SECTION A (30 marks)

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

1. Give **four** reasons for intercropping in crop production. (2 marks)

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2. State **four** characteristics of extensive farming system. (2 marks)

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3. State **four** minimum tillage practices. (2 marks)

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4. Give **four** reasons why burning of land is discouraged. (2 marks)

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5. State **four** functions of Young Farmers' Clubs. (2 marks)

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6. Distinguish between a perfect and an imperfect market. (1 mark)

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7. State **four** reasons for practising intensive hedgerow agroforestry. (2 marks)

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8. State **four** management practices in intensive hedgerow agroforestry. (2 marks)

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9. State the meaning of each of the following terms as used in crop production:

(a) crop rotation (1 mark)

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(b) pruning (1 mark)

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(c) rogueing. (1 mark)

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10. State **four** factors that determine the depth of planting. (2 marks)

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11. State **four** disadvantages of broadcasting seeds during planting. (2 marks)

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12. State **four** characteristics of a good site for a nursery bed. (2 marks)

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13. Name **four** types of market structures in agricultural marketing. (2 marks)

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14. Name **one** crop that is propagated by each of the following:

(a) stem tuber (½ mark)

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(b) split (½ mark)

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(c) slip (½ mark)

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(d) bulbil. (½ mark)

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15. State **four** advantages of using certified seeds. (2 marks)

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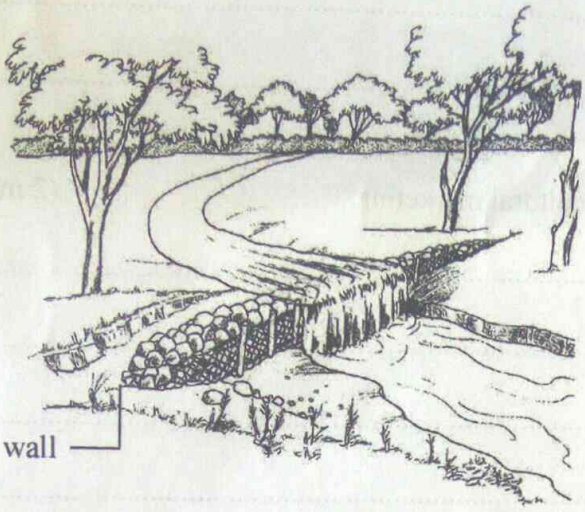
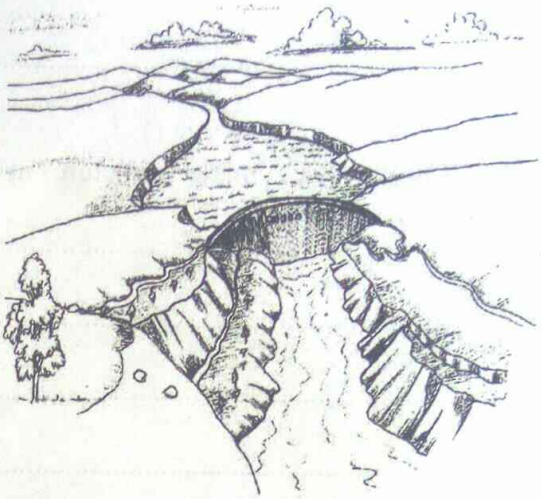
SECTION B (20 marks)

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

16. The diagram below illustrates water storage structures.



E



F

(a) Identify the structure labelled **E**. (1 mark)

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(b) Give **two** reasons why farmers prefer structure **F** to **E**. (2 marks)

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(c) State **two** maintenance practices for the structure labelled **F**. (2 marks)

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17. A farmer has a piece of land on which he can grow maize, cabbages and beans. The expected yields and selling prices of the three crops are shown below.

Crop	Yield (kg)	Selling prices (Ksh/kg)
Maize	4000	40
Cabbages	2800	60
Beans	3000	80

If the cost of producing any of the three crops is the same

(a) Which crop should the farmer grow? Show your working. (2 marks)

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(b) (i) State the farmer's opportunity cost. (1 mark)

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(ii) Give a reason for your answer in (b) (i) above. (1 mark)

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(c) Give a reason why farmers always have to make a choice on the enterprise to implement on the farm. (1 mark)

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18. The following is a list of plant nutrients:

Copper, calcium, nitrogen, molybdenum, zinc, phosphorous, carbon, sulphur, iron and magnesium.

(a) Which one of the above plant nutrients is mainly known for

(i) promoting root development (1 mark)

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(ii) preventing blossom end rot disease (1 mark)

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(iii) Strengthening plant stalks to prevent lodging. (1 mark)

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(b) Name **two** forms in which nitrogen is absorbed from the soil by plants. (2 marks)

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19. A farmer is advised to apply 60 kg N, 20 kg P_2O_5 and 30 kg K_2O per hectare. Calculate the quantity of urea (46% N), single super phosphate (20% P_2O_5) and muriate of potash (50% K_2O) the farmer should apply on his 10 hectares land. (5 marks)

SECTION C (40 marks)

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

20. (a) Describe **eight** methods used in water harvesting. (8 marks)

(b) Describe **nine** ways in which biotic factors influence agricultural production. (9 marks)

(c) Describe the preparation of green manure. (3 marks)

21. (a) Describe **seven** harmful effects of crop pests. (7 marks)

(b) Describe **eight** safety measures a farmer should observe when using herbicides to control weeds. (8 marks)

(c) Describe the harvesting of coffee. (5 marks)

22. (a) Give **five** reasons why early defoliation is discouraged in pasture utilisation. (5 marks)

(b) Described **five** field management practices for onions. (5 marks)

(c) State **five** disadvantages of communal land tenure system. (5 marks)

(d) State **five** characteristics of variable inputs. (5 marks)

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