

443/1

Paper 1

AGRICULTURE

(Theory)

Mar. 2022 – 2 hours



Name Index Number

Candidate's Signature Date

Instructions to candidates

- (a) Write your name and index number in the spaces provided above.
- (b) Sign and write the date of examination in the spaces provided above.
- (c) This paper consists of three sections; A, B and C.
- (d) Answer all the questions in sections A and B.
- (e) Answer any two questions in section C.
- (f) All answers should be written in the spaces provided.
- (g) Non-programmable silent electronic calculators may be used.
- (h) This paper consists of 16 printed pages.
- (i) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- (j) Candidates should answer the questions in English.

For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1-15	30	
B	16-19	20	
C		20	
		20	
	Total Score	90	



SECTION A (30 marks)

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

1. State **two** ways in which the foreign exchange earned from agriculture is important to Kenya. (1 mark)

2. State **four** effects of excessive nitrogenous fertiliser application on tomatoes. (2 marks)

3. State **four** ways in which burning during clearing of land reduces soil fertility. (2 marks)

4. State **four** ways in which water pollution caused by farming activities can be controlled. (2 marks)

5. What is meant by the term preference and choice as used in agricultural economics? (2 marks)

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6. State **four** disadvantages of shifting cultivation. (2 marks)

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7. Name **four** categories of nursery beds. (2 marks)

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8. (a) What is meant by the term conveyance of water? (1 mark)

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(b) State **two** ways of conveying water. (1 mark)

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9. (a) What is meant by the term land tenure reform? (1 mark)

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- (b) State **four** advantages of land registration. (2 marks)

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10. Name **four** types of landslides. (2 marks)

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11. State **four** advantages of small scale farming in Kenya. (2 marks)

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12. State **four** disadvantages of stall feeding. (2 marks)

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13. Give **four** reasons why livestock farmers prepare silage. (2 marks)

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14. State four reasons for carrying out minimum tillage. (2 marks)

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15. Name four financial documents used in farm accounting. (2 marks)

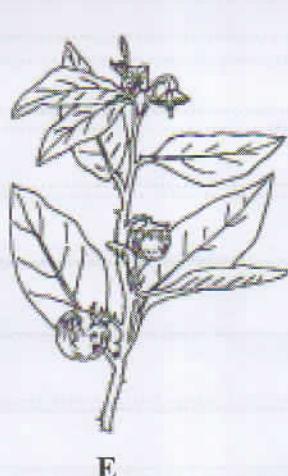
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SECTION B (20 marks)

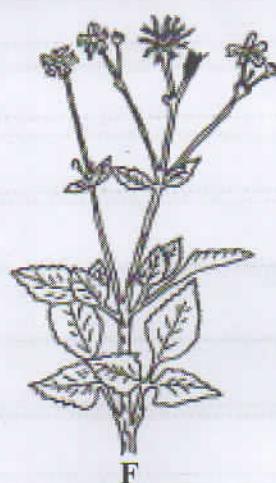
Answer all the questions in this section in the spaces provided.

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16. The diagrams below show certain weeds.



E



F



G

- (a) Identify the weeds labelled F and G.

F (1 mark)

G (1 mark)



- (b) State **one** way in which each of the weeds labelled E and F affects the quality of livestock products. (1 mark)

E

F

(1 mark)

- (c) State the **main** way in which the weed labelled G interferes with farm operations. (1 mark)

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17. (a) An agronomist recommends application of 120kg N, 60kg P₂O₅ and 80kg K₂O after testing a soil sample. Calculate the amount of urea (46%N), single super phosphate (20% P₂O₅) and potassium oxide (50% K₂O) that should be applied on the land. (4 marks)

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- (b) Distinguish between fertiliser ratio and fertiliser grade. (1 mark)

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18. A farmer has a piece of land 200 m long and 36 m wide. If the farmer plants beans at a spacing of $30\text{ cm} \times 15\text{ cm}$, calculate the plant population on the piece of land. Show your working. (5 marks)

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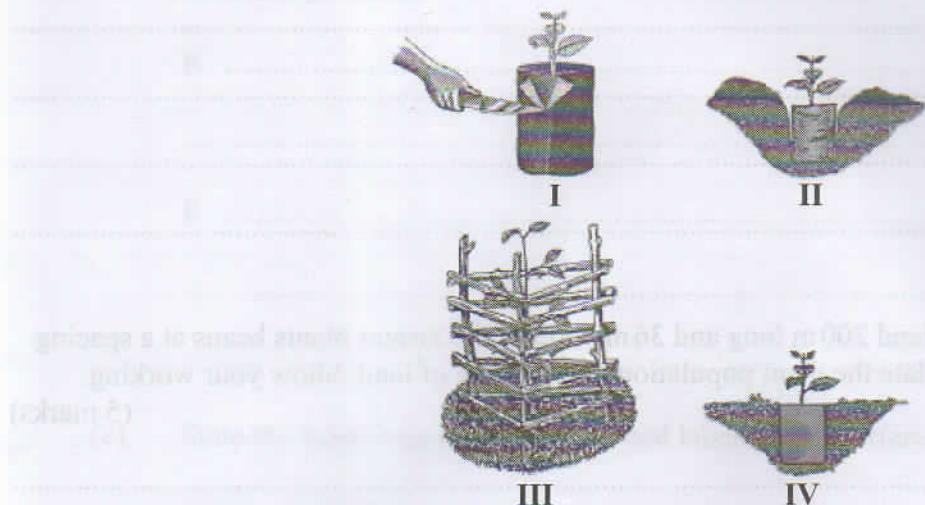
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19. The diagram below shows a practice in agroforestry.



- (a) Identify the practice. (1 mark)

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- (b) State the importance of the activity labelled:

I (1 mark)

IV (1 mark)

- (c) Why was the soil separated as shown in the activity labelled II? (1 mark)

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- (d) State the **main** precaution observed when covering the seedling as illustrated in III. (1 mark)

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SECTION C (40 marks)

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

20. (a) Describe **seven** ways in which a farm manager can provide incentives to increase the productivity of the farm workers. (7 marks)
- (b) Describe Blossom End Rot disease in tomatoes under each of the following sub-headings:
- (i) symptoms (1 mark)
 - (ii) causes (3 marks)
 - (iii) control measures. (3 marks)
- (c) Describe how a farmer should handle a bean crop from the time it is harvested until the dry seed is ready for storage. (6 marks)
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21. (a) Give **two** effects of low temperature on crop growth. (2 marks)
- (b) Explain **four** aspects of rainfall that a farmer should consider when choosing a crop to grow. (8 marks)
- (c) Describe **five** types of layering used by farmers to propagate crops. (5 marks)
- (d) Give **five** functions of agricultural marketing boards in Kenya. (5 marks)
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22. (a) Describe rice production under each of the following sub-headings:
- (i) land preparation (3 marks)
 - (ii) water control (3 marks)
 - (iii) weed control. (2 marks)
- (b) Describe millet production under each of the following sub-headings:
- (i) seedbed preparation (2 marks)
 - (ii) planting (2 marks)
 - (iii) harvesting. (3 marks)



(c) Explain five factors that influence mass wasting.

(5 marks)

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