

**LARI SUB-COUNTY  
END OF TERM TWO 2019 EXAMINATION  
FORM FOUR  
BIOLOGY PAPER 1**

Name.....Index No.....

School..... Class.....Sign.....Date.....

**443/1  
AGRICULTURE  
PAPER 1  
2HOURS**

**INSTRUCTIONS TO CANDIDATES:**

- Write your **name** and **admission number** in the spaces provided.
- This paper consists of three section **A, B** and **C**
- Answer **all** the questions in section **A** and **B**
- Answer any **two** questions in section **C**.
- Answers should be written in the spaces provided in this booklet.

**For Examiner's Use Only:**

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-18	30	
B	19-22	20	
C	23-25	20	
		20	
	<b>TOTAL</b>	<b>90</b>	

**SECTION A**

**Answer all the questions on this section**

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

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

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3. Give **four** reasons why land should be prepared early in readiness for planting. (2mks)

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

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5. List **two** methods of land reclamation. (1mk)

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6. Give **two** circumstances that may necessitate irrigation. (1mk)

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7. Name the parts harvested for each of the following crops. (1½ mks)

(a) Onions .....

(b) Carrots.....

(c) Coffee .....

8. Give **two** characteristics of fresh market tomatoes. (1mk)

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9. Name **four** general methods of controlling crop pests. (2mks)

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10. Give **two** effects of scarcity in agricultural production. (1mk)

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11. Differentiate fertilizer grade and fertilizer ratio. (2mks)

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12. Give **three** precautions that should be observed when storing nitrogenous fertilizers. (1 ½ mks)

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13. State **two** conditions that must exist for a market to be purely competitive. (2mks)

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14. Distinguish between grading and standardization in agricultural marketing. (2mks)

(i) Grading

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(ii) Standardization.

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15. A form four student at Kanga Girls planted maize for her KCSE agriculture project. She used a spacing of 75cm x 25cm. her plot was 4x 3m.

(i) What does 75cm stand for in this statement? (1mk)

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(ii) Calculate the plant population. Show your working. (3mks)

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16. Give **four** benefits of a land title deed to a farmer. (2mks)

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17. State **four** control measures of river bank erosion. (2mks)

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18. Name **two** types of pests with piercing and sucking mouth parts. (1mk)

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**SECTION B (20 MARKS)**

**Answer all questions in this section**

19. Below are two diagrams of Irish potato tubers after being subjected to some conditions before planting.



**Before subjecting to the conditions**

**After subjecting to the conditions**

i. Which process of potato treatment is illustrated above? (1mk)

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ii. State **two** conditions necessary for the above process. (2mks)

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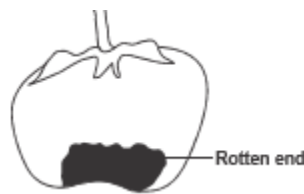
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iii. Give **two** reasons for carrying out the above practice. (2mks)

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20. Study the illustration below of a tomato fruit as observed in field production.



i. Identify the condition illustrated above. (1 mk)

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ii. State **two** conditions that predispose a tomato plant to the conditions stated in (a) above (1 mk)

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iii. Suggest **four** possible ways of controlling the condition stated in (a) above (2mks)

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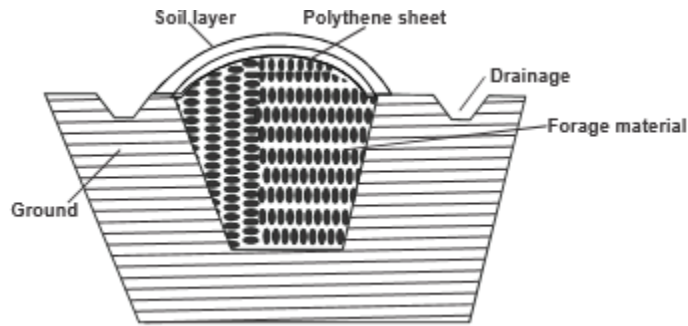
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iv. Name **two** categories of tomato varieties (1mk)

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21. The diagram below shows a method of forage preservation



a) Identify the structure above (1 mk)

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

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c) Give the role played by each of the following in the structure above  
i. Polythene sheet (1 mk)

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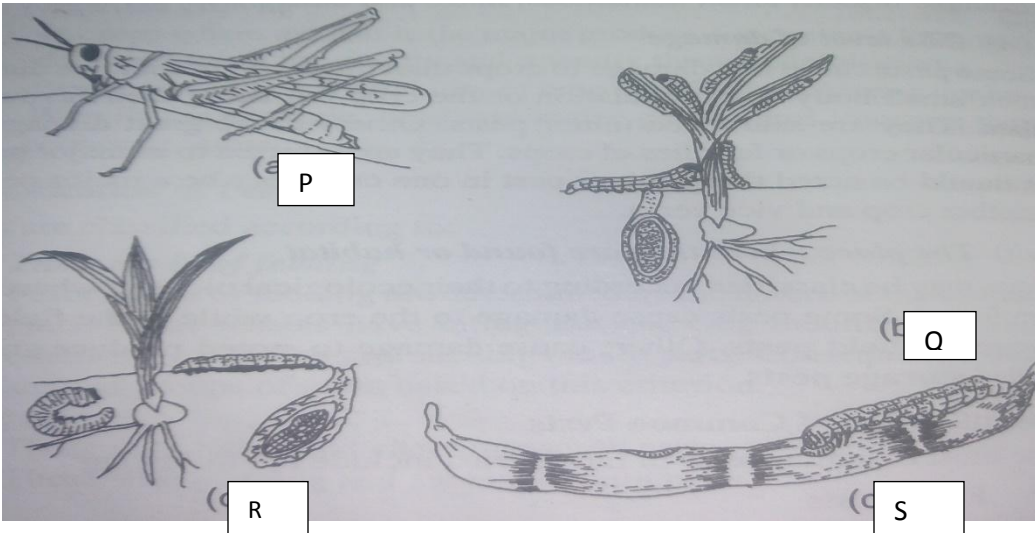
ii. Drainage (1 mk)

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d) Name **two** other methods of forage conservation (1 mk)

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22. Below are the pests that commonly attack the crops. Study them carefully and answer questions that follow.



a. Identify the pests labelled P, Q, R and S. (2 mks)

P.....

Q.....

R.....

S.....

b. What kind of mouth parts do they possess? (1 mk)

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 .....

c. Give **two** ways in which pests can be categorized depending on their habitat. (2 mks)

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**SECTION C (40MKS)**

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

23. (a) (i) What is seed dormancy? (1mk)

(ii) Discuss **four** methods of breaking seed dormancy. (4mks)

(b) Outline the factors that determine the time of harvesting (5mks)

(c) (i) Explain **three** effects of river bank erosion. (3mks)

(ii) Discuss the structural control measure of soil erosion. (7mks)



24. (a) Explain the importance of primary cultivation. (5mks)
- (b) (i) Describe the precautions taken when harvesting pyrethrum. (5mks)
- (ii) Outline the advantages of mulching. (5mks)
- (c) Outline the characteristics of plants used as green manure. (5mks)
25. (a) Explain **five** ways by which farmers minimize grain loses in store. (5mks)
- (b) Outline **eight** roles of a farm manager. (8mks)
- (c) Outline **seven** importances of agroforestry. (7mks)