

KCSE 2011**4.3 AGRICULTURE (443)****4.3.1 Agriculture Paper 1 (443/1)****SECTION A (30 marks)**

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

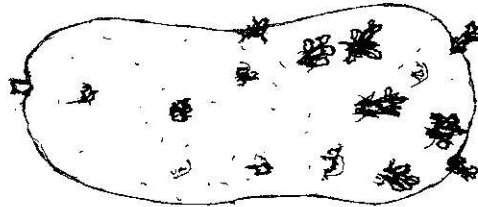
- 1 (a) Name **two** field management practices that are carried out to obtain optimum plant population in a crop field. (1 mark)
.....
.....
- (b) Explain how each of the practices named in (a) above achieves optimum plant population. (1 mark)
.....
.....
- 2 Give **two** examples for each of the following types of costs incurred in broiler production.
 - (a) variable costs; (1 mark)
.....
.....
 - (b) fixed costs. (1 mark)
.....
.....
- 3 State **four** disadvantages of mono cropping in crop production. (2 marks)
.....
.....
- 4 Give **three** reasons for early seedbed preparation. (1½ marks)
- 5 State **two** ways in which crop rotation controls weeds. (1 mark)
- 6 Outline **four** qualities of a mother plant from which vegetative propagation materials should be obtained. (2 marks)
- 7 Give **three** factors that should be considered when choosing the type of labour to use on the farm. (1½ marks)

- 8 State the use of each of the following in farm accounting:
- (a) balance sheet; (½ mark)
- (b) inventory; (½ mark)
-
- (c) cash book. (½ mark)
-
- 9 State **four** functions of Agricultural Society of Kenya (A.S.K.). (2 marks)
- 10 How does leaching lead to loss of soil fertility? (½ marks)
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- 11 Give **two** reasons for imposing quarantine on imported planting materials. (1 mark)
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- 12 State **four** ways of controlling bean anthracnose disease. (2 marks)
- 13 List **four** post-harvest practices that are carried out in maize production. (2 marks)
- 14 Name **two** types of non-competitive markets. (1 mark)
- 15 Name **four** settlement schemes that the Kenyan government started as a result of the success of the Million Acre Scheme. (2 marks)
- 16 Give a weed for each case, which has the following effect on cattle:
- (a) poisoning; (½ mark)
-
- (b) tainting milk when eaten before milking. (½ mark)
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- 17 Apart from training and extension services, state **four** other agricultural support services the Kenyan government provides to a maize farmer. (2 marks)
- 18 State **three** methods of harvesting trees in agroforestry. (1½ marks)
- 19 Give **three** maintenance practices for trees in agroforestry. (1½ marks)

SECTION B (20 marks)

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

- 20 The diagram below illustrates a seed potato prepared for planting. Study it carefully and answer the questions that follow:



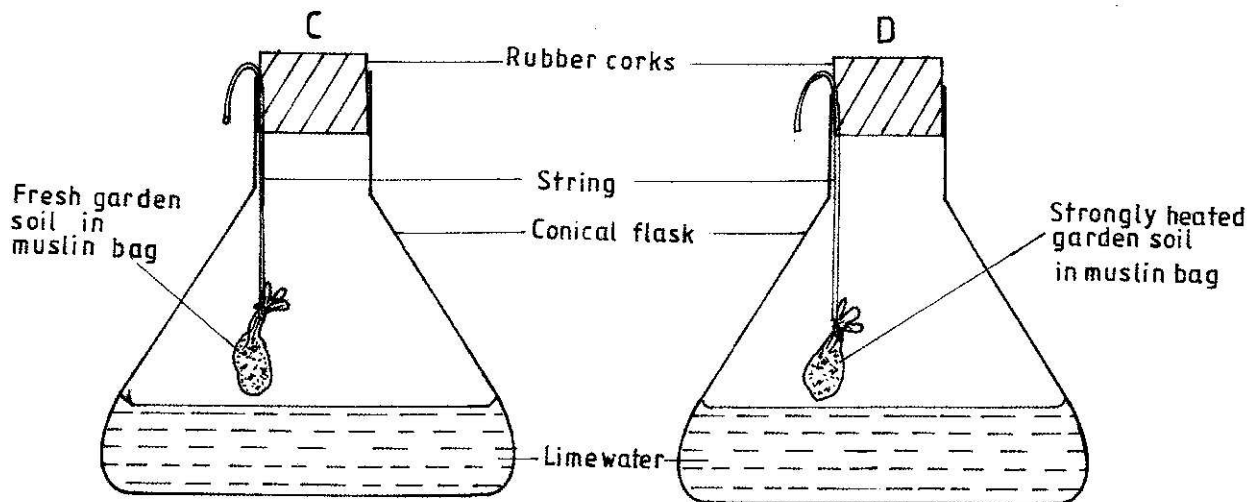
- (a) Name the practice used in preparing the seed potato above for planting. (1 mark)

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- (b) Describe the procedure followed in preparing seed potatoes for planting. (3 marks)

.....

- 21 The diagrams below show a set up of an experiment to study an aspect of soil. The set up was left undisturbed for five hours. Study it and answer the questions that follow.



- (a) What was the aim of the experiment? (1 mark)

- (b) State **one** observation that was made in each of the flasks labelled **C** and **D**.

C..... (½ mark)

D..... (½ mark)

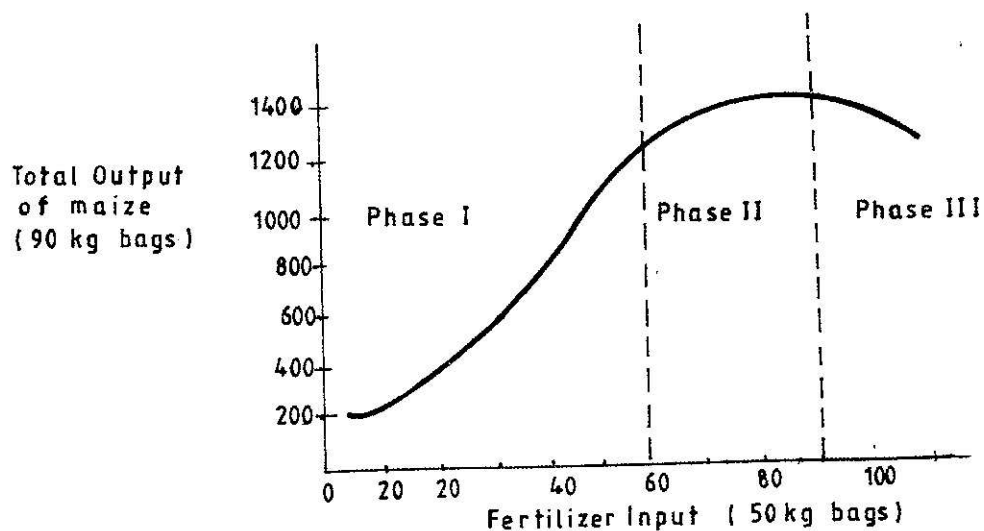
- (c) Give a reason for each of your answers in (b) above.

C..... (1 mark)

.....

D..... (1 mark)

- 22** Below is a graphical representation of a law in agricultural economics. Study the graph carefully and answer the questions that follow:



- (a) Identify the law illustrated by the graph. (½ mark)

- (b) Explain how each additional unit of fertilizer input relates to the total output of maize in phases II and III.

Phase II..... (1 mark)

.....

Phase III..... (1 mark)

.....

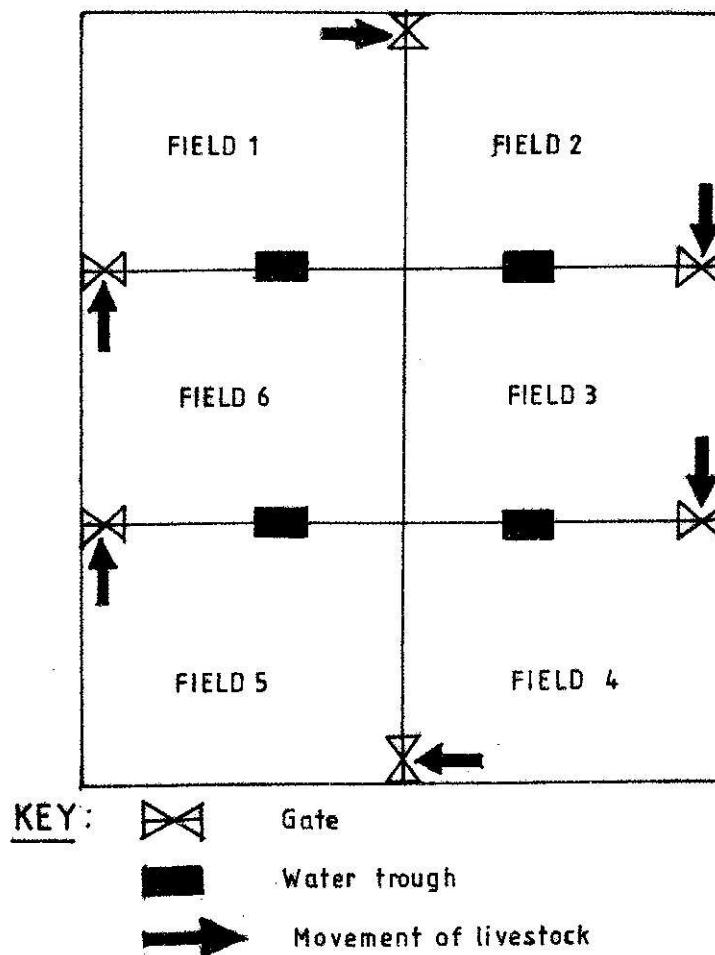
- (c) State the importance of the law identified in (i) above to the maize farmer. (1 mark)

- 23 The following information was extracted from Makueni Farm Records for the financial year ending on 30th June 2009. Study it and prepare a profit and loss account for the farm.

(3 marks)

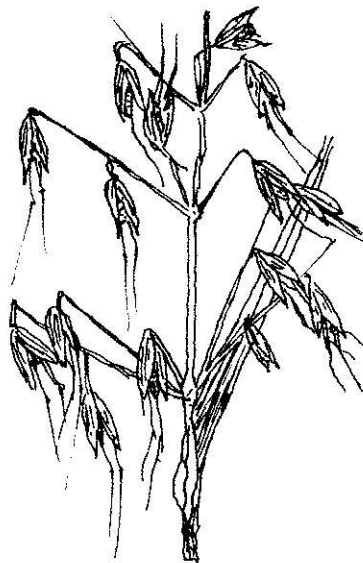
• Rent received	Sh. 10,000
• Egg sale	Sh. 60,000
• Repair of tractor	Sh. 30,000
• Opening valuation	Sh. 80,000
• Interest on Bank loan	Sh. 20,000
• Tax paid	Sh. 40,000
• Closing valuation	Sh. 90,000
• Purchase of farm inputs	Sh. 90,000
• Debts receivable from farmers co-op society	Sh 100,000
• Maize sales	Sh. 55,000

- 24 The diagram below illustrates a grazing system. Study it carefully and answer the questions that follow.



- (a) Identify the grazing system illustrated above. (½ mark)
- (b) State **five** advantages of the grazing system illustrated above. (2½ marks)

- 25 The diagram below is an illustration of a weed. Study it and answer the questions that follow.



- (a) Identify the weed. (½ mark)
- (b) State **two** harmful effects of the weed illustrated above. (2 marks)

SECTION C (40 marks)

Answer any **two** questions from this section in the spaces provided after question 28.

- 26
 - (a) Describe how water is treated to remove solid impurities. (5 marks)
 - (b) Give a reason for each of the farm records kept on a dairy farm. (5 marks)
 - (c) Describe the production of cabbages under the following sub-headings:
 - (i) seedbed preparation; (3 marks)
 - (ii) transplanting of seedlings. (7 marks)
- 27
 - (a) Describe the effects of pests on maize in the field. (6 marks)
 - (b)
 - (i) Describe the procedure of harvesting pyrethrum. (4 marks)
 - (ii) Explain the precautions that should be observed during the harvesting of pyrethrum. (3 marks)
 - (c) Describe the cultural methods of controlling soil erosion. (7 marks)
- 28
 - (a) Explain five ways in which biotic factors influence crop production in agriculture. (5 marks)
 - (b) Describe how the stem cuttings for propagating tea are prepared. (9 marks)
 - (c) Describe the properties of nitrogenous fertilizers. (6 marks)