

NameIndex Number/.....

443/1
AGRICULTURE
Paper 1
Oct./Nov. 2010
2 hours

Candidate's Signature

Date.....



THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
AGRICULTURE
Paper 1
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 from section C.
- (f) All answers should be written in the spaces provided.
- (g) This paper consists of 16 printed pages.
- (h) 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

Section	Question	Maximum Score	Candidate's Score
A	1 - 16	30	
B	17 - 22	20	
C		20	
		20	
TOTAL SCORE		90	

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AGRICULTURE
Paper 1

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Turn over

SECTION A (30 marks)

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

1 Give **two** disadvantages of intensive system of farming. (1 mark)

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2 List **four** methods of farming. (2 marks)

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3 Give the meaning of the following terms:

(a) nitrogen fixation into the soil; (1 mark)

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(b) phosphorus fixation in loss of soil fertility. (1 mark)

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4 Give **four** reasons for keeping livestock health records on the farm. (2 marks)

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5 Explain the relationship between scarcity and choice as used in agricultural economics. (2 marks)

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6 State **two** reasons for land fragmentation in Kenya. (1 mark)

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7 Give **four** advantages of individual owner operator tenure system as practised in Kenya. (2 marks)

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8 State **four** features that should be considered when choosing water pipes for use on the farm. (2 marks)

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9 Give **four** reasons for treating water for use on the farm. (2 marks)

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10 Name **four** statutory boards that are involved in the marketing of crop produce in Kenya. (2 marks)

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11 State **four** marketing functions of Kenya Co-operative Creameries (K.C.C.). (2 marks)

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12 Give **two** reasons for carrying out each of the following operations in land preparation:

(a) rolling; (1 mark)

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(b) levelling. (1 mark)

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13 Name **three** recommended practices that should be carried out when clearing the bush during land preparation. (1½ marks)

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14 State **five** advantages of zero grazing. (2½ marks)

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15 Give **four** factors that would determine the stage at which a crop is harvested. (2 marks)

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16 Name **two** classes of weeds on the basis of each of the following:

(a) growth cycle; (1 mark)

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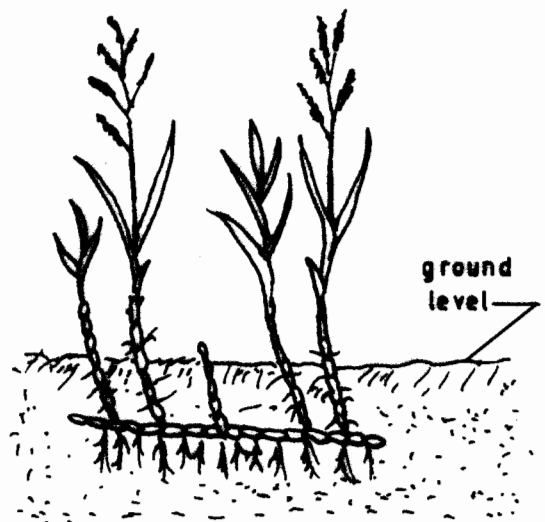
(b) plant morphology. (1 mark)

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SECTION B (20 marks)

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

17 Below is a diagram of a weed. Study the diagram carefully and answer the questions that follow.



- (a) Identify the weed illustrated above. (½ mark)

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- (b) Why is the weed illustrated above difficult to control? (1 mark)

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- (c) State **four** ways in which the weed can be controlled in a field of maize. (2 marks)

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- 18 The table below shows pH values of different soil samples. Study it and answer the questions that follow.

<u>Soil Sample</u>	<u>pH value</u>
S ₁	3
S ₂	4
S ₃	5
S ₄	6
S ₅	7
S ₆	8
S ₇	9
S ₈	10

- (a) Which soil sample has the highest acidity? (½ mark)

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(b) State **two** ways in which the pH value of sample S_g can be lowered. (1 mark)

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(c) Which of the above soil samples is suitable for growing tea? (½ mark)

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19 Explain how agroforestry tree seeds should be prepared after collection in readiness for planting. (4 marks)

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20 (a) The diagrams below represent two ways in which a crop was pruned. Study them carefully and answer the questions that follow.



- (i) Which diagram represents the correct way of pruning? (½ mark)

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

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- (b) State **two** ways in which pruning assists in controlling crop diseases. (1 mark)

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- 21** On 1st January 2009, Kaburu Farm started farm operations with Ksh 30,000 cash. During the month, the farm made the following transactions. Study the transactions and prepare a cash analysis for Kaburu Farm for the month of January. (5 ½ marks)

<u>Date</u>	<u>Transaction</u>	<u>Amount (Ksh)</u>
05/01/09	Livestock sales	80,000
08/01/09	Crop sales	50,000
15/01/09	Bought seed for planting	7,500
20/01/09	Paid K.F.A. for fertilizer	16,400
25/01/09	Bought livestock feeds	50,000
30/01/09	Paid wages for planting & weeding	56,000
31/01/09	Received cash from K.C.C. for milk delivery	120,000
31/01/09	Paid transport charges for milk delivery	9,000

SECTION C (40 marks)

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

- 23** (a) Explain **eight** factors that can encourage soil erosion. (8 marks)
- (b) Describe the seven management practices that should be carried out on a vegetable nursery after sowing seeds until the seedlings are ready for transplanting. (7 marks)
- (c) State **five** soil factors that should be considered when selecting a crop to grow in an area. (5 marks)
- 24** (a) Outline **five** ways in which high temperature affects agricultural production in Kenya. (5 marks)
- (b) (i) Explain **four** precautions that should be observed when harvesting cotton. (4 marks)
- (ii) Describe the harvesting of sugar cane. (3 marks)
- (c) Explain **eight** factors that should be considered when planning to set up a farm business. (8 marks)
- 25** (a) Explain **six** physical methods that can be used to control crop pests on the farm. (6 marks)
- (b) Describe the production of bulb onions under the following sub-headings:
- (i) field management; (4 marks)
- (ii) harvesting. (3 marks)
- (c) Explain **seven** factors that influence seed rates in crop production. (7 marks)

