</u>
Opening Valuation	100,000
Calves	72,000
Hired Labour	21,000
Sales of milk	13,000
Sales of cereals	33,000
Rent	9,000
Feed	5,300
Seed	1,700
Fertilizers	4,700
Sales of Vegetables	9,300
Sales of poultry	1,800
Sales of fruits	700
Pesticides	1,250
Depreciation	650
Repair and Maintenance	950
Interest on loans	200
Closing Valuation	9,0000

- a) using the information given above , prepare a profit and loss account for Mr Juma's farm for the year ended 31<sup>st</sup> March (7mrks)
- b) Giving a reason, State whether Mr. Juma's farm made a profit or loss ( ½ mark )

**20.** The diagram below shows a maize stalk infected by a certain pest .Study it and answer the questions that follow .



- a) Identify the pest (1/2)
- b) Apart from maize, name another crop attacked by the pest named above ( ½ mark)
- c) Give three cultural measures that can be applied to control the pest (3mrks)

### **SECTION C ( 40MARKS)**

**Answer any two questions in this section in the spaces provided**

- 21**
  - a) Describe six advantages of rotational grazing (6mrks)
  - b) Explain eight ways in which soil fertility can be maintained (8mrks)
  - c) Explain six factors considered when drawing a farm plan (6mrks)
- 22.**
  - a) Explain the factors that influence the type of irrigation to be used in a farm (8mrks)
  - b) Explain six reasons for pruning coffee.(6mrks)
  - c) Describe 6 ways in which labour productivity can be improved on a farm (6mrks)
- 23**
  - a) Describe five importance of agro -forestry in soil and water conservation (6mrks)
  - a) Describe the procedure of silage making (10mrks)
  - b) Describe five effect of over application of nitrogenous fertilizer(5mrks)



# GOLDLITE ONLINE SUPPLIES

*Kenya Certificate of Secondary Education*

## KCSE TOP NATIONAL SCHOOLS TRIAL SERIES 2025

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Name ..... Admission number .....

Candidate's Signature.....Date.....

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### KASSU JET TRIAL 1

**413/1**

**AGRICULTURE**

**PAPER 1**

**TIME: 2 hours**

**Instructions to Candidates**

- Write your **name, index number** in the spaces provided.
- This paper has three sections A, B and C.
- Answer **all** the questions in section A and B in the spaces provided.
- Answer any **two** questions in section C.

**For Examiner's Use Only**

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 13	30	
B	14 – 17	20	
C	18	20	
	19	20	
	20	20	
	<b>Total Score</b>	<b>90</b>	

**CONTACT US ON 0724351706/0726960003**

**FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEMES**

**SECTION A:(30MARKS)**

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

1. State four advantages of intensive system of farming. (2mks)  
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.....
2. Give four conditions likely to facilitate land fragmentation. (2mks)  
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.....  
.....
3. a) List four post-harvest practices done on crops. (2mks)  
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.....
- b) What is earthing up in crop production? (1mk)  
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4. Give four reasons as to why burning as a method of bush clearing is not recommended. (2mks)  
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.....
- 5.a) Give the form in which the following elements are available to plants (1mk)  
i) Nitrogen -  
ii) Sulphur-
- b) State two liming elements in crop production. (1mk)  
.....  
.....
6. State four effects of ill- health and HIV /AIDs in agricultural production (2mks)  
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.....
7. State the functions of the following components in a compost heap. (2mks)  
i) Ash.....  
ii) Garden soil .....

iii) Organic manure.....

iv) Stick.....

8. State four factors that can enhance rooting in stem cuttings. (2mks)

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9. Outline four reasons a farmer should have breeding records in livestock production. (2mks)

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10. Give four ways of treating water for use in the farm. (2mks)

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11. List Four methods of harvesting water in a farm. (2mks)

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12. Give two methods of conserving forage. (1mk)

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13. State four Farming activities that encourage soil erosion. (2mks)

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14. State four roles of agriculture in national development (2mks)

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.....  
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15. State four advantages of budding. (2mks)

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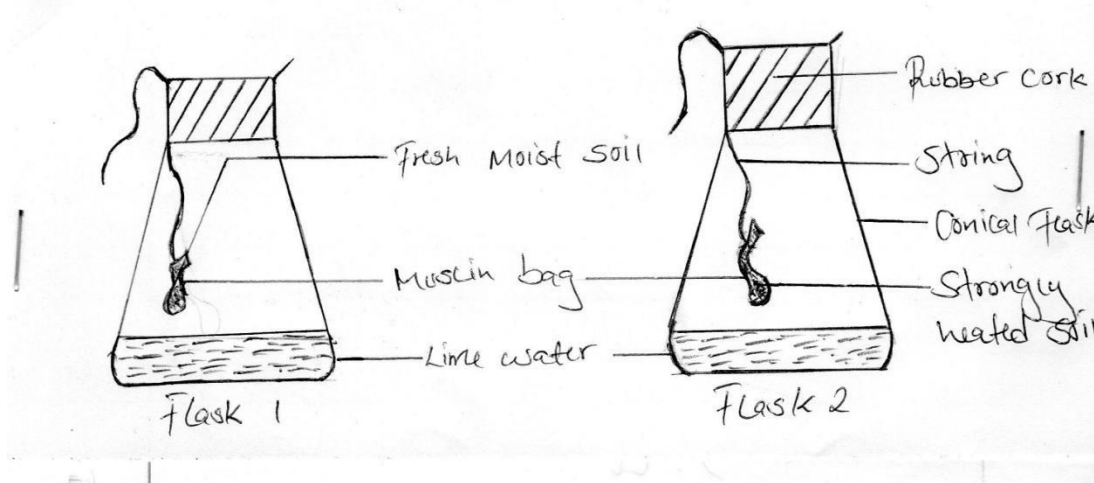
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**SECTION B: (20MKS)**

**Answer all questions in this section.**

16. The diagrams below show an experiment that was carried out by Mwatate agriculture students. Study it carefully and answer the questions that follow.



- a) What was the aim of the experiment. (1mk)

.....

.....

- b) What observation did the students make in the two flasks at the end of the experiment. (2mks)

Flask 1 .....

Flask 2 .....

- c) Give a reason for the observation made in flask 1 (1mk)

.....

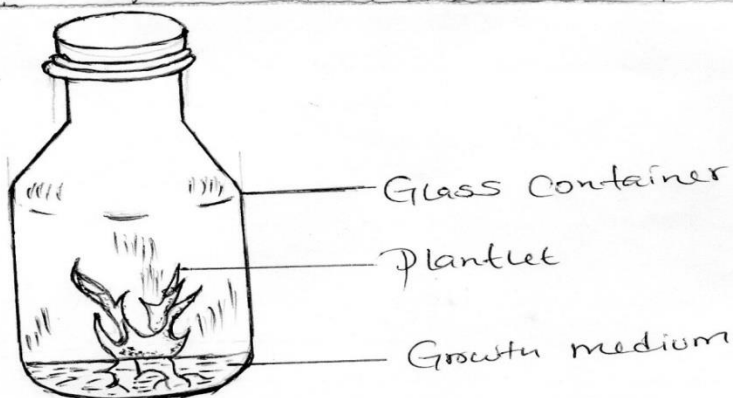
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- d) Why did the students heat the garden soil in flask 2 strongly? (1mk)

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.....

17. The diagram below illustrates materials, and a method of vegetative propagation. Study it and answer the questions that follow.



i) Identify the method of propagation illustrated above. (1mk)

.....

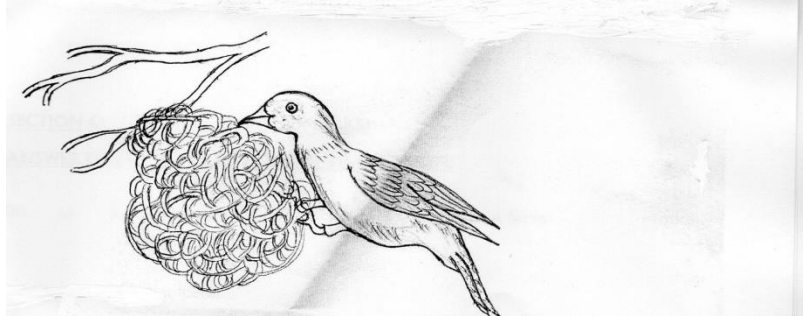
ii) Name a common crop propagated through the method. (1mk)

.....

iii) Give three disadvantages of this method of propagation. (3mks)

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 .....  
 .....

18. The diagram below shows a bird which is a field crop pest. Study it and answer the question that follow.



a) Identify the pest (1mk)

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b) State two damages caused to crops by the pest. (2mks)

.....  
 .....

c) Give two methods which can be used to control the pest. (2mks)

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 .....  
 .....

19. a) Given that the spacing of coffee is 2.7m by 2.7m, calculate the plant population in 1 hectare (Ha) of land (2mks)

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 .....  
 .....

b) Give three reasons why crops should be planted at the correct spacing. (3mks)

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**SECTION C (40MARKS)**

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

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

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

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

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

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

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22. a) Explain **four** factors to consider in choosing the type of irrigation to use in the farm. (8mks)

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b) Describe **five** farming practices that destroy soil structure. (5mks)

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

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**GOLDLITE ONLINE SUPPLIES**  
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Candidate's Signature.....Date.....

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**LANJET JOINT EXAMS**

**413/1**

**AGRICULTURE**

**PAPER 1**

**TIME: 2 hours**

**INSTRUCTIONS TO CANDIDATES**

- a) Write your name and index number in the spaces provided*
- b) This paper consists of three sections: A, B and C.*
- c) Answer all the questions in section A and B and any other two in section C*
- d) All answers must be written in the spaces provided in this booklet*

**FOR EXAMINER'S USE ONLY**

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1 - 18	30	
B	19 - 22	20	
C	23 - 25	40	
	<b>TOTAL SCORE</b>	<b>90</b>	

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**FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEME**

**SECTION A (30 MARKS)**

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



1. a) What is land reform? (1 mark)  
.....  
.....
- b) State **two** objectives of land reforms. (2 marks)  
.....  
.....  
.....
2. State **two** importance of ridging. (1 mark)  
.....  
.....  
.....
3. State **four** disadvantages of overhead irrigation. (2 marks)  
.....  
.....  
.....  
.....
4. State **four** sources of nitrogen in the soil for plants. (2 marks)  
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.....  
.....  
.....  
.....
5. a) What is weed? ( ½ mark)  
.....  
.....
- b) State **four** factors that contribute to the competitive ability of weeds. (2 marks)  
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.....  
.....  
.....
6. a) What is solifluction? (½mark)  
.....  
.....
- b) State the factors that influence solifluction. (2 marks)  
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.....  
.....
7. State **two** field practices that can ensure efficient utilization of Urea fertilizer in a field of maize. (1 mark)  
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- .....
8. Give **two** advantages of tissue culture in crop propagation. (1 mark)
- .....
- .....
- .....
9. List **two** advantages of grass – legume mixture. (1 mark)
- .....
- .....
- .....
10. State **four** sources from which a farmer would obtain capital for farming activities. (2 marks)
- .....
- .....
- .....
11. State **four** factors that influence soil formation. (2 marks)
- .....
- .....
- .....
- .....
12. Give **two** management practices carried in a banana stool. (1 mark)
- .....
- .....
- .....
13. State **two** functions of polythene sheet when used as mulch material. (1 mark)
- .....
- .....
- .....
14. a) What is an incomplete compound fertilizer? (½ mark)
- .....
- .....
- b) State **four** reasons why a maize crop continued showing deficiency of potassium despite application recommended amount of potassic fertilizer. (2 marks)
- .....
- .....
- .....
- .....
15. Give **three** benefits of timely planting of annual crops. (1½ marks)
- .....
- .....
- .....
- .....
- .....
16. Why are farmers encouraged to conserve excess forage in the farm? (1 mark)

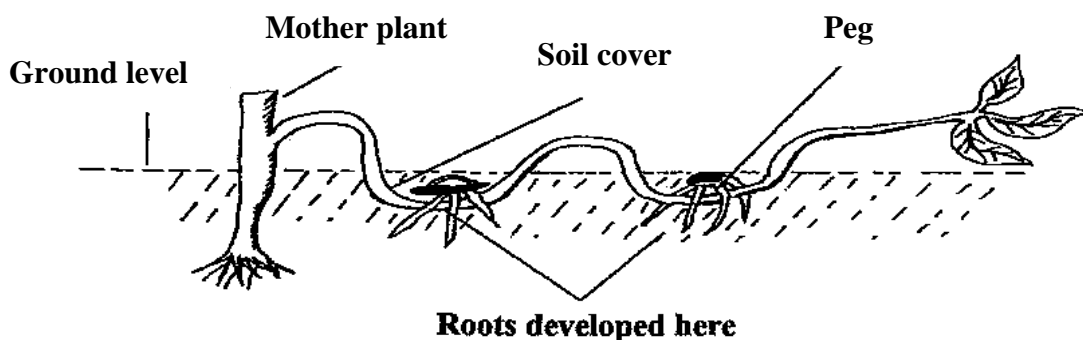
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.....  
17. When does opportunity cost not exist? (1 mark)

.....  
.....  
18. Give **four** crops requiring training. (2 marks)

.....  
**SECTION B 20 MARKS)**

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

19. The diagram below represents a method of crop propagation.



a) Identify the method of propagation. (1 mark)

.....  
b) What is the benefit of the above method of crop propagation? (1 mark)

.....  
c) List any **three** processes by which part of a stem is induced to produce roots while attached to the mother plant. (3 marks)

.....  
20. A farmer was asked to apply fertilizers as follows:-

50 kg / ha Nitrogen for top dressing.

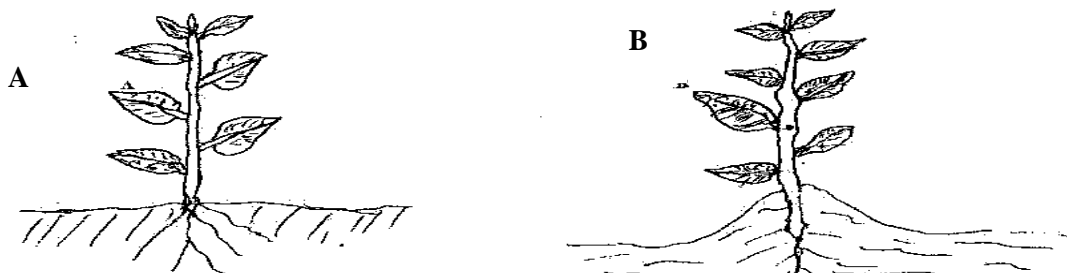
60 kg / ha  $P_2O_5$  at planting time

60 Kg/ ha  $K_2O$  for top dressing.

a) Calculate how much Sulphate of Ammonia 20%N would be required per hectare. (2 marks)

b) Calculate how much double super phosphate 40%  $P_2O_5$  would be required per hectare.(2 marks)

21. The diagram below show a practice out on various crops on the farm. Study them carefully and answer the questions that follow.



- i) Identify the practice in diagram B. (1 mark)
- .....
- .....
- ii) State the importance of the practice in diagram B in the following crops. (4 marks)
- Irish potatoes
- .....
- Ground Nuts
- .....
- Tobacco
- .....
- Maize
- .....
- iii) At what stage of growth should the above practice be carried out in maize? (1 mark)
- .....
- .....
22. i) What do you understand by the term integrated pest management (IPM)? (1 mark)
- .....
- .....
- ii) List **four** factors that affect efficiency of pesticides in crop production. (4 marks)
- .....
- .....
- .....

### **SECTION C (40 MARKS)**

**Answer any TWO questions from this section the spaces provided at the end of the section.**

23. Describe the harvesting process of the following crops.
- a) Coffee. (6 marks)
- b) Pyrethrum. (7 marks)
- c) Sugar cane. (7 marks)
24. a) Describe the following production of dry beans under the following sub headings.
- i) Ecological requirements. (2 marks)
- ii) Varieties. (3 marks)
- iii) Planting. (3 marks)
- iv) Field management practices. (4 marks)
- v) Harvesting. (2 marks)
- b) Outline any **six** measures that a mixed farmer should take in account to minimize water pollution. (6 marks)
25. a) Give **two** agents of soil erosion. (2 marks)
- b) Briefly explain how the following soil erosion types occur. (4 marks)
- i) Splash erosion.
- ii) Sheet erosion.
- iii) Rill erosion.
- iv) Gully erosion.
- c) Discuss the methods of controlling soil erosion. (14 marks)

# GOLDLITE ONLINE SUPPLIES

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## KCSE TOP NATIONAL SCHOOLS TRIAL SERIES 2025

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Candidate's Signature.....Date.....

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### MIRROR JOINT EXAMS

413/1

AGRICULTURE

PAPER 1

TIME: 2 hours

**Instructions to Candidates**

- Write your *name, index number* in the spaces provided.
- This paper has three sections A, B and C.
- Answer *all* the questions in section A and B in the spaces provided.
- Answer any *two* questions in section C.

**For Examiner's Use Only**

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 13	30	
B	14 – 17	20	
C	18	20	
	19	20	
	20	20	
	<b>Total Score</b>	<b>90</b>	

**CONTACT US ON 0724351706/0726960003**

**FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEMES**

**SECTION A – (30 Marks)**

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

1. State **two** ways through which agriculture contribute to directly to development of industries. (1 mark)

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.....

.....

2. State **two** effects of soil organisms which benefit crop growth. (1 mark)

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3. Name **two** processes of rock wearing. (1 mark)

.....

.....

4. Give **four** activities involved in land preparation. (2 marks)

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.....

5. Give **two** types of water pumps. (1 mark)

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6. Give **two** symptoms of potassium deficiencies in maize. (1 mark)

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7. Give **four** variable costs in the production of maize. (2 marks)

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.....

8. State **four** factors that determine the stage at which a grain crop is ready for harvesting. (2 marks)

.....

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.....

.....

9. Give **four** reasons for earthing up in crop production. (2 marks)
10. State **four** advantages of applying lime as a measure of improving soil condition. (2 marks)
11. Name **two** forms of gulley erosion. (1mark)
12. State any **three** any three stages of land adjudication. (1½marks)
13. State **four** precautions a maize farmer would take to minimize risks in the production. (2 marks)
14. Give **four** sources of agricultural credit to a farmer. (2 marks)
15. Differentiate the term partial budget and complete budget. (1 mark)





- i) Rearrange the label G, H, J, and K to show the correct sequence in which the cotton fruit develops. (1 mark)

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.....

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- ii) What would be the effect of attack by cotton boll worms at the stage labeled K? (1 mark)

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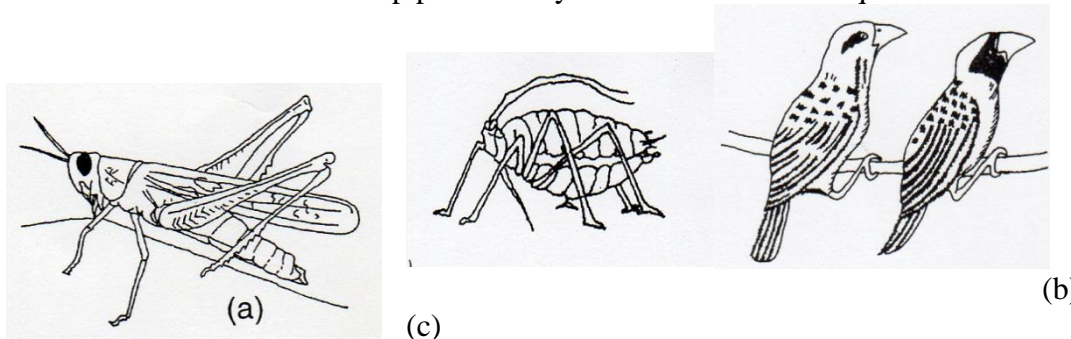
- iii) State **two** conditions that should be observed when harvesting to ensure that cotton picked is of high quality. (2 marks)

.....

.....

.....

21. The illustration below are crop pests. Study them and answer the questions that follow.



- i) Identify each of the pest labeled as (a), (b) and (c) (2 marks)

(a)  
(b)  
(c)

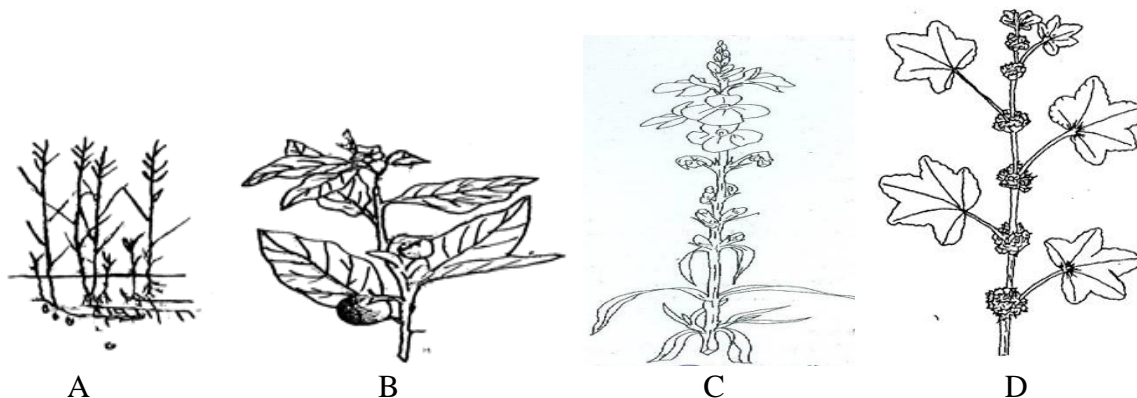
- ii) State **two** types of damage caused by pest (c) in the crops infested. (2 marks)

.....

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.....

22. The diagram below shows two types of weeds A, B, C and D. Study and answer the questions that follow.



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

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

ii) Why is it difficult to control the weed in diagram A (1 mark)

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

iii) State one harmful effect of B. (1 mark)

.....  
 .....

b) i) Why is it difficult to control weed C in the crop of cereals? (1 mark)

.....  
 .....

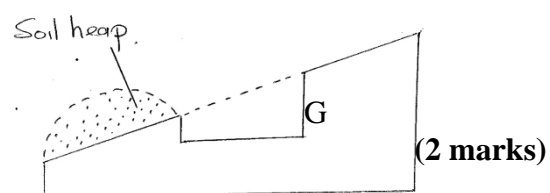
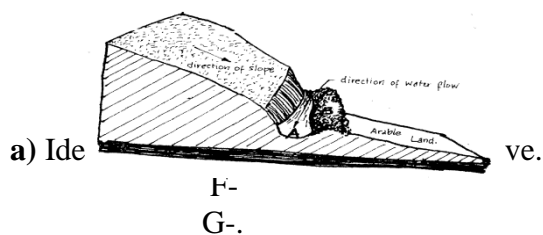
ii) State one negative effect of weed C in a field of cereal crops. (1 mark)

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

c) State one harmful effect of weed D in a crop of cotton. (1 mark)

.....  
 .....

23. The diagrams labeled F and G below represent physical measures in conservation soil and water. Study them carefully and answer the questions that follow.



b) Why is it that the embankment of F should not be cultivated with crops. (1 mark)

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

d) Name two other physical measures apart from F and G that can be used to conserve water. (2 marks)

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

### SECTION C: (40 marks)

#### Answer two questions from this section

24. (a) Describe four components of well-developed soil profile. (8 marks)

(b) Describe the disadvantages of herding in livestock production. (5 marks)

(c) Explain how a maize farmer may overcome risks and uncertainties in a farming business. (7 marks)

25. (a) Describe field production of Napier elephant grass under the following sub-headings.

(i) Seedbed preparation (5 marks)

(ii) Planting (5 marks)

(iii) Fertilizer application (3 marks)

(iv) Weed control (3 marks)

(v) Utilization (4 marks)

(b) State and explain five factors to consider when siting a nursery bed. (10 marks)

26. (a) The following accounts information is from Mrs. Mangu's farm for the year ended 31 – 12 – 2010.

Opening valuation Ksh. 6,000/=

Paid wages Ksh. 5000/=

Bought equipment worth Ksh. 8,000/=

Bought pig feeds worth Ksh. 4,000/=

Sold mature pigs worth Ksh. 7,000/=

Bought drugs worth Ksh. 3,200/=

Sold maize worth Ksh. 3,000/=

Closing valuation Ksh. 4,000/=

(i) Using the information above, prepare a profit and loss account for Mrs. Mangu's farm. (2 ½ marks)

(ii) From the calculations in (i) above, state whether Mrs. Mangu made a profit or a loss. (1/2 mark)

(b) Describe **four** advantages of mulching in crop production. (4 marks)

(c) Explain **three** farming practices which may lead to soil erosion. (3 marks)

.....

**GOLDLITE ONLINE SUPPLIES**  
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Name ..... Admission number .....

Candidate's Signature.....Date.....

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**MOKASA TRIAL 1**

**413/1**

**AGRICULTURE**

**PAPER 1**

**TIME: 2 hours**

**Instructions to Candidates**

- Write your **name**, **index number** in the spaces provided.
- This paper has three sections A, B and C.
- Answer **all** the questions in section A and B in the spaces provided.
- Answer any **two** questions in section C.

**For Examiner's Use Only**

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 13	30	
B	14 – 17	20	
C	18	20	
	19	20	
	20	20	
	<b>Total Score</b>	<b>90</b>	

**CONTACT US ON 0724351706/0726960003**

**FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEMES**

## SECTION A (30 MARKS)

*Answer All the Questions in This Section in the Spaces Provided*

1. State **two** biotic factors that are useful in agricultural production. (1 mark)

.....

.....

2. Give **four** reasons why it is important to stake tomatoes. (2 marks)

.....

.....

.....

3. State **two** methods of utilizing sorghum as a forage crop. (1mark)

.....

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4. Give **four** signs that could enable a farmer to identify compost manure that is ready (2 marks)

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5. List **four** farming practices that may help to achieve minimum tillage on a farm. (2 marks)

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6. Give **four** reasons why seed selection is important in the establishment of crops. (2 marks)

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7. Give **four** reasons for keeping breeding records in a dairy farm. (2 marks)

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.....

8. State **two** characteristics of shifting cultivation. (1 mark)

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9. State **four** factors that determine spacing of crop. (2 marks)

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

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11. State **two** characteristics of a large scale farming system. (2 marks)

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.....

12. State **four** steps followed in land adjudication. (2 marks)

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.....

13. State **two** physical agents of weathering. (1 mark)

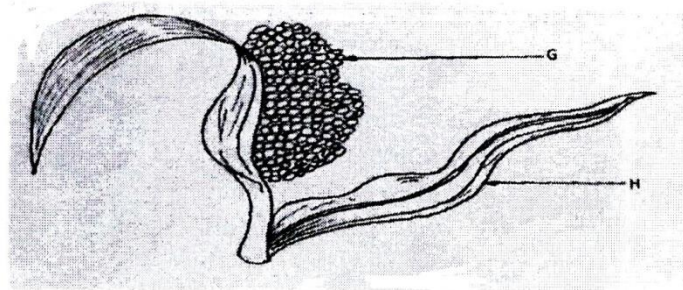
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**SECTION B (20 MARKS)**

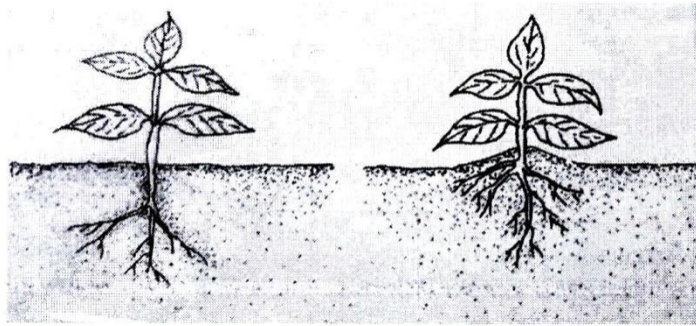
*Answer All the Questions in the Spaces Provided*

14. The diagram below illustrates one of the arable field crops. Study it carefully and answer the questions that follow.



- a) Identify the field crop. (1 mark)  
.....
- b) State the common disease that attack the parts labeled G and H (2 marks)  
G..... H.....
- c) Name a variety of the crop that is resistant to birds attack. (1 mark)  
.....
- d) State one cultural method to control the diseases named in (b) above. (1 mark)  
.....
15. (a) Name the deficient nutrient element in plants showing the following symptoms;
- (i) Stunted growth, die back of the plant tips, leaves roll up and chlorosis along margins of younger leaves. (1 mark)  
.....
- (ii) Yellowing of leaves appears first on lower leaves; leaves turn brown and fall prematurely, stunted growth. (1 mark)  
.....
- (iii) Leaf curling, yellowing of leaves tips and edges of leaves scorched and has small mottles. (1 mark)  
.....
- (iv) Purpling of leaves, stunted growth, slender stalks and lateral buds remain dormant. (1 mark)  
.....

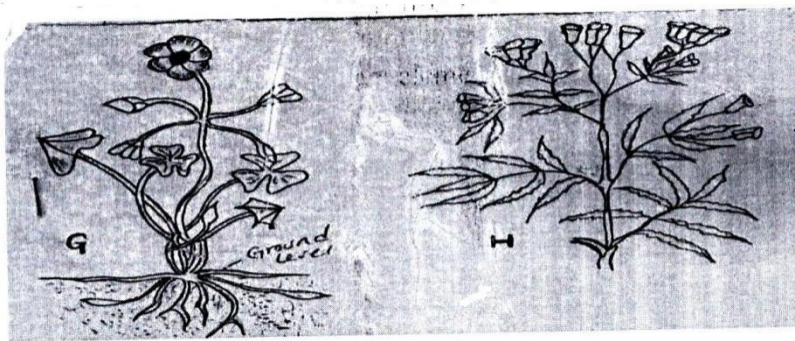
(b) The diagram below show a practice out on various crops on the farm. Study them carefully and answer the questions that follow.



Identify the practice in the diagram above.

(1 mark)

16. Diagram G and H below show some weeds.



a) Identify the weeds G and H.

(2 marks)

G .....

H.....

b) State one economic importance of weed H

(1 mark)

.....

c) Why is it difficult to control weed G?

(1 mark)

.....

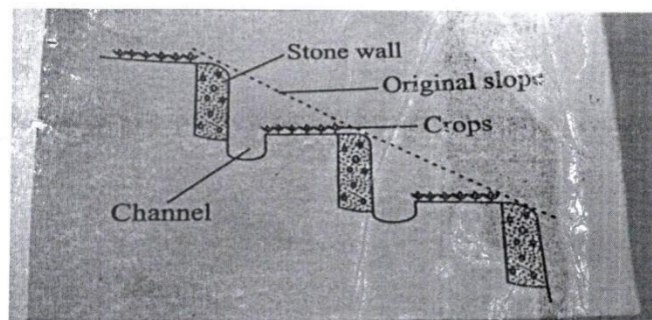
d) Name an example of a systematic herbicide which can be used to control weed G

(1 mark)

.....



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



- a) Identify the type of terrace illustrated above (1 mark)

.....

- b) Under what **two** circumstances should the construction of the above terrace be justified?

.....

.....

- c) Name **two** other types of terraces.

.....

.....

### SECTION C (40 MARKS)

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

18. (a) Describe the production of tomatoes under the following;
- Transplanting. (5 marks)
  - Field management practices. (5 marks)
- (b) Give **six** advantages of drip irrigation. (6 marks)
- (c) Describe the precautions a farmer should put into consideration when harvesting cotton. (4 marks)
19. (a) Outline various ways through which vegetation cover reduces soil erosion. (4 marks)
- (b) Outline various conditions which necessitate land clearing. (4 marks)
- (c) Give **six** benefits of planting annual crops early. (6 marks)
- (d) Describe **six** practices carried out in a vegetable nursery to ensure healthy seedlings at transplanting (6 marks)
20. (a) Describe **eight** cultural methods of controlling diseases in crop production. (8 marks)
- (b) Explain **three** ways in which biotic factors discourages agricultural production. (3 marks)
- (c) State **four** effects of high temperature in crop production. (4 marks)
- (d) Describe **five** ways through which a farmer can maintain soil fertility in his coffee farm. (5 marks)

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Candidate's Signature.....Date.....

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**MOMALICHE CYCLE 1**

**413/1**

**AGRICULTURE**

**PAPER 1**

**TIME: 2 hours**

**Instructions to Candidates**

- Write your **name**, **index number** in the spaces provided.
- This paper has three sections A, B and C.
- Answer **all** the questions in section A and B in the spaces provided.
- Answer any **two** questions in section C.

**For Examiner's Use Only**

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 13	30	
B	14 – 17	20	
C	18	20	
	19	20	
	20	20	
	<b>Total Score</b>	<b>90</b>	

**CONTACT US ON 0724351706/0726960003**

**FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEMES**

**SECTION A (30marks).**

**Answer all Questions in this section**

1. Name **two** branches of horticulture. (1marks)

.....

.....

.....

2. List **two** advantages of mixed farming. (1 mark)

.....

.....

3. State **two** advantages of metal water pipes over plastic pipes in piping water in the farm. (1 mark)

.....

.....

4a) State **two** characteristics of extensive farming system. (1marks)

.....

.....

.....

.....

b) List **four** characteristic of fertile soil (2maks)

.....

.....

.....

.....

5. Give **four** advantages of raising cabbage seedlings in a nursery before transplanting (2maks)

.....

.....

.....

.....

6. State **four** benefits of a land title deed to a farmer (2marks)

.....

.....

.....

.....

7. State **four** factors which should be considered when deciding type of irrigation on crop production (2marks)

.....

.....

.....

.....

8. Give **two** ways by which overstocking encourage soil erosion. (1mark)

.....

.....

.....

9. State **two** physical agent of weathering (1mark)

.....

.....

.....

10. State **four** objectives of the million-acre scheme. (2marks)

.....

.....

.....

.....

11.State **four** symptoms of attack by the bean fly in bean production. (2marks)

.....

.....

.....

.....

12. State any **four** measures that are taken to minimize water pollution in the farm. (2 marks)

.....

.....

.....

.....

b). Outline **four** ways through which soil loses its fertility. (2 marks)

.....

.....

.....

.....

13. List **Four** practices that achieve minimum tillage. (2 marks)

.....

.....

.....

.....

14.a) List **four** farming practices that can be carried out to increase the amount of light harnessed by crops. (1 marks)

.....

.....

.....

15. State **two** ways of preparing planting materials before planting (1mark)

.....

.....

.....

16.State **four** ways of increasing labour efficiency on the farm (2marks)

.....

.....

.....

.....

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

.....

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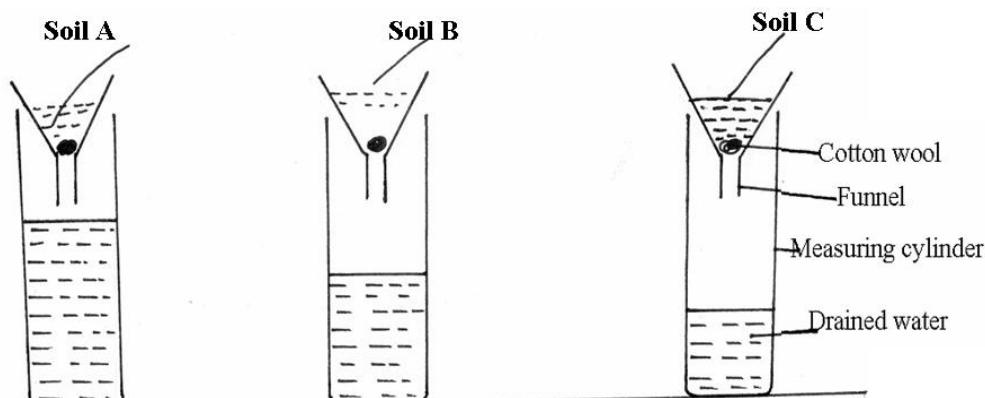
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**SECTION B (20 MARKS)**

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

**18.** The diagram below shows an experiment set up using three different sets of soil, and the observations made after 24hrs. Study the diagram and answer the questions that follow.



(a) What is the experiment set up above designed to study. (1 mark)

.....

(b) Name soil types B and C. (2 marks)

C.....

B.....

(c) What are the characteristic textures of the soil type A and C (2 marks)

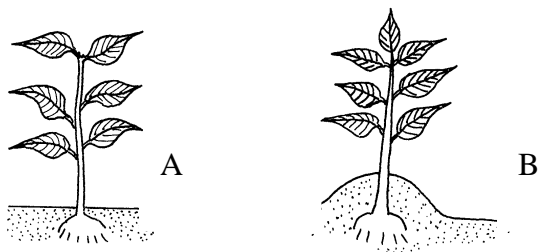
**Soil type A**

.....

**Soil type C**

.....

19. The diagrams below show a practice carried out on various crops on the farm. Study them carefully and answer the questions that follow.



Before

after

a) Identify the farm practice represented by B. (1mark )

.....

b) State one the importance of the above practice in the following crops. (3marks)

i. Maize

.....

ii. Irish Potatoes

.....

iii. Tobacco

.....

c) At what stage of growth should the above practice be carried out in maize. (1mark )

.....

20. Study the farm record below and the questions that follow:

Date	Disease symptoms	Animals affected	Drug used	Cost of treatment	Remarks

(a) Identity of the record (1mark)

.....

(b) State **two** different information that should be entered in the remarks column (2marks)

.....

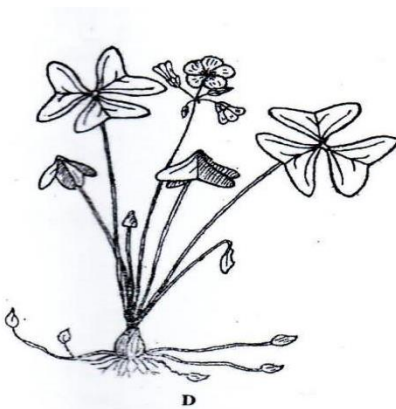
.....

(c) Give **two** importance of keeping the farm record illustrated above (2marks)

.....

.....

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



a) Identify the weed labeled C and D (2marks)

C.....

D.....

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

.....

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

### **SECTION C ANSWER ONLY TWO QUESTION 40 MARKS**

22. Describe the management of cabbages under the following sub-headings.

(a) Nursery preparation and establishment (7 marks)

(b) Management of seedlings in the nursery (5 marks)

(c) Transplanting of seedlings (8 marks)

23a) Explain **five** ways government policy contributes to Agriculture. (5 marks)

b) Explain any **five** factors considered when spacing crops. (10marks)

c) Describe the advantages of mixed grass -legume pasture over a pure grass pasture (5marks)

24a) State and explain four ways in which soil loses its fertility (8marks)

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

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



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Candidate's Signature..... Date.....

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**NAIROBI JOINT EXAMINATIONS**

**413/1**

**AGRICULTURE**

**PAPER 1**

**TIME: 2 hours**

**Instructions to Candidates**

- Write your **name**, **index number** in the spaces provided.
- This paper has three sections A, B and C.
- Answer **all** the questions in section A and B in the spaces provided.
- Answer any **two** questions in section C.

**For Examiner's Use Only**

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 13	30	
B	14 – 17	20	
C	18	20	
	19	20	
	20	20	
	<b>Total Score</b>	<b>90</b>	

**CONTACT US ON 0724351706/0726960003**

**FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEMES**

**SECTION A (40 MKS)**  
**ANSWER ALL QUESTIONS IN THE SPACES PROVIDED**

1. Name three forms of horticulture practiced in Kenya (3 mks)  
.....  
.....  
.....
2. State four conditions when land cleaning should be done (4mks)  
.....  
.....  
.....  
.....
3. Give four reasons for treating water before use (4mks)  
.....  
.....  
.....  
.....
4. State four factors to consider when siting a compost manure pit (4mks)  
.....  
.....  
.....  
.....
5. Give three reasons why farmers should keep health records (3mks)  
.....  
.....  
.....
6. State two functions of potassium in plants (2mks)  
.....  
.....
7. State four post-harvesting management practices carried out on various crops (4mks)  
.....  
.....  
.....  
.....
8. State four advantages of communal land tenure system (4mks)  
.....  
.....  
.....  
.....

9. (a) What is soil erosion (1mk)  
.....  
.....
- (b) State four factors influencing soil erosion (2mks)  
.....  
.....  
.....  
.....  
.....
10. State four qualities of good silage (2mks)  
.....  
.....  
.....
11. State three roles of soil microorganisms ( 1 ½ mks)  
.....  
.....  
.....
12. State four method that can be used to clear land (4mks)  
.....  
.....  
.....  
.....  
.....
13. State four importance of soil PH to crops (2mks)  
.....  
.....  
.....  
.....  
.....
14. Name three crops propagated by use of suckers ( 1 ½ mks)  
.....  
.....  
.....  
.....
15. State two limitations of tissue culture in crop production (1mk)  
.....  
.....
16. Give four benefits of mulching (2mks)

**SECTION B (20 MKS)**  
**ANSWER ALL QUESTIONS IN THE SPACES PROVIDED**

17. The diagrams below illustrate common weeds in arable land. Study them carefully and answer the questions that follow



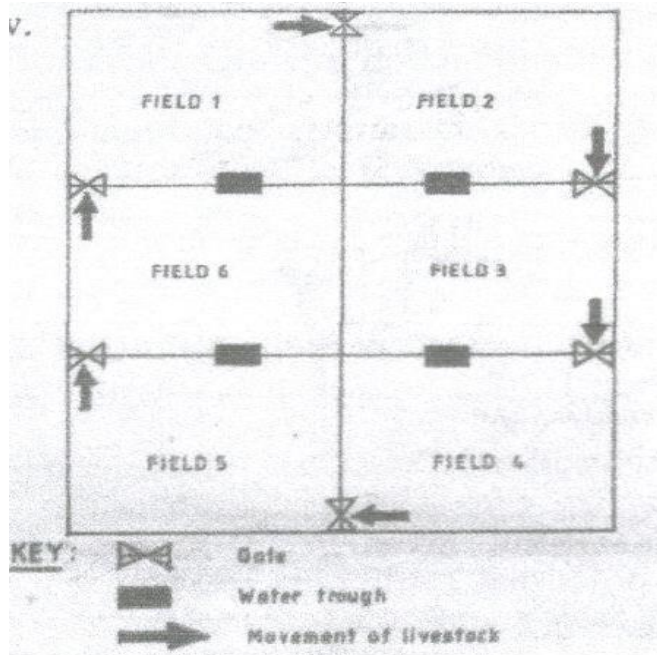
a) Identify the weed labeled D (1mk)

Classify the weed labeled C according to plant morphology (1mk)

b) Give one reason why it is difficult to control the weed labeled D (1mk)

State two cultural ways of controlling couch grass (*Digitaria scalarum*) (2mks)

18. The diagram below illustrates a grazing system. Study it carefully and answer the questions that follow



a) Identify the grazing system illustrated above

(1mk)

.....

.....

.....

.....

.....

b) State your advantages of the grazing system illustrated above

(4mks)

.....

.....

.....

.....

.....

19. A farmer is advised to apply 60kg (N) , 20kg  $P_2O_5$  and 30kg  $K_2O$  per hectare. Calculate the quantity of urea (46%N) , single superphosphate (20% $P_2O_5$ ) and mutiate of potash (50%  $K_2O$ ) the farmer should apply on his 10 hectares land

(5mks)

.....

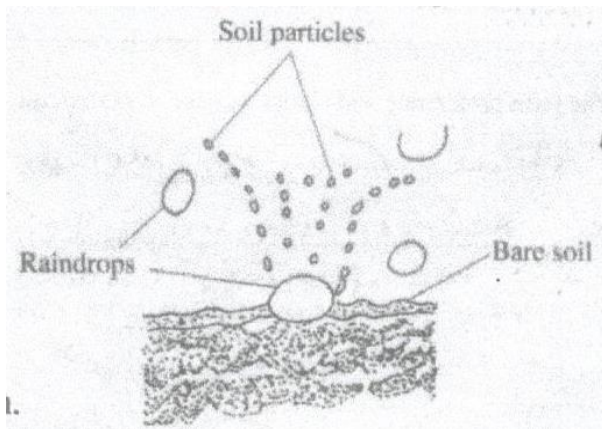
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.....

.....

20. The diagram below illustrates a type of soil erosion



a) Identify the type of erosion

(1mks)

.....

b) How does the type of erosion shown above occur?

(2mks)

.....

c) How does cover cropping help control the type of erosion shown above

(2mks)

.....

.....

**SECTION C (40 MKS)**  
**ANSWER ANY TWO QUESTIONS**

21. (a) Discuss six biotic factors that influence agricultural production

(6mks)

(b) Describe four methods of breaking seed dormancy

(4mks)

(c) Describe five nursery management practices

(5mks)

(d) Explain five reasons why use of chemicals to control pests should be discouraged

(5mks)

22. (a) Describe the harvesting of pyrethrum (5mks)  
(b) State four precautions when harvesting pyrethrum (4mks)  
(c) Explain six cultural methods of disease control (6mks)  
(d) Explain five methods of water harvesting (5mks)
23. (a) Describe carrot production under the following sub-headings  
(i) Field management practices (3mks)  
(ii) Land Preparation (3mks)  
(b) Explain five factors that determine the stage in which crops are harvested (3mks)  
(c) Explain four factors determining the depth of planting (4mks)  
(d) Describe five effects of strong wind on agricultural production (5mks)

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Name ..... Admission number .....  
Candidate's Signature.....Date.....

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**SUKELEMO JOINT EXAMINATION**

**413/1**

**AGRICULTURE**

**PAPER 1**

**TIME: 2 hours**

**Instructions to Candidates**

- Write your **name, index number** in the spaces provided.
- This paper has three sections A, B and C.
- Answer **all** the questions in section A and B in the spaces provided.
- Answer any **two** questions in section C.

**For Examiner's Use Only**

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 15	30	
B	16 – 19	20	
C	20	20	
	21	20	
	22	20	
	<b>Total Score</b>	<b>90</b>	

**CONTACT US ON 0724351706/0726960003**  
**FOR MORE PAPERS FOR ALL SUBJECTS AND MARKING SCHEMES**

**SECTION A (30 MARKS)**

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

1. What is meant by the following terms  
(a) Under sowing. (1mark)  
.....  
.....  
(b) Over sowing. (1mark)  
.....  
.....  
(c) Ammonification. (1mark)  
.....  
.....
2. State four qualities of a scion for use in vegetative propagation materials (2marks)  
.....  
.....  
.....
3. Give two advantages of compound fertilizer. (2marks)  
.....  
.....
4. State four effects of soil depth on crop production. (2mark)  
.....  
.....  
.....
5. Give four ways of improving sandy soils. (2marks)  
.....  
.....  
.....
6. State two reasons for rolling in wheat crop productivity. (2marks)  
.....  
.....  
.....
7. Give four roles of cost agricultural economics. (2 marks)  
.....  
.....  
.....
8. State two effects of varying spacing in maize production. (1 mark)  
.....  
.....
9. State three financial documents in agricultural production. (1½ marks)  
.....  
.....



.....  
.....  
10. Give four disadvantages of concession land tenure systems. (2 marks)

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

11. State five symptoms of viral diseases in crop production. (2½ marks)

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

12. Give four factors that are considered when selecting a nursery site. (2 marks)

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

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

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

14. Give three reasons for cutting back in pyrethrum. (1½ marks)

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

15. Give five ways in which consolidation helps to improve farm management. (2½ marks)

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.....

**SECTION B (20 MARKS)**

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

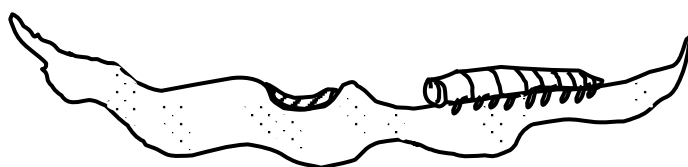
16. i) The following is a farm record Mr. Makau had kept as at 30<sup>th</sup> June 2011. Study it carefully and prepare a balance sheet for the farm. (6 marks)

Equity loan	180,000
Equity overdraft	24,000
Working tools	30,000
Cash at hand	15,000
Cash in bank	50,000
Buildings	60,000



.....  
.....  
iii) State three forms of agroforestry. (1½ marks)  
.....  
.....  
.....  
.....

18. 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. (1 mark)  
.....  
.....

19. 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)  
.....  
.....

**SECTION C (40 MARKS)**

**Answer any two questions from this section in the spaces provided after question 22**

20. a) State the functions of the Kenya National Federation of Producers in Kenya (5 marks)  
b) State five factors considered when drawing a farm plan (5 marks)  
c) Describe the harvesting of cotton (10 marks)
21. a) Describe the production of carrots under the following sub headings  
b) Seedbed preparation (3 marks)  
c) Harvesting (4 marks)  
d) Explain five cultural methods of weed control in bean production. (10 marks)  
e) Outline three roles of sulphur in crop production. (3 marks)
22. a) Explain the effects of solifluction (6 marks)  
b) Outline importance of grafting in oranges (4 marks)  
c) Describe ways of improving labour efficiency (10 marks)