

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

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

**443/1**  
**AGRICULTURE**  
**PAPER 1**  
**SEPTEMBER, 2022**  
**TIME: 2 HOURS**

**LANET CLUSTER JOINT EXAMINATION (LANJET) -  
2022**

**443/1**  
**AGRICULTURE**  
**PAPER 1**  
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**INSTRUCTIONS TO CANDIDATES**

- a) Write your name, index number and class in the spaces provided above.
- b) This paper consists of **THREE SECTIONS, A, B and C.**
- c) Answer all questions in sections **A and B** and two questions in section **C.**
- d) All your answers must be written in the spaces provided in this question paper.
- e)

**FOR EXAMINERS USE ONLY**

<b>SECTION</b>	<b>QUESTIONS</b>	<b>MAXIMUM SCORE</b>	<b>CANDIDATES SCORE</b>
A	1-15	30	
B	16-19	20	
C	20-22	20	
		20	
<b>TOTAL</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 pages are missing*

**SECTION A: (30 MARKS)**

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

1. State four features of rainfall a farmer should consider when deciding on a crop to grow. (2 mks)

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2. Mention four factors that affect effectiveness of a pesticide. (2 mks)

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3. State four advantages of using farm yard manure. (4 mks)

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4. State two ways by which organic mulch helps to conserve moisture in the soil. (2 mks)

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5. List four reasons for pruning in coffee. (2 mks)

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6. State four disadvantages of nomadic pastoration. (2 mks)

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7. State four practices that should be carried out to maintain grass pastures. (2 mks)

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8. Mention four advantages of minimum tillage in crop production. (2 mks)

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9. State four importance of keeping farm records in crop production. (2 mks)

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10. State four cultural methods of weed control in crop production. (2 mks)

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11. List four advantages of individual-owner operator in land tenure system. (2 mks)

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12. List four sites on which agroforestry trees can be established on a farm. (2 mks)

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13. State four methods commonly used for applying nitrogenous fertilisers. (2 mks)

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14. State four reasons for staking tomatoes. (2 mks)

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15. List four classes of livestock farming. (2 mks)

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16. State four types of soil erosion caused by water. (2 mks)

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**SECTION B: (20 MARKS)**

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

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



(a) Identify the field practice above. (1 mk)

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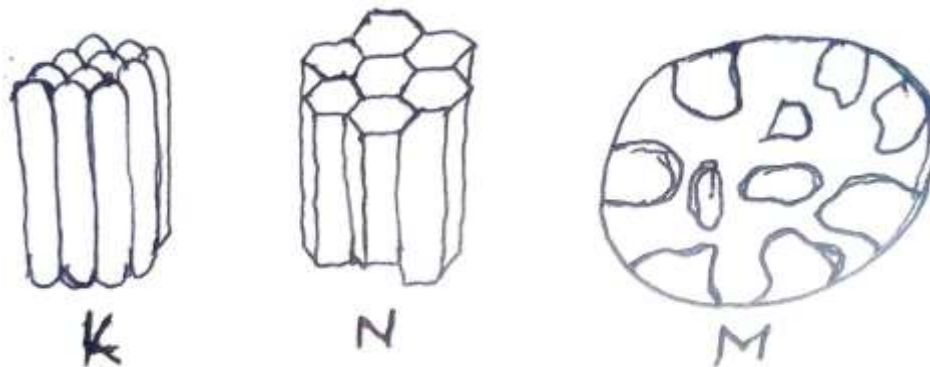
(b) State two importance of the practice above. (2 mks)

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(c) State two other practices aimed at providing support to weak stemmed plants. (2 mks)

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18. Study the diagrams below and answer the questions.



(a) Identify the soil structure labeled K and M. (2 mks)

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(b) Differentiate between soil structure K and N. (1 mk)

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(c) How can soil structure M be improved? (1 mk)

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19. The table below shows maize production from varying amounts of NPK on one hectare of land.

YEAR	NPK	TOTAL PRODUCT
2001	0	5
2002	50	12
2003	100	28
2004	150	47
2005	200	59
2006	250	65
2007	300	68
2008	350	70
2009	400	70

2010	450	68
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- (a) Calculate the farmer's marginal product for year 2004 and 2005. (1 mk)
- (b) Calculate the average product for the year 2008 and 2010. (1 mk)
- (c) Assume the average price of fertilisers over the years recorded was Ksh 2000 per 50kg bag and the price of maize per bag who Ksh 3000, calculate the net revenue for year 2009. (2 mks)

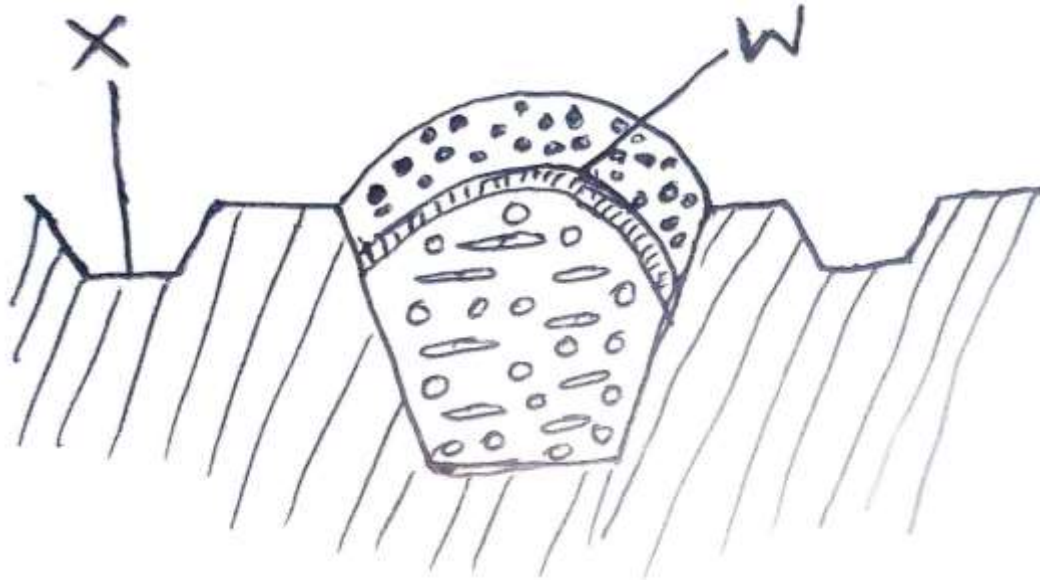
20. The diagrams below represent varieties of sorghum grown by farmers.



- (a) Identify varieties R and Q (2 mks)
- R .....
- Q .....
- (b) Name the variety prone to bird attack. (1 mk)
- .....
- (c) State two ways of controlling birds in sorghum field. (2 mks)

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21. Use the diagram below to answer the questions that follow.



(a) Identify the method of ensiling shown above. (1 mk)

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(b) Identify the function of W and X. (2 mks)

W : .....

X : .....

(c) State two ways of preventing overheating. (2 mks)

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**SECTION C: (40 MARKS)**

**Answer any two questions from this section.**

22. (a) Explain five properties of nitrogenous fertilizers. (5 mks)  
(b) Mention five precautions observed in harvesting pyrethrum to ensure high quality product. (5 mks)  
(c) State and explain five importance of drainage as a land reclamation method. (10 mks)
23. (a) Explain five roles of trees in soil and water conservation. (5 mks)  
(b) State seven factors that contribute to competitive ability of weeds . (7 mks)  
(c) Mention eight effects of fragmentation and sub-division of land. (8 mks)
24. (a) Explain five advantages of sub-surface irrigation system. (5 mks)  
(b) Explain five contributions of agriculture to National development. (5 mks)  
(c) Explain five non-human factors that encourage soil erosion. (10 mks)

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