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Name Index No/.....

443/2
 AGRICULTURE
 Paper 2
 Oct./Nov. 2011
 2 hours

Candidate's Signature

Date

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

Instructions to candidates

1. Write your name and index number in the spaces provided above.
2. Sign and write the date of examination in the spaces provided above.
3. This paper consists of **three** sections: **A, B and C**.
4. Answer **all** the questions in sections **A and B**.
5. Answer any **two** questions from section **C**.
6. Answers should be written in the spaces provided.
7. **This paper consists of 15 printed pages.**
6. **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	Questions	Maximum Score	Candidate's Score
A	1 - 18	30	
B	19 - 23	20	
C		20	
		20	
Total Score		90	



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 2011(MMXI) KCSE (11421)
 AGRICULTURE
 Paper 2

**Turn over**

SECTION A (30 marks)

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

1 State **four** maintenance practices for a disc plough. (2 marks)

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2 Name **three** methods that are used in selection of breeding stock in livestock production. (1 ½ marks)

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3 State **four** advantages of using animals instead of tractors as a source of power on the farm. (2 marks)

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4 Name **one** livestock disease that is transmitted by each of the following parasites:

(a) blue ticks; (½ mark)

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(b) brown ear ticks; (½ mark)

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(c) tsetse flies. (½ mark)

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5 State **four** methods of controlling round worms (*Ascaris sp*) in livestock. (2 marks)

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6 Give the meaning of the following terms as used in livestock health:

(a) disease; (1 mark)

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(b) vaccination. (1 mark)

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7 State **three** maintenance practices for a tractor battery. (1 ½ marks)

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.....

8 Name the type of breed into which each of the following breeds of cattle are classified:

(a) Aberdeen Angus; (½ mark)

(b) Guernsey; (½ mark)

(c) Sahiwal; (½ mark)

(d) Red poll. (½ mark)

9 Give **two** ways in which proper nutrition helps to control livestock diseases. (1 mark)

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10 List **four** categories of livestock diseases. (2 marks)

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11 Name **two** breeding systems that can increase the frequency of high milk production genes in indigenous cattle. (1 mark)

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12 Name **two** bloodless methods of castration in lambs. (1 mark)

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.....

13 Give the meaning of the following terms as used in livestock breeding:

(a) recessive gene; (1 mark)

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.....

(b) epistasis. (1 mark)

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14 State **four** signs that indicate that a doe is about to kindle. (2 marks)

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15 Name **two** developmental stages of a liverfluke (*Fasciola sp.*) which occur in the fresh water snail (*Limnaea sp.*). (1 mark)

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16 Name the strokes in a four stroke cycle engine. (2 marks)

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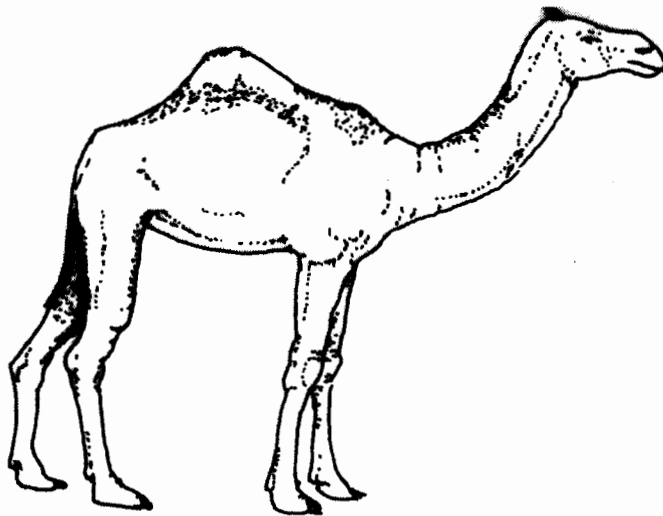
17 State **four** signs of mite attack in poultry. (2 marks)

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18 State **three** advantages of natural feeding in calf rearing. (1 ½ marks)

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20 Below is an illustration of a camel. Study it and answer the questions that follow.



(a) Identify the camel species illustrated above. ($\frac{1}{2}$ mark)

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(b) Name **three** products that farmers obtain from the camel species illustrated above. ($1\frac{1}{2}$ marks)

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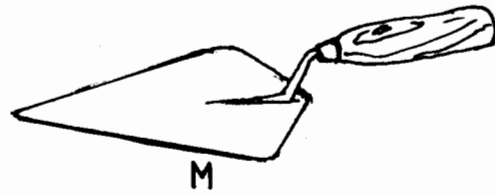
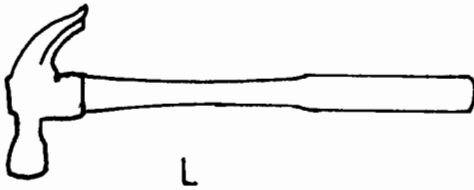
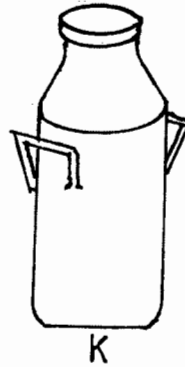
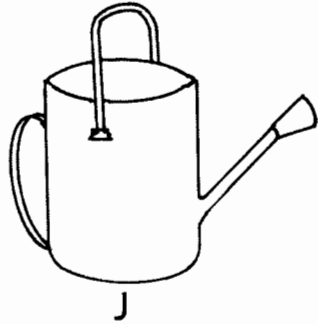
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(c) Give **two** reasons why the camel species illustrated above is able to survive in its natural habitat. (2 marks)

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21 The diagram below represents farm tools and equipment. Study them and answer the questions that follow.



(a) Identify the tool / equipment labelled **J**, **K** and **M**.

J($\frac{1}{2}$ mark)

K($\frac{1}{2}$ mark)

M($\frac{1}{2}$ mark)

(b) State **one** use for each of the tool / equipment labelled **K** and **L**.

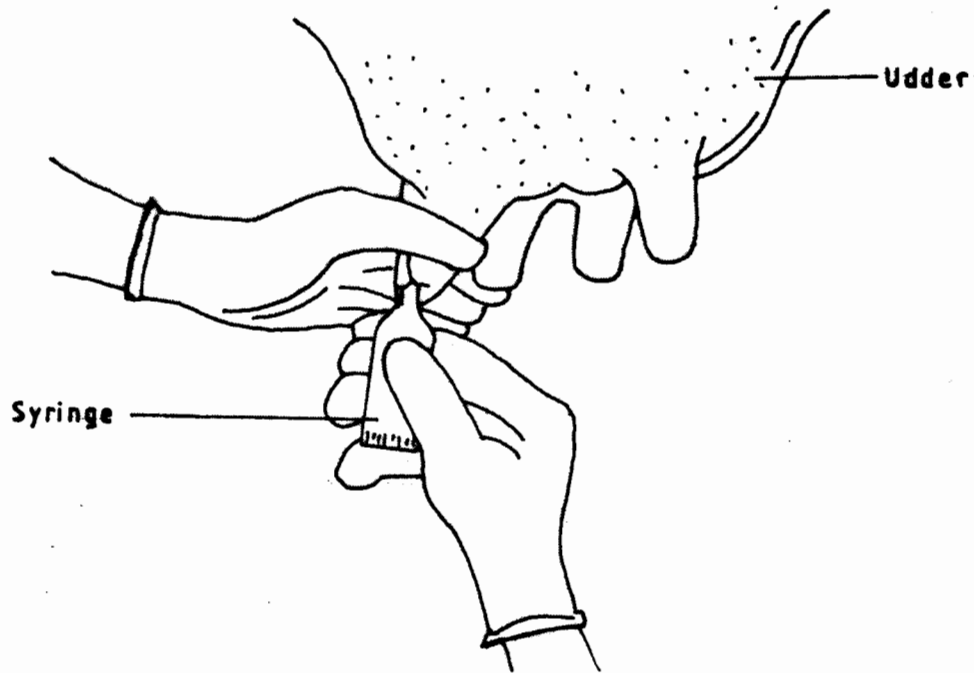
K(1 mark)

L(1 mark)

(c) Give **two** maintenance practices for the equipment labelled **K**. (1 mark)

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22 The illustration below shows a practice carried out to prevent mastitis infection in a dairy cow.



(a) Identify the practice. (1/2 mark)

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(b) At what stage is the practice carried out? (1/2 mark)

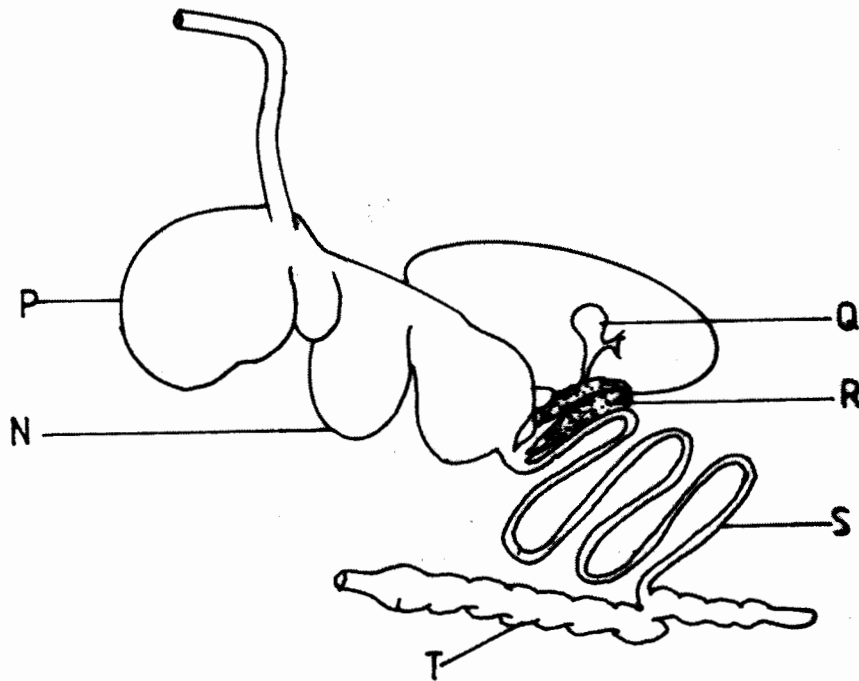
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(c) State **two** other practices that are carried out on the udder to prevent mastitis infection. (2 marks)

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23 The diagram below shows the digestive system of cattle. Study it and answer the questions that follow.



(a) Name the parts labelled N, P and Q.

N($\frac{1}{2}$ mark)

P($\frac{1}{2}$ mark)

Q($\frac{1}{2}$ mark)

(b) State **one** function for each of the parts labelled S and T.

S(1 mark)

T(1 mark)

(c) Give **one** enzyme produced by each of the parts labelled R and S.

R($\frac{1}{2}$ mark)

S($\frac{1}{2}$ mark)

SECTION C (40 marks)

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

- 24** (a) Explain the factors considered when culling livestock. (5 marks)
- (b) Describe poultry management under the following sub-headings:
- (i) causes of stress; (8 marks)
- (ii) control measures for cannibalism. (7 marks)
- 25** (a) Describe the feeding practices in artificial rearing of a dairy calf. (10 marks)
- (b) Describe Newcastle disease under the following sub-headings:
- (i) causal organism; (1 mark)
- (ii) signs of infection; (7 marks)
- (iii) control measures. (2 marks)
- 26** (a) Describe the uses of fences on the farm. (10 marks)
- (b) Give **five** harmful effects of liver flukes in sheep rearing. (5 marks)
- (c) State the differences between a diesel engine and a petrol engine. (5 marks)