

THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education



Paper 1

443/1

AGRICULTURE (Theory)

Nov. 2023 - 2 hours

Serial No.

27166236

Name:

Index Number:

Candidate's signature:

Date:

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 provided above.
- This paper consists of **three** sections; **A**, **B** and **C**.
- Answer **all** the questions in sections **A** and **B**.
- Answer any **two** questions in section **C**.
- All answers should be written in the spaces provided.
- Non-programmable silent electronic calculators may be used.
- This paper consists of 16 printed pages.**
- Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.**
- 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	

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443/1



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SECTION A (30 marks)

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

- 1** State **four** roles of agroforestry trees in soil and water conservation. (2 marks)

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- 2** State **four** factors that determine spacing in crop production. (2 marks)

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- 3** Give **four** reasons why organic farming is important. (2 marks)

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- 4** State **four** advantages of applying nitrogenous fertilizers in splits. (2 marks)

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- 5** State **four** factors which limit a farmer's access to agricultural credit. (2 marks)

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- 6 Name **four** sources of surface water. (2 marks)

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- 7 Give **four** reasons why land consolidation should be undertaken in densely populated areas. (2 marks)

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- 8 Give **four** reasons why maize farmers should control strong wind in their crop fields. (2 marks)

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- 9 State **four** aspects of rainfall that influence coffee farming. (2 marks)

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- 10 State **four** reasons why a farmer should avoid excess nitrogenous fertilizer in tomato production. (2 marks)

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11 State **four** disadvantages of using suckers as planting materials. (2 marks)

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12 Give **four** ways of breaking seed dormancy. (2 marks)

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13 State **four** factors considered when selecting stem cuttings for planting cassava. (2 marks)

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14 Give **four** reasons for sub-soiling in land preparation. (2 marks)

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15 State **four** methods of treating water for use on the farm. (2 marks)

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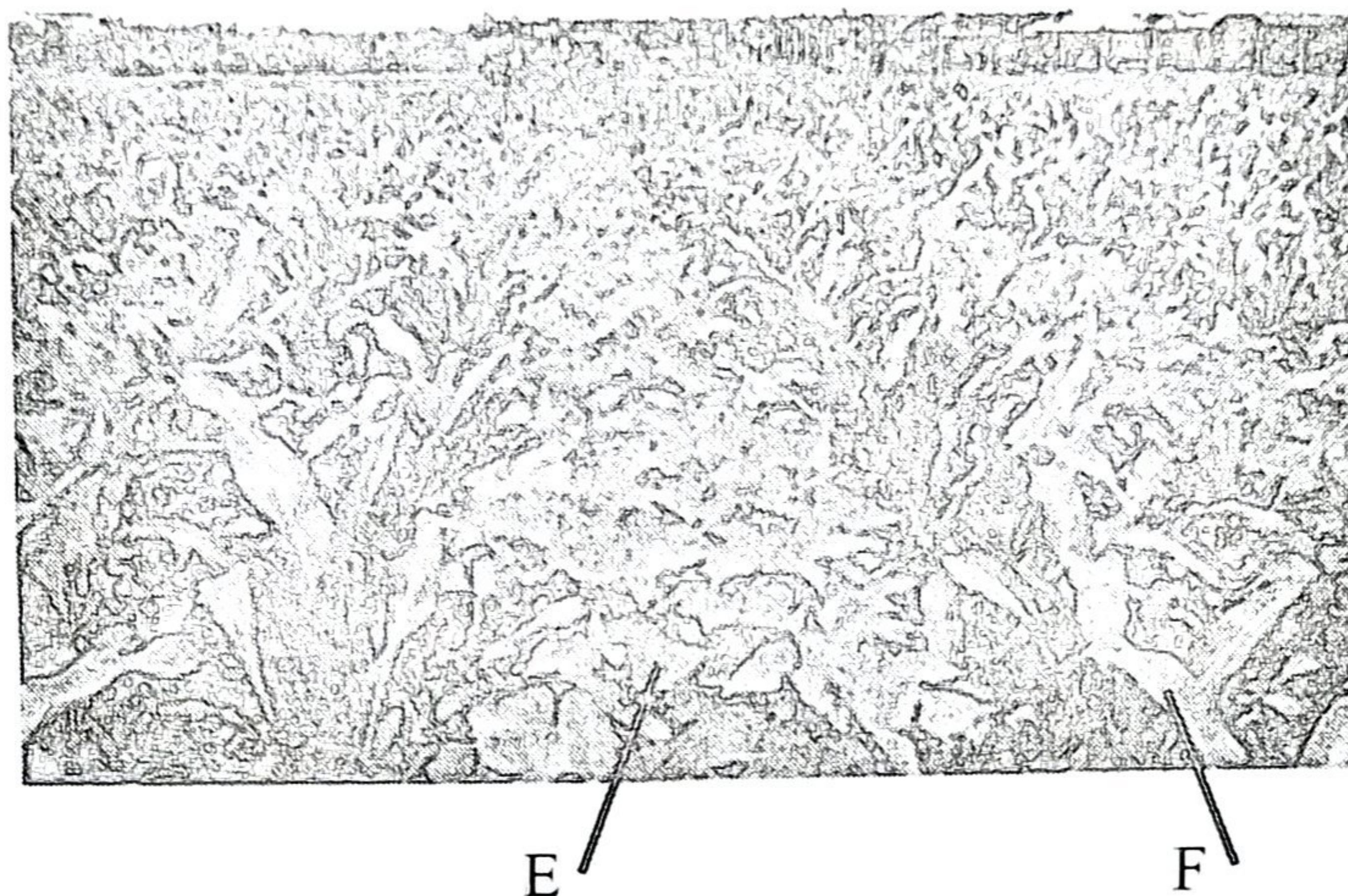
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SECTION B (20 marks)



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

- 16 The picture below shows the practice a farmer used to grow crops.



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

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- (b) State two factors that determine the selection of the crop labelled E. (2 marks)

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- (c) Give two ways in which the crop labelled F benefits from the practice (2 marks)

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- 17 A tomato crop infected by a disease shows the following symptoms:

- dry brown lesions on stems, leaves and fruits;
- fruits appear rotten and fall prematurely.

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

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- (b) Name the causal organism of the disease. (1 mark)

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(c) Give **three** control measures for the disease.

(3 marks)

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18 The following is a picture showing a sorghum plant infested by a pest.



(a) Identify the pest.

(1 mark)

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(b) Give **two** reasons for your answer in (a).

(2 marks)

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(c) State **two** control measures for the pest.

(2 marks)

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- 19 The following is a picture showing a pasture crop infested by a weed.



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

- (b) Give three effects of the weed on the pasture crop. (3 marks)

- (c) State the appropriate growth stage at which the weed should be controlled. (1 mark)

SECTION C (40 marks)

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

- 20
- Explain **six** factors considered when designing a crop rotation programme. (6 marks)
 - Explain **four** control measures of river bank erosion. (4 marks)
 - Explain **two** ways in which each of the following factors influences crop production:
 - relative humidity; (2 marks)
 - light; (2 marks)
 - temperature. (2 marks)
 - Give **four** roles of 4-K clubs in Kenya. (4 marks)

21 (a) Describe **ten** ways in which farmers who grow beans can cope with risks and uncertainties. (10 marks)



(b) Explain **ten** factors that influence soil erosion. (10 marks)

22 (a) Give **five** pieces of information kept in feeding records on a dairy farm. (5 marks)

(b) Describe the field management practices for cabbage production. (9 marks)

(c) Give **six** benefits of establishing onions using a nursery bed instead of direct sowing. (6 marks)

