

443/1

**AGRICULTURE**  
(Theory)

Paper 1



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
<b>A</b>	<b>1-15</b>	<b>30</b>	
<b>B</b>	<b>16-19</b>	<b>20</b>	
<b>C</b>		<b>20</b>	
		<b>20</b>	
<b>Total Score</b>		<b>90</b>	



**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)

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

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

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

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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.*

16. The diagrams below show certain weeds.



(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** .....

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**F** .....

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(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  $P_2O_5$  and 80kg  $K_2O$  after testing a soil sample. Calculate the amount of urea (46%N), single super phosphate (20%  $P_2O_5$ ) and potassium oxide (50%  $K_2O$ ) that should be applied on the land. (4 marks)

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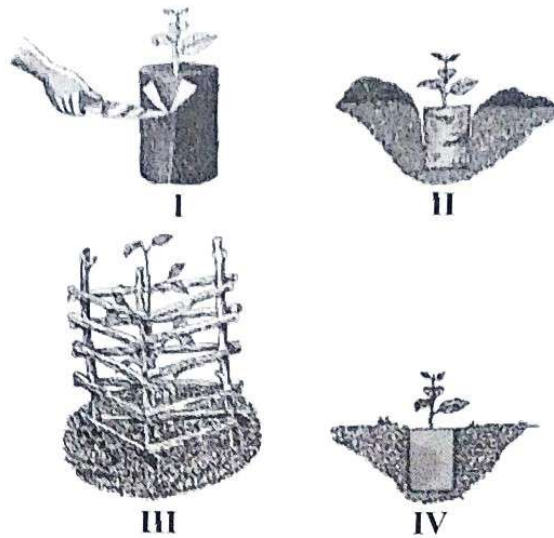
(b) Distinguish between fertiliser ratio and fertiliser grade. (1 mark)

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

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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.

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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)
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)
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)

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(c) Explain five factors that influence mass wasting.

(5 marks)

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