

000120740

Name Index Number /

443/1
 AGRICULTURE
 Paper 1
 Oct./Nov. 2015
 2 hours

Candidate's Signature

Date



THE KENYA NATIONAL EXAMINATIONS COUNCIL

Kenya Certificate of Secondary Education

AGRICULTURE

Paper 1

2 hours



04500201

Instructions to candidates

- Write your name and index number in the spaces provided above.
- Sign and write the date of the 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 any **two** questions in section **C**.
- All answers should be written in the spaces provided.
- This paper consists of **16** printed pages.
- Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- Candidates should answer the questions in English.

For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1 – 17	30	
B	18 – 21	20	
C		20	
		20	
Total Score		90	



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Turn over

SECTION A (30 marks)

Answer all the questions in the spaces provided.

- 1** State **four** reasons for applying phosphatic fertilizers during planting. (2 marks)

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- 2** Give **four** ways in which crop pests are classified. (2 marks)

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- 3** State **four** advantages of landlordism and tenancy. (2 marks)

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- 4** Differentiate between apiculture and aquaculture. (1 mark)

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5 State **four** factors that affect the quality of farm-yard manure. (2 marks)

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6 Give **four** reasons why seed propagation is encouraged in crop production. (2 marks)

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7 State **four** factors that can make a farmer choose a jembe for primary tillage. (2 marks)

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8 Give **four** factors that affect the quality of hay. (2 marks)

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9 Name **five** entries that can be made on a cattle breeding record. (2½ marks)

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10 Give **two** reasons for testing soil. (1 mark)

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11 Name **three** forms of horticulture practised in Kenya. (1½ marks)

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12 Give **two** reasons for constructing a shade over a nursery. (1 mark)

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13 Name **four** appropriate sites for agroforestry trees. (2 marks)

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14 State **four** personal safety measures a farmer should consider when handling herbicides. (2 marks)

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15 Give **two** reasons why a maize plant growing in a cabbage crop field may be treated as a weed. (1 mark)

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16 Name **four** classes of weeds. (2 marks)

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17 State **four** agricultural activities that may pollute water. (2 marks)

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SECTION B (20 marks)

Answer all the questions in the spaces provided.

- 18** A farmer applied a compound fertilizer 10:20:0 on a three hectares piece of land at a rate of 180 kg N per hectare.

- (a) Calculate the quantity of the compound fertilizer the farmer applied on the piece of land. (3 marks)

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- (b) What do the figures 10 and 20 stand for in the compound fertilizer? (2 marks)

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- 19** The diagram below illustrates a nursery practice.



- (a) Identify the practice. (1 mark)

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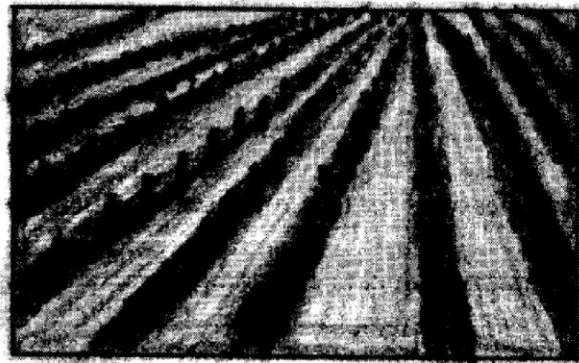
(b) Describe the procedure followed in carrying out the practice illustrated. (2 marks)

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(c) State two advantages of the practice illustrated above in crop production. (2 marks)

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20 The diagram below shows crop establishment using a certain method of planting.



(a) Name the method of planting used for the crop. (1 mark)

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(b) State two advantages of the planting method used for the crop. (2 marks)

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(c) Explain two factors that determine the depth of planting. (2 marks)

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21 Below is a diagram showing a crop disease.



(a) Identify the crop disease. (1 mark)

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(b) State **three** control measures for the crop disease. (3 marks)

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(c) Name the category in which the crop disease is classified. (1 mark)

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SECTION C (40 marks)

Answer any two questions from this section in the spaces provided after question 24.

- 22 (a) Explain how each of the properties of rainfall and light influence crop production.
- (i) rainfall; (8 marks)
- (ii) light. (4 marks)
- (b) Describe rice production under the following sub-headings:
- (i) land preparation; (2 marks)
- (ii) water control; (2 marks)
- (iii) fertilizer application; (2 marks)
- (iv) weed control. (2 marks)
- 23 (a) Explain five factors that can increase the demand for tea on a market. (10 marks)
- (b) State four ways of improving labour productivity on the farm. (4 marks)
- (c) The following information was obtained from Upendo Farm inventory on 1st January 2013.

ITEM	VALUE (Ksh)
Layers	80,000
Beef cattle	240,000
Beans in store	40,000
Cash at hand	15,000
Land	550,000
Machinery	250,000
Buildings	310,000
Calves	75,000

On the same day the farm recorded the following:

ITEM	VALUE (Ksh)
Wages payable	5,000
Interest payable	8,000
Bank loan	725,000
Milk sales on credit	12,000
Chicken sales on credit	6,000
Cash in bank	52,000
Purchase of fertilizer on credit	26,000
Taxes payable	3,000

Using the information provided prepare a balance sheet for Upendo Farm. (6 marks)

Kenya Certificate of Secondary Education, 2015
443/1

Name 000120741 Index Number /

443/2
AGRICULTURE
Paper 2
(THEORY)
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2 hours

Candidate's Signature
Date



THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
AGRICULTURE
Paper 2
(THEORY)
2 hours

04500202

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** and **any two** questions in section **C**.
- (e) **All** answers should be written in the spaces provided on the question paper.
- (f) **This paper consists of 16 printed pages.**
- (g) **Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.**
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B	19 – 22	20	
C		20	
		20	
Total Score		90	



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Turn over

SECTION A (30 marks)

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

1 Name **four** rabbit breeds reared in Kenya. (2 marks)

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2 State **four** characteristics of desirable eggs for marketing. (2 marks)

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3 Name **two** types of roughage. (1 mark)

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4 Give **four** disadvantages of inbreeding in livestock. (2 marks)

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5 Name the nutritional deficiency for each of the following livestock diseases:

- (a) milk fever; (1/2 mark)
- (b) bloat. (1/2 mark)

6 Give **two** reasons for docking in sheep rearing. (1 mark)

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7 State **four** signs of fowl typhoid. (2 marks)

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8 Differentiate between drift and pen lambing. (2 marks)

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9 State **four** features on the animal which may predispose it to livestock diseases. (2 marks)

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10 Give **four** factors that affect milk composition. (2 marks)

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11 State **two** control measures for keds in sheep. (1 mark)

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12 State **two** maintenance practices carried out on a greenhouse structure. (1 mark)

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13 (a) Name the goat breed which is brown in colour with white strips running down the face to the nose. ($\frac{1}{2}$ mark)

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(b) State **four** rearing practices that necessitate handling of piglets. (2 marks)

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14 Give **four** preventive measures for livestock diseases. (2 marks)

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15 State **one** function of each of the following parts during egg formation in poultry:

(a) funnel; ($\frac{1}{2}$ mark)

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(b) magnum; (1/2 mark)

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(c) isthmus. (1/2 mark)

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16 The following is a list of poultry breeds:

- White Leghorn
- Light Sussex
- Rhode Island Red
- Ancona.

Categorize them into:

(a) light breeds; (1 mark)

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(b) heavy breeds. (1 mark)

.....

17 State **two** functions of a queen in a bee colony. (1 mark)

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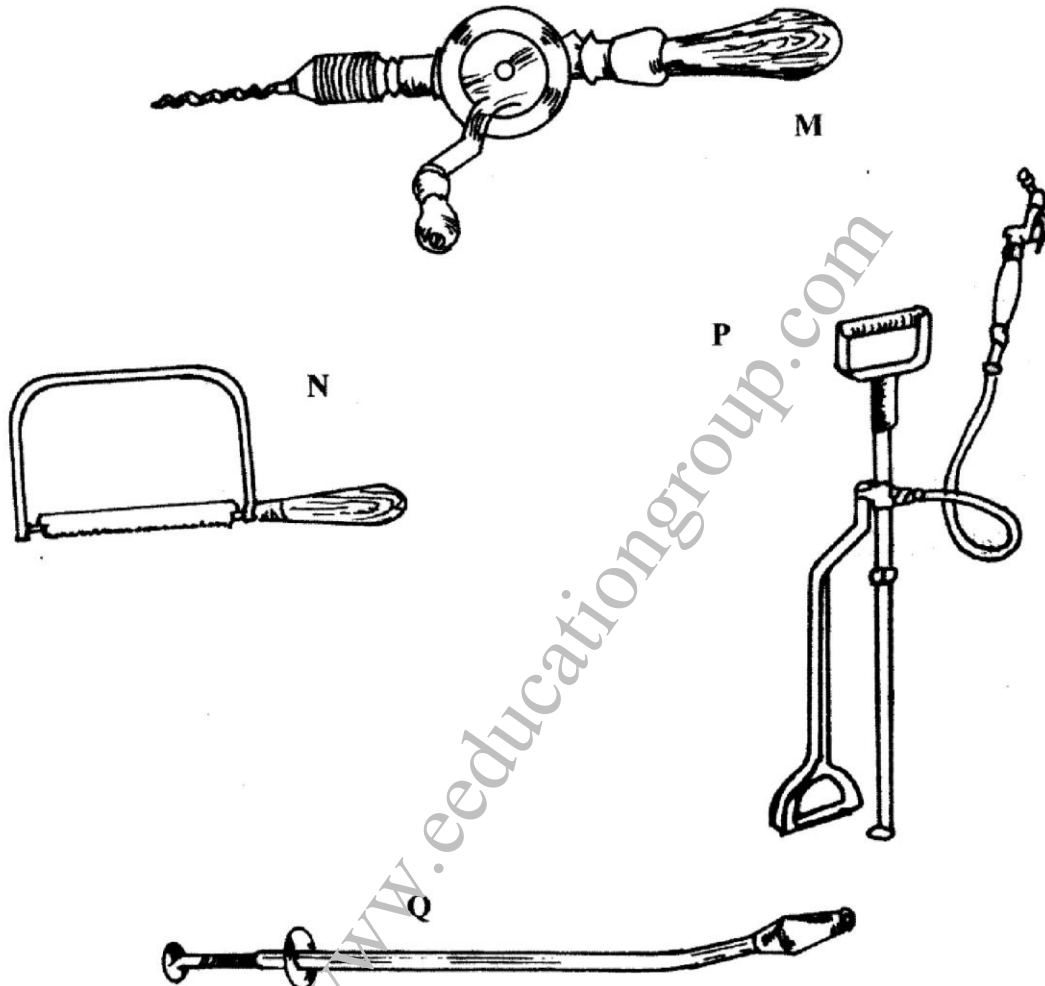
18 State **four** maintenance practices carried out on a fish pond. (2 marks)

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SECTION B: (20 marks)

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

- 19 The diagrams below represent some farm tools and equipment. Study them and answer the questions that follow.



- (a) Identify the tools labelled N and P.

N (1 mark)

P (1 mark)

- (b) State **one** use of each of the tools labelled M and Q.

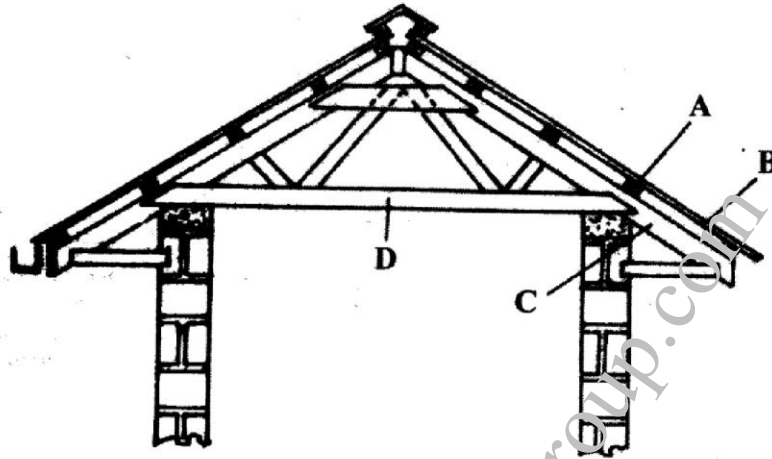
M (1 mark)

Q (1 mark)

- (c) Explain **one** maintenance practice carried out on the equipment labelled P. (1 mark)

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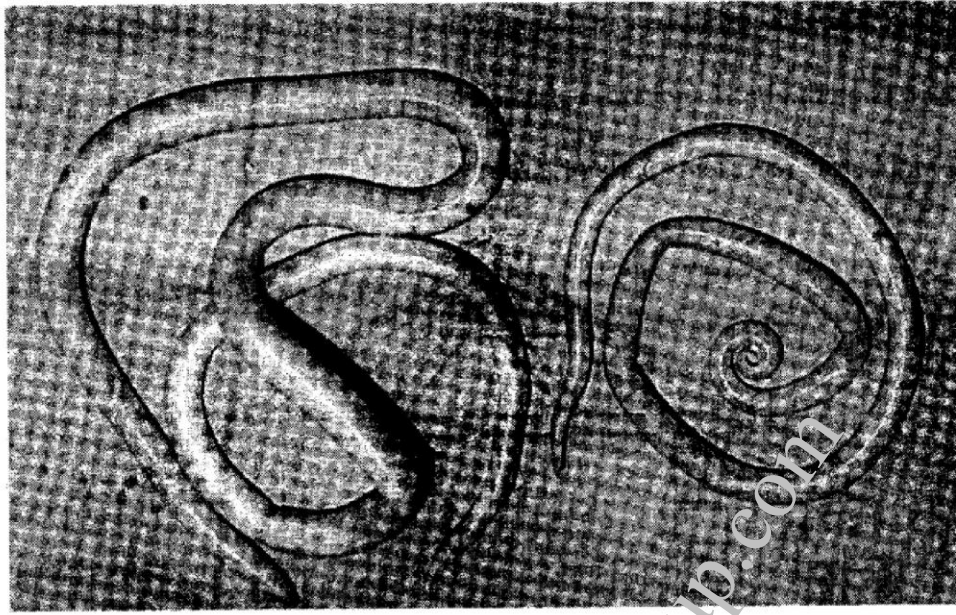
20 The diagram below represents parts of a roof.



- (a) Identify the parts labelled A and C.
- A (1 mark)
- C (1 mark)
- (b) State **two** types of materials that may be used for the part labelled D. (2 marks)
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- (c) Give **one** disadvantage of using thatch for the part labelled B. (1 mark)

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21 The diagram below illustrates an internal parasite of livestock.



(a) Identify the parasite. (1 mark)

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(b) Name **two** common species of the parasite illustrated above. (2 marks)

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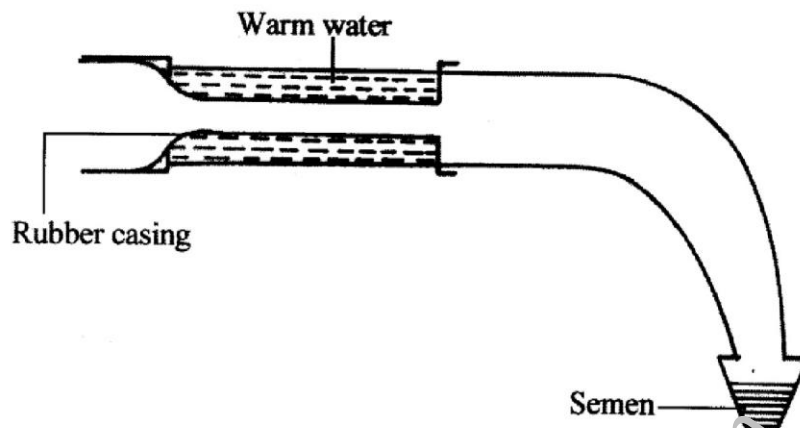
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(c) State **two** signs of worm infestation that may be observed in the dung of livestock. (2 marks)

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22 Below is a diagram illustrating an instrument used in cattle breeding.



(a) Identify the instrument. (1 mark)

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(b) State the role of the instrument in cattle breeding. (1 mark)

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(c) When would it be appropriate to serve a cow after the onset of heat? (1 mark)

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(d) Apart from the method in which the above instrument is used, name two other methods of serving a cow. (2 marks)

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SECTION C: (40 marks)

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

- 23 (a) Give the functions of any **five** parts of a poultry egg. (10 marks)
- (b) Describe the uses of **five** materials/equipment required for hand milking. (10 marks)
- 24 (a) Describe East Coast fever under the following sub-headings:
- (i) livestock affected; (1 mark)
 - (ii) vector and causal organism; (2 marks)
 - (iii) signs of attack; (5 marks)
 - (iv) control measures. (2 marks)
- (b) Describe the activities that take place during the digestion process in the rumen. (5 marks)
- (c) Describe the management practices that ensure proper hygiene in a deep litter poultry house. (5 marks)
- 25 (a) State **five** signs of external parasite infestation in livestock. (5 marks)
- (b) Explain **five** factors that should be considered when siting a farm store. (5 marks)
- (c) Describe the cycle of a four stroke petrol engine. (10 marks)

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