

Name \_\_\_\_\_ Index No. \_\_\_\_\_

Candidate's Signature \_\_\_\_\_

Date \_\_\_\_\_

**443/1**  
**AGRICULTURE**  
**PAPER 1**  
**JULY / AUGUST 2014**  
**TIME : 2 HOURS**

**KATHONZWENI SUB-COUNTY FORM IV PRE-TRIAL EXAMINATION**  
**Kenya Certificate of Secondary Education**  
**AGRICULTURE**  
**PAPER 1**  
**2 HOURS**

**INSTRUCTIONS**

- (a) Write your name and index number in the spaces provided above.
- (b) Sign and write date of examination in the spaces provided above.
- (c) This paper consists of three sections A, B and C.
- (d) Answer all questions in section A and B.
- (e) Answer only TWO questions from section C.
- (f) Answer should be written in the spaces provided.

**FOR EXAMINER'S USE ONLY**

<b>SECTION</b>	<b>QUESTION</b>	<b>MAXIMUM SCORE</b>	<b>CANDIDATE'S SCORE</b>
A		30	
B		20	
C		20	
		20	
<b>TOTAL SCORE</b>		<b>90</b>	

*This paper consists of 12 printed pages*

*Turn Over*

**SECTION A ( 30 MARKS )**

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

1. List four importance of minimum tillage. ( 2 marks )

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- 2 Explain the term perishability as applied to vegetable crops. ( 1 mark )

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3. Give three reasons for rolling in crop production. ( 1 ½ marks )

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4. Give six physical methods of controlling pests. ( 3 marks )

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5. Give four reasons for earthing up irish potatoes. ( 2 marks )

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6. State two ways in which a farmer can improve the structure of a water-logged soil. ( 1 mark )

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7. List down four ways of modifying soil pH in the farm. ( 2 marks )

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8. What is changing cycle as used in coffee production. ( 1 mark)

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9. Distinguish between afforestation and reforestation. ( 1 mark )

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10. State two ways in which mulches control weeds. ( 1 mark )

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11. Explain the meaning of land reform. ( 1 mark)

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12. Give two methods used for seed-treatment of tree species before planting in agroforestry. ( 2 marks )

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13. State two effects of excess nitrogen in cereal crops. ( 1 mark )

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14. Give two tertiary operations in land preparation. ( 1 mark )

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15. State four advantages of rotational grazing. ( 2 marks )

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16. State four factors that determine the time of harvesting a crop. ( 2 marks )

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17. Name three branches of horticulture. ( 1 ½ marks )

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18. Name four items that a maize farmer would enter into his consumable inventory records. ( 2 marks )

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19. State four beneficial effects of soil micro-organisms. ( 2 marks )

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**SECTION B**

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

20. The figures shown below are illustrations of different weeds of arable land.



(a) Identify each weed.

( 1 mark )

W1 \_\_\_\_\_

W2 \_\_\_\_\_

(b) Explain why herbicides application is ineffective in controlling the weeds labeled W1.

(2 marks )

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(c) State four economic importance of the weed labeled W2 to a cotton grower. ( 2 marks )

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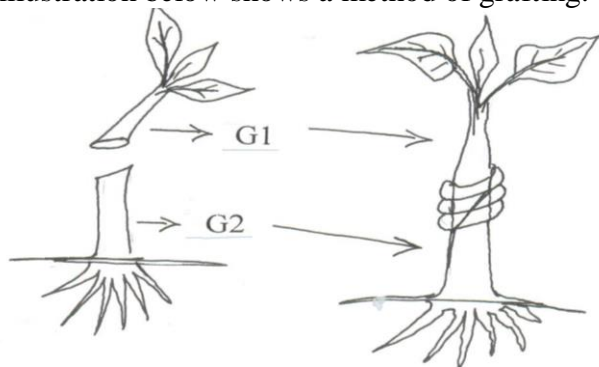
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21. (a) Design rotation programme of two seasons using the following crops; Maize, garden peas, kales and irish potatoes. (2 marks )

(b) The illustration below shows a method of grafting. Use it to answer the following questions.



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- (i) Identify the type of grafting. ( ½ mark )

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- (ii) Name the parts named G1 and G2. ( 1 mark )

G1 \_\_\_\_\_

G2 \_\_\_\_\_

- (iii) List down three equipments / tools used to carry out the above type of grafting. ( 1 ½ marks )

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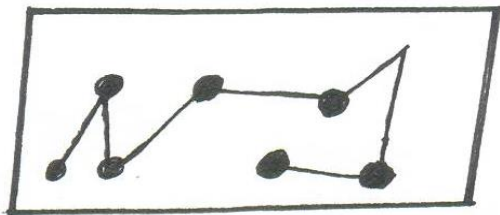
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22. A farmer bought 5 bags of 100kgs fertilizer at Ksh. 1,200 per bag. 15 litres of diesel at Ksh. 65 per litre. He also bought 3 bags of 20kgs layers mash at Ksh. 250 and 2kg of nails at Ksh. 50 per kilogram. Put the above information in a cash sale receipt. ( 5 marks )

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23. The diagram below shows a method of soil sampling. Use it to answer the questions that follow.



(a) Identify the method of sampling.

( 1 mark)

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- (b) State four pieces of information contained in a composite soil sample before it is taken to the laboratory. ( 4 marks )

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**SECTION C ( 40 MARKS )**

*Answer any TWO questions from this section in the spaces provide in each question.*

24. Describe beans (phaseolus vulgaris ) under the following sub-headings. ( 4 marks )  
(a) Ecological requirements. ( 4 marks )  
(b) Varieties ( 4 marks )  
(c ) Seedbed preparation ( 8 marks )  
(d) Pests and diseases control. ( 4 marks )
25. (i) Explain the characteristics of a fertile soil. ( 8 marks )  
(ii) State advantages of farm mechanization. ( 4 marks )  
(iii) Explain four marketing problems faced by the agricultural industry and give ways of solving these problems. ( 8 marks )
26. (a) Outline five steps followed in land adjudication. ( 5 marks )  
(b) Explain five physical structures used to control soil erosion. ( 10 marks )  
(c ) Explain five marketing functions. ( 5 marks )

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**ANSWERS:**

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