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 and any two questions from section C.
(e) Answers should be written in the spaces provided.
(f) This paper consists of 16 printed pages.
(g) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

For Examiner’s Use Only

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SECTION A (30 marks)

Answer ALL the questions in this section in the spaces provided

1. Name the part harvested for each of the following crops:
   (a) onions
   ............................................................................................................. (1/2 mark)
   (b) carrots
   ............................................................................................................. (1/2 mark)
   (c) coffee
   ............................................................................................................. (1/2 mark)

2. State four biotic factors that influence crop production. (2 marks)
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3. Name four methods of controlling crop pests. (2 marks)
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4. State four ways of harvesting water on the farm (2 marks)

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5. Name four farm records that should be kept by a poultry farmer. (2 marks)

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6. State four disadvantages of using organic manure in crop production. (2 marks)

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7. Give two ways in which pastures are classified. (1 mark)

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8. State four disadvantages of organic mulches. (2 marks)

9. Give five advantages of practicing crop rotation. (2½ marks)

10. State two advantages of earthling up in crop production. (1 mark)

11. Give four harmful effects of weeds on crop production. (2 marks)

12. State three advantages of shifting cultivation. (1½ marks)
13. Give five advantages of zero grazing in dairy farming. (2 ½ marks)

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14. State four factors that determine the stage at which a crop is harvested. (2 marks)

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15. State four ways in which land reform can be implemented in Kenya. (2 marks)

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16. Give four factors that influence the number of secondary cultivation in seedbed preparation. (2 marks)

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SECTION B (20 marks)

Answer ALL the questions in this section in the spaces provided

17. The illustration below shows a structure used for controlling soil erosion. Study it carefully and answer the questions that follow.

(a) Identify the structure. (1 mark)

(b) Explain two ways in which the structure helps to control soil erosion. (2 marks)
18. The diagram below illustrates the law of demand in agricultural marketing. Study it and answer the questions that follow.

(a) Give a reason for the shape of the curve labeled A. (1 mark)

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(b) If the price of the commodity remains constant, explain three factors that can cause the curve to shift from A to B. (3 marks)

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The diagrams below illustrate common weeds in arable land. Study them carefully and answer the questions that follow.

(a) Identify the weed labeled D. (1 mark)

(b) Classify the weed labeled C according to plant morphology. (1 mark)

(c) Give one reason why it is difficult to control the weed labeled D. (1 mark)
20. The diagram below illustrates an agroforestry practice. Study it and answer the questions that follow.

(a) Identify the agroforestry practice illustrated above. (1 mark)

(b) Explain three benefits of the practice illustrated above. (3 marks)
21. The diagram below shows a pest and the damaged crop. Study it and answer the questions that follow.

(a) Identify the crop pest illustrated above. (1 mark)

(b) Explain two ways of controlling the pest. (2 marks)
22. The diagram below illustrates an investigation on a property of soil using soil samples labeled J, K and L.

(a) If the levels of water shown in the diagram were observed after three hours, name the property of soil being investigated. (1 mark)

(b) What is the relationship between the soil property named in (a) above and the size of soil particles? (1 mark)

(c) Which soil sample would be suitable for growing paddy rice? (1 mark)
SECTION C (40 marks)

Answer any TWO questions from this section in the spaces provided after question 25.

23. (a) Explain five factors that should be considered in farm planning. (10 marks)

(b) Describe the transplanting of tomato seedlings. (10 marks)

24. (a) Explain five factors that should be considered when siting a vegetable nursery. (5 marks)

(b) Explain six factors that should be considered when selecting seeds for planting. (6 marks)

(c) Explain the difference ways in which of the following environmental factors influence crop production:

(i) temperature; (4 marks)

(ii) wind (5 marks)

25. (a) Outline the information contained in a Purchase Order. (5 marks)

(b) Describe the harvesting of tea. (6 marks)

(c) Explain the importance of irrigation in crop production (5 marks)

(d) Describe the role of magnesium in crop production. (4 marks)