

**SECTION A ( 30 MARKS)**

Answer **ALL** questions in this section

1) Name a chemical used to achieve the following during water treatment.

(a)Coagulation of solid particles (½mark)

..... (½mark)

(b)Softening of water

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(c)Killing pathogens (½mark)

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2) State **two** causes of forking in carrots | mark

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3) Name **four** books of account kept by a farmer (2 mark)

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4) Give the element whose deficiency in plants is plants is characterized by the following

(a) Interveinal chlorosis of the leaves .....(½ mark)

(b) Blossom end rot in tomatoes .....(1/2mark)

(c) Scorched edges of a leaf ..... (½ mark)

5) Give **two** roles of agriculture in industrial growth. (1 mark)

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6). Difference between olericulture and pomoculture ( 1 mark)

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7 a) Give two disadvantages of Hydram pumps (1 mark)

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(b) State two methods of harvesting Maize (1 mark)

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8) State **four** conditions that necessitate irrigation. (2 marks)

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9) Give **four** farming practices that may help in achieving minimum tillage. (2 marks)

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10) Define the term "Economic Injury Level" of a crop. (1 mark)

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11) State **two** conditions when opportunity costs are zero (1 mark)

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12) State four factors that influence soilfluction (2 marks)

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13) Give four conditions that necessitate clearing of land. (2 marks)

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14) List two maintenance practices of sub-surface irrigation (1 mark).

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15) Give four reasons for keeping health records (2 marks)

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16) Name any two diseases that affect bean production in the field. (1 mark)

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17) State four benefits of crop rotation (2 marks)

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18) State four management practices in a vegetable nursery (2 marks)

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19) Name four processes involved in chemical weathering (2mks)

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20) Give two types of inventory records in the farm. (1 mark)

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21) Below is a list of weeds found in the farm. Use them to answer the questions below.  
Wondering Jew, pigweed, Mexican Marigold, Sodom Apple, Couch Grass and Thorn Apple.

i) Name two narrow leaved weeds. (1 mark)

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ii) Give two weeds that are poisonous. (1 mark)

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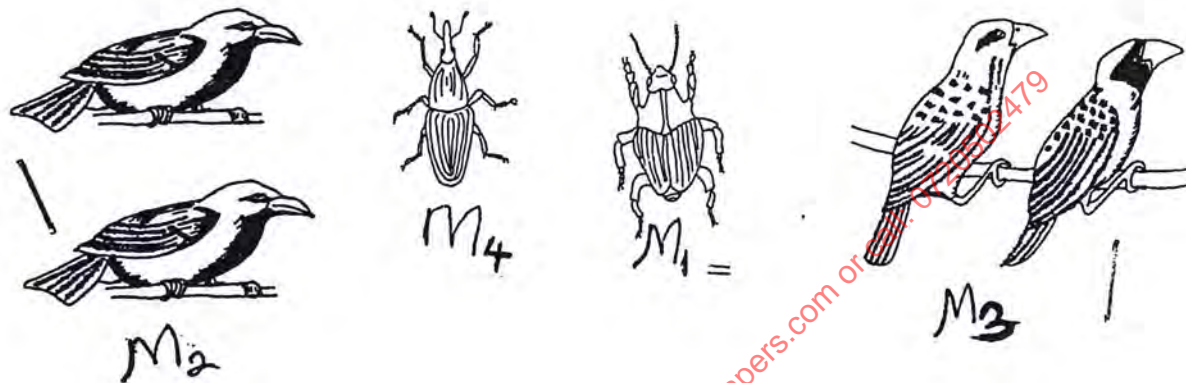
iii) Identify two annual weeds from the above list (1 mark)

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**Section B (20 marks)**

Answer ALL the question from this section

22) The diagrams below illustrate both field and storage pests



a) Identify the pests in the illustration. (1½ mark)

M<sub>1</sub>: .....

M<sub>2</sub>: .....

M<sub>3</sub>: .....

M<sub>4</sub>: .....

b) State two ways by which pest labelled M<sub>2</sub> causes loss in cereal crops. (2marks)

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c) State two methods which are used to control the pest labeled M<sub>2</sub>. (2marks)

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23) Study the following field practice.



(a) Identify the practice carried out in the above diagram. (2marks)

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(b) Give four reasons for carrying out the above practice. (4marks)

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(c) Give three limitations of the above practice. (3marks)

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24) The diagrams below labeled H and J are illustrated of coffee plants establishing 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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25) Name two types of pruning that should be carried out after the coffee bush has been established using the system J (2marks)

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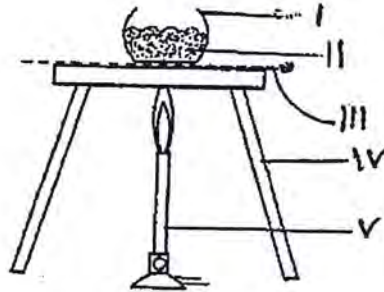
26) A farmer wishes to change her enterprise from vegetable production to dairy cattle rearing. The costs she incurs in growing of vegetables is as follows:

- Weeding Sh. 200, Harvesting Sh. 300, Fertilizers Sh. 500 and Seeds Sh. 400. When she changes her enterprises to dairy cattle rearing, she incurs the following cost:
- Cost of buying cattle Sh. 5000, Disease control, Sh. 200, Salary of milk person Sh. 2000 and Fencing Sh. 500. The revenue she got when growing vegetable is 10,000.
- In dairy production, the revenue she gets from milk sales is Shs. 15,000 and manure sales shs. 1,000.

Draw up the partial budget and indicate the effect of the change. (Show your working) (5marks)

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 27) The diagram below shows a setup of apparatus for finding the percentage of humus contents in a soil by ignition.



a) Name the apparatus labeled as; (2 marks)

- i.
- ii.
- iii.
- iv.
- v.

(b) Describe the steps followed in carrying out the illustrated experiment. (3 marks)

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**SECTION C ( 40 marks)**

Answer TWO questions from this section in the spaces provided

28) Use the information given in the table below to answer the questions that follow.

Fertilizer inputs (units)	Potato yield (bags)	Marginal product (bag)
0	50	-
1	62	12
2	66	4
3	68	2
4	69	1
5	69	0

The cost of fertilizer is Shs. 320 per unit and the price of potatoes is Shs. 200 per bag.

i) At what point of fertilizer application should the farmer be advised to stop investing in potatoes?

(Show your work)

(5marks)

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

(2marks)

At what level is net revenue highest?

(1mark)

b) Explain the methods of harvesting agroforestry

(4 marks)

c) Describe five effect of over application of nitrogenous fertilizer.

(5mrks)

- d) Explain three main objectives of establishing the early African settlement schemes
- 29a) State the functions of the Kenya National Federation of Producers in Kenya (5 marks)
- b) Describe the harvesting of cotton (10 marks)
- c) Explain five the effects of soilfluction (5 marks)
- 30a) Explain **five** ways government policy contributes to Agriculture. (5 marks)
- b) Explain any **five** factors considered when spacing crops. (10mks)
- c) Describe the advantages of mixed grass -legume pasture over a pure grass pasture (5mks)

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