

Name Index No.

School Candidate's signature

Date

443/1

AGRICULTURE
Paper 1

July / August 2016

Time 2 hours

NYANDARUA SOUTH FORM FOUR JOINT EVALUATION

Kenya Certificate of Secondary Education

AGRICULTURE

Paper - 443/1

July / August 2016

Time: 2 hours

INSTRUCTIONS TO CANDIDATES

Write your name and Index number in the spaces provided above.

Sign and write the date of the examination in the spaces above.

This paper consists of THREE sections A, B and C.

Answer ALL questions in section A and section B and Two questions in section C.

All answers must be written in this booklet.

EXAMINER'S USE ONLY

Section	Question	Max. score	Candidate's score
A	1 - 17	30	
B	18 - 21	20	
C	22 - 24	40	
Total score		90	

This paper consists of 8 printed pages

Candidates should check the question paper to ensure that all the printed pages are printed as indicated and no questions are missing.

SECTION A 30 marks

Answer ALL questions in this section on the spaces provided.

1. a) Give two disadvantages of intensive-system of farming. (1 mark)

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- b) List two methods of farming. (1 mark)

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2. Name any two methods that can be used to detect nutrient deficiency in crops. (1 mark)

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3. Name four methods used in harvesting trees in agroforestry. (2 marks)

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4. Outline two ways used to control overheating in the process of silage making. (1 mark)

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5. Name four types of financial books a farmer should keep. (2 marks)

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6. State two ways in which a farmer would benefit by having a title deed. (1 mark)

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7. State four factors that may lead to a farmer using high seed rate for a given crop. (2 marks)

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8. Outline four factors considered when designing a crop rotation programme. (2 marks)

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Outline four reasons why kale seedlings should be raised in a nursery bed before transplanting. (2 marks)

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List any four kinds of information a farmer should enter in the health records of livestock. (2 marks)

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Distinguish between settlement and resettlement. (2 marks)

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State four characteristics of nitrogenous fertilizers. (2 marks)

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List four methods that can be used to reclaim water-logged land. (2 marks)

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List four different categories of vegetables. (2 marks)

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Give four advantages of using certified seeds in crop propagation. (2 marks)

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16. Name three different types of layering. (1½ marks)

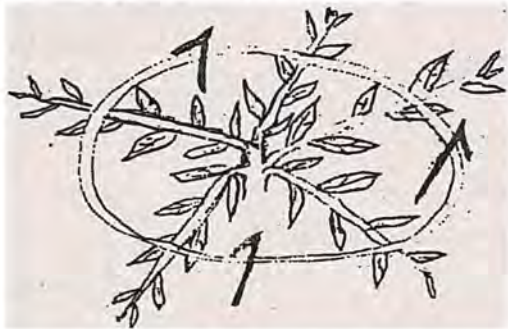
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17. State three characteristics of good green-manuring crop. (1½ marks)

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SECTION B (20 marks)

18. The diagram below shows a method of bringing tea into bearing. Study it carefully and use it to answer the questions that follow.



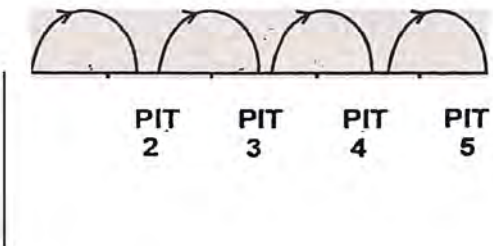
a) Identify the method shown in the diagram above. (1 mark)

b) Why is it necessary to prune a young tea plant as illustrated in the diagram above? (1 mark)

c) Outline the procedure followed when using the pruning method shown above. (3 marks)

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19. The following diagram shows a method of compost manure preparation.



a) Identify the method. (1 mark)

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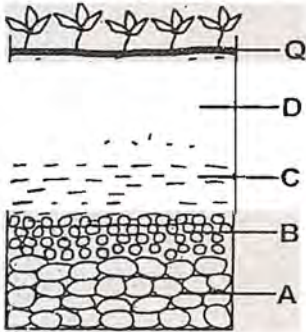
b) Give two factors that should be considered when siting the compost pit. (2 marks)

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c) Maize requires 120kg/ha of phosphorous pentoxide (P_2O_5). How much of the compound fertilizer 20 : 20 : 10 would be applied to 0.4 hectares of land to achieve this rate. (2 marks)

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



a) Identify the above structure. (1 mark)

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b) Name the parts labelled (2 marks)

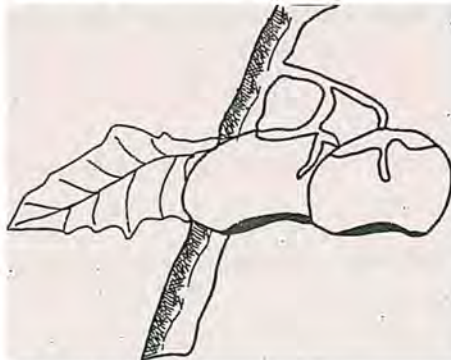
A C

B D

c) Give the name of the layer labelled Q. (1 mark)

d) State are characteristic of layer D. (1 mark)

21. The diagram below shows a physiological condition in tomatoes. Use it to answer the questions that follow.



a) Identify the disease condition. (1 mark)

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b) Outline two causes of the condition named in (a) above. (7 marks)

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c) Give two ways of controlling the diseases. (2 marks)

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SECTION C (40 marks)

Answer any two questions from this section. All questions carry equal marks.

22. a) Explain four farming practices that maintain good soil structure (4 marks)

b) Explain four advantages of minimum tillage in crop production. (4 marks)

c) Describe seven safety precautions that should be taken when using herbicides to control weeds. (7 marks)

d) Outline five harmful effects of crop pests. (5 marks)

23. a) Complete the table below that shows a hypothetical relationship between fertilizer input and maize yields, the cost of production and returns from maize. The cost of fertilizer is Kshs 750 per 50kg bag and the price of maize is Kshs 1200/= per 90kg bag. (8 marks)

CAN FERTILIZER (50 kg)	YIELD OF MAIZE (90kg/bag)	TOTAL COST (TC) Kshs	MARGINAL COST MC Ksh	TOTAL REVENUE	MARGINAL NET REVENUE	REVENUE
1	35	750				
2	53	1,500	750	63,600	21,600	
3	68		750	81,600		79,350
4	70	3,000	750			
	71	3,750	750			81,450
6	69	4,500	750		-2400	78,300
7	68	5,250	750			
8	66	6,000	750	79,200		

i) Using the table above, what is the point of profit maximization. (1 mark)

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

Describe the raising of a maize crop grown for grain production under the following subheadings

i) Ecological requirements. (2 marks)

ii) Seedbed preparation. (2 marks)

iii) Planting (4 marks)

iv) Harvesting (2 marks)

a) Describe the establishment and management of pasture crop stand up to grazing time. (5 marks)

b) Describe the cultural methods used in controlling crop diseases. (5 marks)

c) Outline five ways in which a farmer would improve the productivity of farm labour. (5 marks)

d) Describe the various agencies and institutions involved in marketing of agricultural produce. (5 marks)