

KCSE 2011**4.3.2 Agriculture Paper 2 (443/2)****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)
- 2 Name **three** methods that are used in selection of breeding stock in livestock production. (1 $\frac{1}{2}$ marks)
- 3 State **four** advantages of using animals instead of tractors as a source of power on the farm. (2 marks)
- 4 Name **one** livestock disease that is transmitted by each of the following parasites:
 - (a) blue ticks; ($\frac{1}{2}$ mark)
.....
 - (b) brown ear ticks; ($\frac{1}{2}$ mark)
.....
 - (c) tsetse flies. ($\frac{1}{2}$ mark)
.....
- 5 State **four** methods of controlling round worms (*Ascaris sp*) in livestock. (2 marks)
- 6 Give the meaning of the following terms as used in livestock health:
 - (a) disease; (1 mark)
 - (b) vaccination. (1 mark)
- 7 State **three** maintenance practices for a tractor battery. (1 $\frac{1}{2}$ marks)
- 8 Name the type of breed into which each of the following breeds of cattle are classified:
 - (a) Aberdeen Angus; ($\frac{1}{2}$ mark)
.....
 - (b) Guernsey; ($\frac{1}{2}$ mark)
.....
 - (c) Sahiwal; ($\frac{1}{2}$ mark)
.....
 - (d) Red poll. ($\frac{1}{2}$ mark)
.....

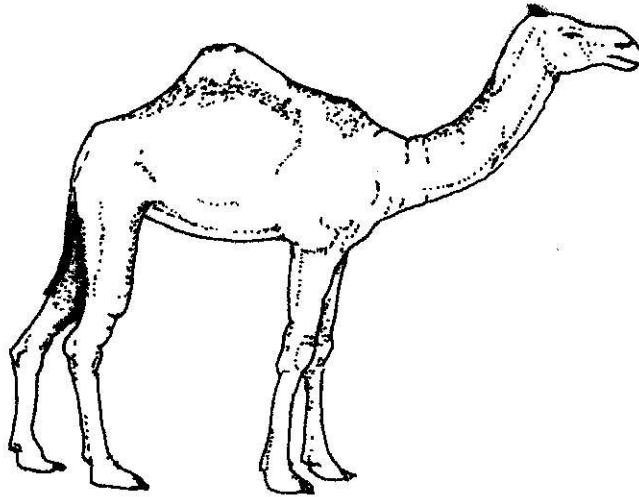
- 9 Give **two** ways in which proper nutrition helps to control livestock diseases. (1 mark)
- 10 List **four** categories of livestock diseases. (2 marks)
- 11 Name **two** breeding systems that can increase the frequency of high milk production genes in indigenous cattle. (1 mark)
- 12 Name **two** bloodless methods of castration in lambs. (1 mark)
- 13 Give the meaning of the following terms as used in livestock breeding:
- (a) recessive gene; (1 mark)
- (b) epistasis. (1 mark)
- 14 State **four** signs that indicate that a doe is about to kindle. (2 marks)
- 15 Name **two** developmental stages of a liverfluke (*Fasciola sp.*) which occur in the fresh water snail (*Limnaea sp.*). (1 mark)
- 16 Name the strokes in a four stroke cycle engine. (2 marks)
- 17 State **four** signs of mite attack in poultry. (2 marks)
- 18 State **three** advantages of natural feeding in calf rearing. (1 $\frac{1}{2}$ marks)

SECTION B (20 marks)

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

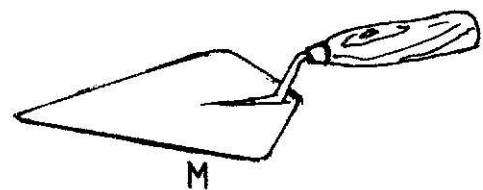
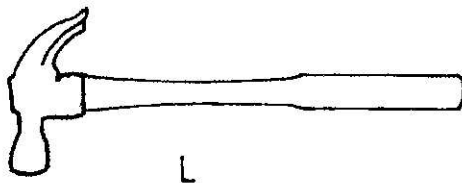
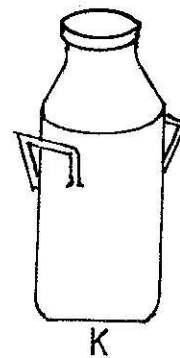
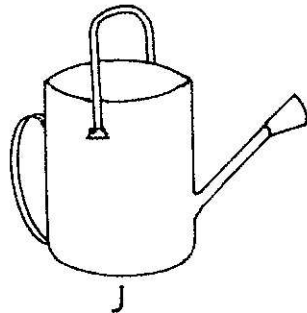
- 19 A dairy farmer is required to prepare 100 kg of dairy meal containing 20% Digestible Crude Protein (D.C.P.). Using the Pearson's Square Method, calculate the quantity of soya bean (40% D.C.P.) and rice (16% D.C.P.) the farmer requires for the dairy meal. (4 marks)

- 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)
-
- (b) Name **three** products that farmers obtain from the camel species illustrated above. ($1\frac{1}{2}$ marks)
- (c) Give **two** reasons why the camel species illustrated above is able to survive in its natural habitat. (2 marks)

- 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)

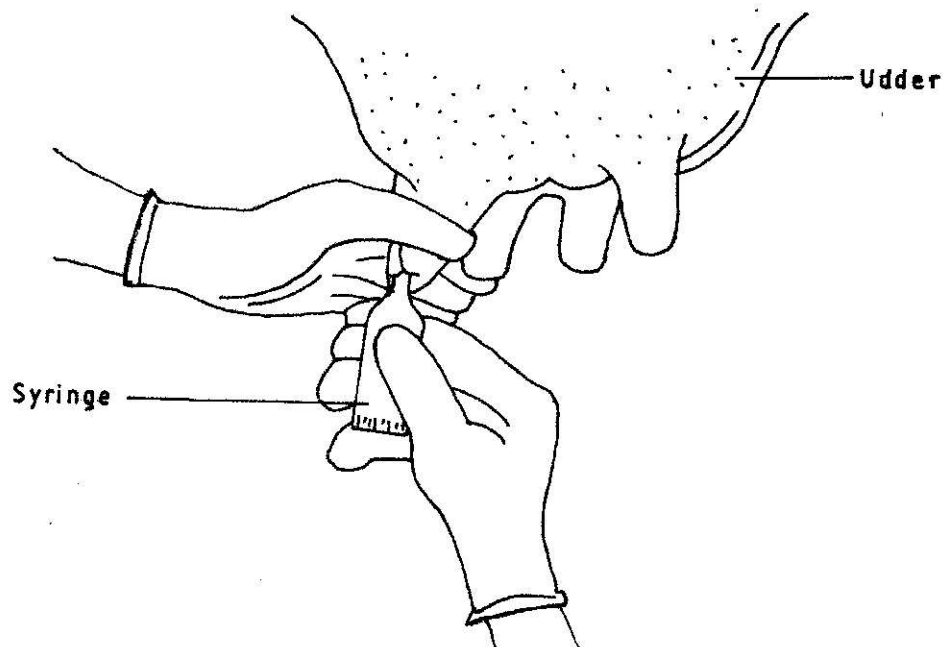
(b) State **one** use for each of the tool / equipment labelled **K** and **L**.

K(1 mark)

L(1 mark)

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

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



(a) Identify the practice. ($\frac{1}{2}$ mark)

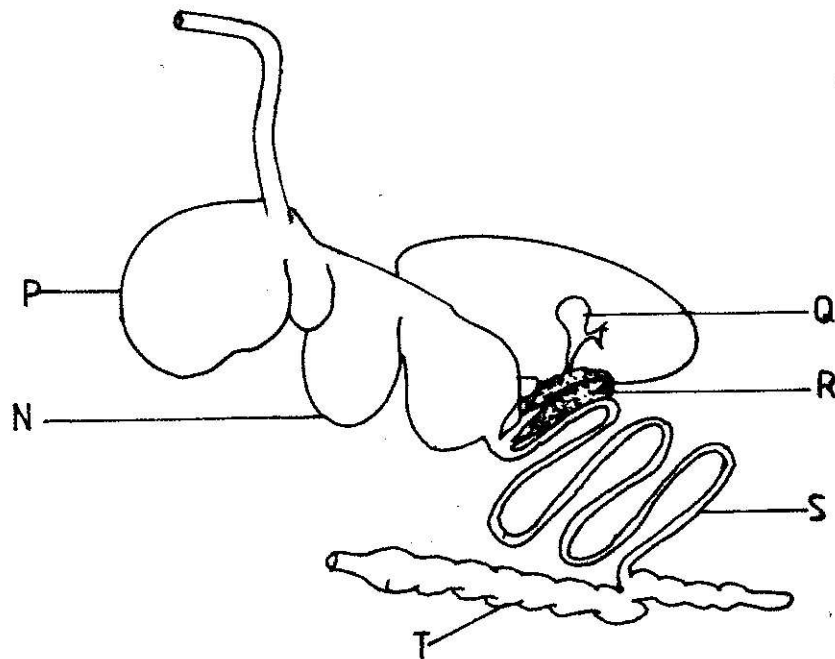
.....

(b) At what stage is the practice carried out? ($\frac{1}{2}$ mark)

.....

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

- 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)