

## 23.14 AGRICULTURE (443)

### 23.14.1 Agriculture Paper 1 (443/1)



MANYAM FRANCHISE  
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Name.....Index No...../.....

443/1

AGRICULTURE

Paper 1

Oct./Nov. 2007

2 hours

Candidate's Signature.....

Date.....

THE KENYA NATIONAL EXAMINATIONS COUNCIL  
Kenya Certificate of Secondary Education  
AGRICULTURE  
Paper 1  
2 hours

*Write your name and index number in the spaces provided above.  
Sign and write the date of examination in the spaces provided above.  
This paper consists of three sections: A, B, and C.  
Answer ALL the questions in section A and B.  
Answer two questions in section C in the spaces provided.*

#### For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1 – 16	30	
B	17 – 21	20	
C		20	
		20	
Total Score			

**This paper consists of 16 printed pages**

**Candidates should check the question paper to ascertain that all the pages are printed as indicated and no questions are missing.**

7061

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**Turn over**

### SECTION A (30 marks)

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

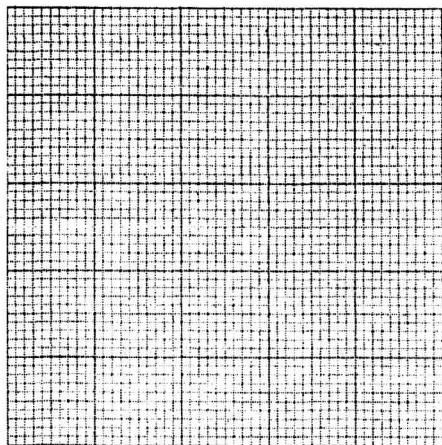
- 1 Give **four** conditions of the land which may make it necessary to carry out reclamation practices. (2 marks)
- 2 List **three** physical weathering agents in the soil formation process. (1½ marks)
- 3 State **two** mechanical methods of separating soil particles according to size during soil analysis. (1 mark)
- 4 Give **two** benefits of possessing a Land Title Deed to a farmer. (1 mark)
- 5 Give **four** advantages of crop rotation. (2 marks)
- 6 State **four** factors that should be considered when classifying crop pests. (2 marks)
- 7 State **three** functions of boron in crop development. (1½ marks)
- 8 Outline **four** observable indicators of economic development of a nation. (2 marks)
- 9 Give **three** factors that may influence the price of an agricultural commodity. (1½ marks)
- 10 Name **three** examples of leguminous fodder crops. (1½ marks)
- 11 Give **two** factors that may determine the size of a pit for silage making. (1 mark)
- 12 Give **three** reasons for controlling weeds in pastures. (1½ marks)
- 13 State **six** characteristics of a productive soil. (3 marks)
- 14 State **any five** qualities that should be considered when selecting seeds for planting. (2½ marks)
- 15 (a) State **four** practices which encourage soil erosion. (2 marks)  
(b) Name **two** forms of gully erosion. (1 mark)
- 16 (a) State **four** advantages of land consolidation. (2 marks)  
(b) Give **two** advantages of leasehold tenure system in farming. (1 mark)

### SECTION B (20 marks)

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

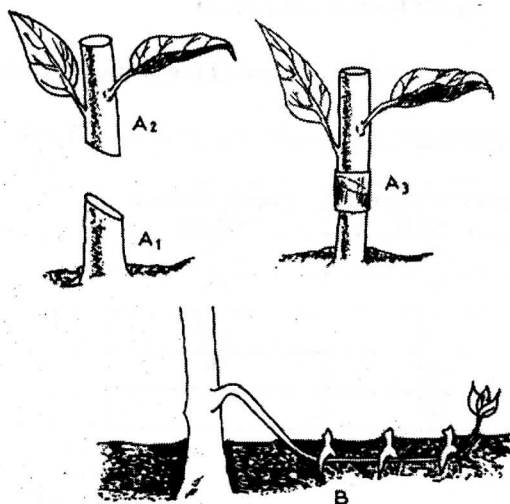
- 17 The table below shows the demand and supply of potatoes at UKULIMA market.

Price (Ksh)	Quantity Demanded (in bags)	Quantity Supplied (in bags)
1200	50	250
1000	90	200
800	150	150
600	225	70
400	335	0

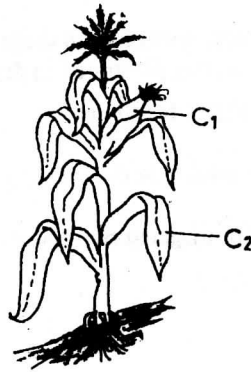


- (a) Using suitable scales, draw and label a graph showing the relationship between the demand and supply of the potatoes at UKULIMA market. (5 marks)
- (b) What is the equilibrium price of the potatoes? (1 mark)
- (c) From the graph determine:
- the number of bags of potatoes that would be bought if the price per bag is Ksh 900/=. (1 mark)
  - the price of a bag of potatoes if 180 bags are supplied. (1 mark)

18 The diagrams labelled A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub> and B below illustrate materials and methods of vegetative propagation. Study them and answer the questions that follow.



- Name the parts labelled A<sub>1</sub> and A<sub>2</sub>. (2 marks)
  - Name the methods of propagation illustrated in diagrams A<sub>3</sub> and B. (2 marks)
- 19 Study the crop illustrated in the diagram below and answer the questions that follow.



- (a) Name one insect pest which attacks the part labelled C<sub>1</sub> and one disease which attacks the part labelled C<sub>2</sub>. (2 marks)

20 A member of Young Farmers' Club was advised to apply a complete fertilizer 30:20:10 in a tomato plot measuring 10m long by 5m wide at the rate of 300kg per hectare.

- (a) State the percentage of P<sub>2</sub>O<sub>5</sub> in the complete fertilizer. (1 mark)  
 (b) Calculate the amount of fertilizer the member would require for the plot. (2 marks)  
 (Show your working)

21 The diagrams labelled D and E below are illustrations of coffee established using two different formative pruning systems. Study them and answer the questions that follow.



- (a) Name the system of pruning illustrated in diagram D above. (1 mark)  
(b) Outline how the pruning system illustrated in diagram E is carried out. (2 marks)

**SECTION C (40 marks)**

*Answer any TWO questions in this section in the spaces provided after question 24.*

- 22 (a) Describe the field production of irrigated rice under the following sub-headings:
- (i) land preparation (7 marks)
  - (ii) water control. (6 marks)
- (b) Describe the management of trees grown under various agro-forestry systems. (7 marks)
- 23 (a) Describe the problems of marketing of agricultural produce. (10 marks)
- (b) Discuss the importance of budgeting in agricultural production. (10 marks)
- 24 (a) Discuss the importance of irrigation in farming. (12 marks)
- (b) Explain the factors that influence the type of irrigation to be used in a farm. (8 marks)

## 23.14.2 Agriculture Paper 2 (443/3)

Name ..... Index No...../.....

443/2

AGRICULTURE

Paper 2

Oct. /Nov. 2007

2 hours

Candidate's Signature .....

Date .....

### THE KENYA NATIONAL EXAMINATIONS COUNCIL

Kenya Certificate of Secondary Education

AGRICULTURE

Paper 2

2 hours

### INSTRUCTIONS TO CANDIDATES

*Write your name and index number in the spaces provided.*

*Sign and write the date of examination in the spaces provided above.*

*This paper consists of three sections: A, B and C.*

*Answer all the questions in sections A and B.*

*Answer two questions from section C.*

*Answers to ALL questions must be written in this booklet.*

For Examiner's use only

Section	Questions	Maximum Score	Candidate's Score
A	1 - 19	30	
B	20 - 23	20	
C		20	
		20	
Total Score			

This paper consists of 12 printed pages

Candidates should check the question paper to ascertain that all the pages are printed as indicated and no questions are missing.

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### SECTION A (30 marks)

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

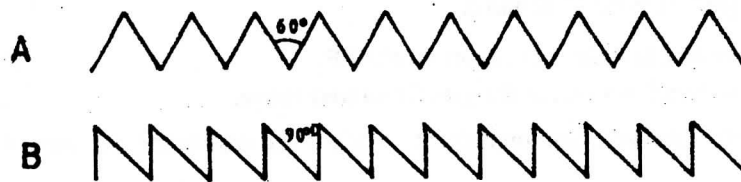
- 1 Give **two** reasons for using litter in a poultry house. (1 mark)
- 2 Name **two** diseases of poultry that are controlled by vaccination. (1 mark)
- 3 State **two** factors that could lead to failure to conceive in sows after service. (1 mark)
- 4 Give **two** causes of scouring in calves. (1 mark)
- 5 State **three** factors that would determine the amount of concentrate fed to dairy cattle. (1½ marks)
- 6 Give **three** ways of stimulating milk let-down in a dairy cow. (1½ marks)
- 7 State **two** reasons for dehorning cattle. (1 mark)
- 8 List **two** equipment used in handling cattle during an agricultural exhibition. (1 mark)
- 9 State **three** signs of anthrax infection disease observed in the carcass of cattle. (1½ marks)
- 10 Give **three** effects of external parasites that are harmful to livestock. (1½ marks)
- 11 State **four** factors to consider when siting a fish pond. (2 marks)
- 12 State **three** adjustments that should be carried out on a tractor - mounted mouldboard plough in preparation for ploughing. (1½ marks)
- 13 (a) Name **four** breeds of dairy goats. (2 marks)  
(b) Mention **two** distinguishing characteristics of the Bactrian camel breed. (1 mark)
- 14 State **five** methods of maintaining good health in livestock. (2½ marks)
- 15 List **four** sources of farm power which are environmental friendly. (2 marks)
- 16 State **three** maintenance practices that should be carried out on a feed trough. (1½ marks)
- 17 Name **four** systems of a tractor engine. (2 marks)
- 18 List **three** types of calf pens. (1½ marks)
- 19 State **four** conditions that would encourage hens to eat eggs in poultry production. (2 marks)

### SECTION B (20 marks)

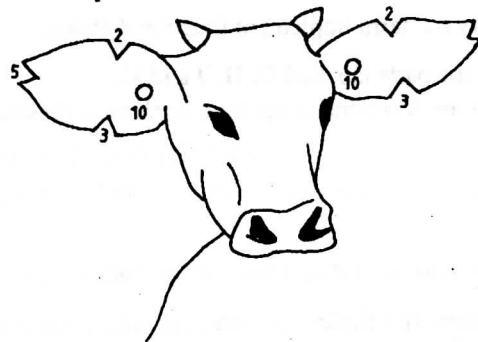
*Answer ALL the questions in this section in the spaces provided.*

20. The diagrams labelled A and B below show the teeth arrangements in hand workshop tools.





- (a) Identify the tools represented with by the teeth arrangements A and B. (1 mark)
- (b) State **one** functional difference between tools represented by the teeth arrangements A and B. (2 marks)
- (c) Give **two** maintenance practices for the tools represented by the teeth arrangements shown above. (2 marks)
- 21 (a) The diagram below illustrates a method of identification in livestock production. Study the diagram and answer the questions that follow.

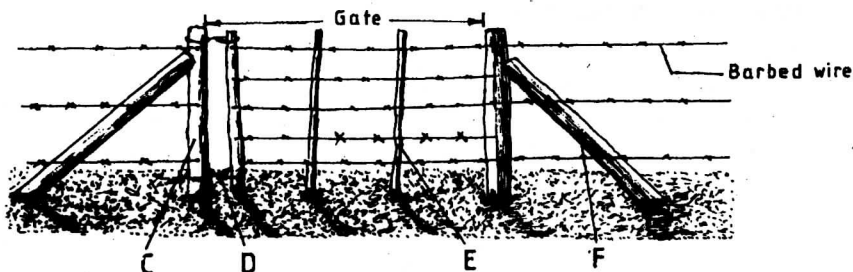


- (i) Name the type of identification illustrated above. (1 mark)
- (ii) Give the identification number of the animal illustrated in the diagram above. (1 mark)
- (iii) Using diagrams illustrate how you can identify animals Nos 24 and 36 using the above method. (2 marks)

Animal No. 24

Animal No. 36

- (b) If a sow was successfully served on 27th September, 2006, state the date she is likely to have farrowed. (1 mark)
- 22 The diagram below shows a type of a farm gate. Study the diagram and answer the questions that follow.

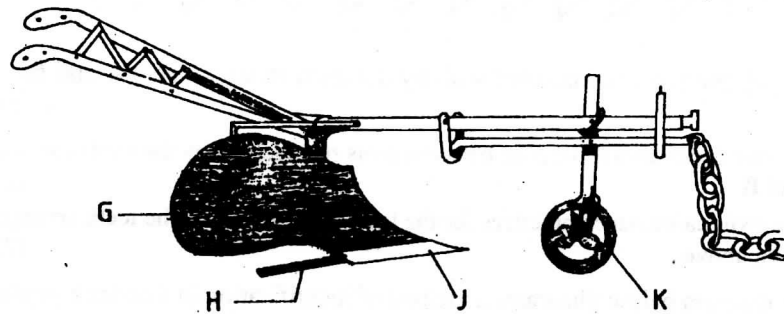


- (a) Identify the type of gate shown. (1/2 mark)



- (b) Name the parts labelled C, D and E. (1½ mark)
- (c) (i) State **one** function of the part labelled F. (1 mark)
- (ii) State **two** functions of the gate illustrated above. (2 marks)

23 The diagram below shows a farm implement. Study it and answer the questions that follow.



- (a) Identify the farm implement illustrated above. (1 mark)
- (b) Name the parts labelled G, H, J and K. (2 marks)
- (c) State **four** functions of the farm implement illustrated above. (2 marks)

### SECTION C (40 marks)

Answer any **TWO** questions in this section in the spaces provided after question 26.

- 24 (a) Describe the advantages of the battery system of rearing layers. (10 marks)
- (b) Outline the factors to consider when selecting livestock for breeding. (10 marks)
- 25 (a) Name the strokes in a four stroke engine and describe how each operates. (12 marks)
- (b) Describe the functions of the gear box in a tractor. (8 marks)
- 26 (a) Name and describe the features of an ideal calf pen. (9 marks)
- (b) Discuss pneumonia in calves under the following sub-headings:
- (i) predisposing factors (3 marks)
  - (ii) symptoms (5 marks)
  - (iii) control measures. (3 marks)