

AGRICULTURE PAPER I

Paper I
Theory
(2 Hours)

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

[h] Candidates should answer the questions in English.

For Examiners

| SECTION | QUESTIONS | MAX.SCORE | CAND.SCORE |
|---------|--------------------|-----------|------------|
| A | 1-----18 | 30 | |
| B | 19-----23 | 20 | |
| C | | 20 | |
| | | 20 | |
| | TOTAL SCORE | 90 | |

SECTION A: (30 MARKS)

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

1. State **four** limitations of pastoral farming (2 marks)

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2. Give **four** benefits of timely planting of crops (2 marks)

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3. State **four** factors of soil which influence productivity of crops (2 marks)

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4. Give **four** conditions of land that would make it necessary to carryout reclamation practices (2 marks)

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5. State **two** factors that influence the quantity of water used in the farm (1 mark)

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6. State **four** reasons for keeping health records (2 marks)

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7. Give **two** types of inventory records (1 mark)

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8. Name **two** situations in which opportunity cost does not exist (1 mark)

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9. State **three** ways in which flooded water is important in the growing of paddy rice (1½ mks)

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10. State **four** ways of maintaining a healthy and high yield grass pasture after planting (2 marks)

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11. Give **three** factors considered while determining the size of a silo (1½ mks)

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12. Give **two** ways in which overheating can be avoided during silage making (1 mark)

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13. State **four** factors that will determine the depth of ploughing a maize field using tractor drawn implements (2 marks)

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14. Give **four** ways in which cover crops help in soil and water conservation (2 marks)

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15. List **five** biotic factors that affect livestock negatively (2½ mks)

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16. State **three** characteristics of soil that are influenced by its texture (1½ mks)

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17. Distinguish between contact and systemic herbicide (2 marks)

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18. Give **two** reasons why phosphatic are applied at planting time (1 mark)

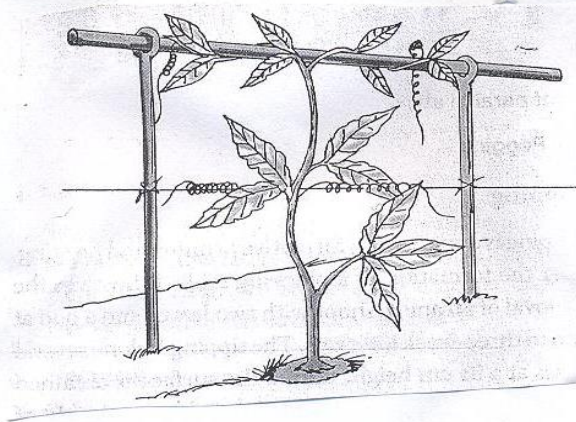
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SECTION B: (20 MARKS)

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

19. The diagram below shows a practice in crop production.



a)i) Give the identity of the field management practice illustrated above (½ mark)

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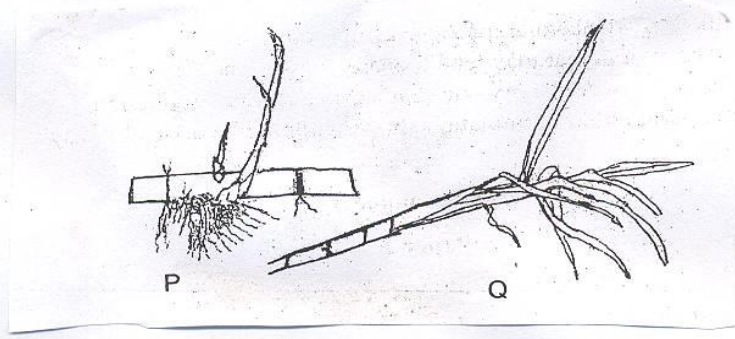
ii) Give **two** reasons for carrying out the above field management practice (2 marks)

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b) A plot measuring 4m x 3m was prepared for planting cabbages at a spacing of 60cm x 60cm. Calculate the plant population in the plot (1½ mks)
Show your working.

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20. a) Identify the illustration P and Q which are materials used in propagation of sugarcane



P

Q

b) Giving reasons which of the above is more suitable as a planting material in sugar cane? (2 marks)

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c) How is planting material in sugarcane treated to control ratoon stunted disease (1 mark)

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21. The diagrams below labelled H and J are illustrations of coffee plants established using two different pruning systems. Examine them closely and answer the questions that follow.



H



J

- a) Name the pruning systems illustrated by diagrams H and J (1 mark)

H

J

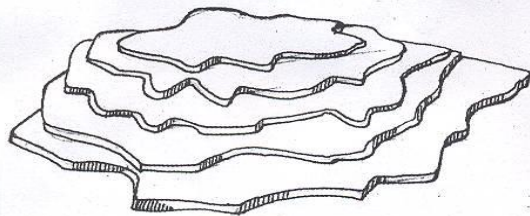
- b) Give **two** advantages of pruning system illustrated by diagram H over that one illustrated by diagram J (2 marks)

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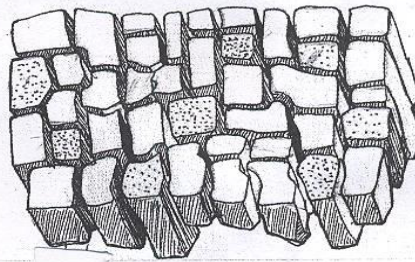
- c) Name **two** types of pruning that should be carried out after the coffee bush has been established using the system J (2 marks)

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22. The diagrams V and W illustrate some soil structures. Study the diagrams and answer the questions that follow.



V



W

a) Identify the **two** structures labelled V and W (1 mark)

V

W

b) Name the types of soils from which structures labelled V and W can be found (1 mark)

V

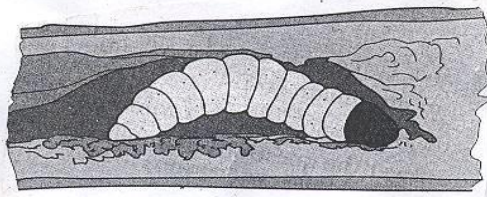
W

c) State **two** ways through which structure V may influence crop production (2 marks)

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23. The diagram below shows a maize stalk infested by a certain pest. Study it and answer the questions that follow.



a) Identify the pest (½ mark)

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b) Give **two** types of damages caused to crops by the above pest (2 marks)

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c) Other than maize name one other crop attacked by the pest (½ mark)

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SECTION C: (40 MARKS)

Answer any TWO questions from this section in the spaces provided.

24. a) Describe the field production of tomatoes under the following subheadings
- (i) Field management practices (7 marks)
 - (ii) Grading of tomato fruits (3 marks)
- b) Explain **five** factors considered when designing a crop rotation programme (10 marks)
25. a) Explain **ten** factors that influence soil erosion (10 marks)
- b) Describe **six** benefits of land consolidation (6 marks)
- c) Explain **four** main objectives of establishing the early African settlement schemes (4 marks)
26. a)i) Explain the difference between stocking rate and carrying capacity (2 marks)
- ii) Discuss the advantages of rotational grazing system (5 marks)
- iii) Describe the precautions when harvesting coffee (3 marks)
- b)i) Explain harmful effects of weeds in the main field (5 marks)
- ii) Discuss the cultural methods of controlling crop diseases (5 marks)