THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education

443/2 — AGRICULTURE — Paper 2

(THEORY)

Nov. 2019 – 2 hours

Name ..... Index Number .....

Candidate's Signature ..... Date .....

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 in 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.***
(i) ***Candidates should answer all the questions in English.***

For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1–15	30	
B	16–19	20	
C		20	
		20	
	Total Score	90	

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SECTION A (30 marks)

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

1. State **four** effects of fleas in poultry. (2 marks)

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2. Name **two** breeds of dairy cattle with the highest

(a) butter fat content (1 mark)

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(b) milk yield (1 mark)

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3. State **four** ways in which vaccines are administered to livestock. (2 marks)

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4. State **four** characteristics of animals which require a high maintenance ration. (2 marks)

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5. State **four** microbial activities that occur in the rumen. (2 marks)

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6. Name **four** pests that attack bees. (2 marks)

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7. Name **four** mineral deficiency livestock disorders. (2 marks)

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8. State **four** control measures for fowl typhoid. (2 marks)

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9. State the function of each of the following:

(a) mallet (½ mark)

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(b) trocar and canula (½ mark)

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(c) garden line (½ mark)

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(d) stock and die (½ mark)

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10. State **four** maintenance practices carried out on a wheelbarrow. (2 marks)

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11. State **four** limitations of biogas as a source of power on the farm. (2 marks)

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12. State **four** functional differences between disc and mouldboard ploughs. (2 marks)

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13. State **four** advantages of the Kenya Top Bar Hive (K.T.B.H.) over the log hive. (2 marks)

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14. Distinguish between the following practices as used in livestock production:

(a) tupping and serving (1 mark)

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(b) ringing and raddling (1 mark)

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15. (a) Name the causal organism for East Coast Fever. (½ mark)

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(b) State **three** ways in which infectious diseases spread from one animal to another. (1½ marks)

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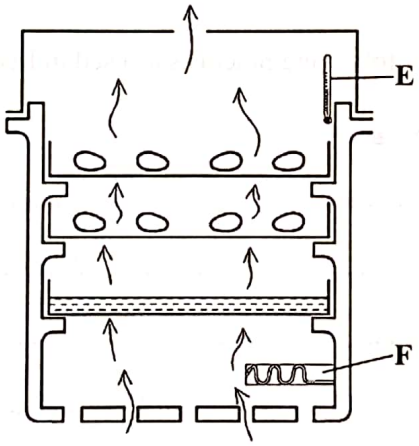
SECTION B (20 marks)

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

16. The diagram below illustrates a practice in poultry rearing.



(a) Identify the practice. (1 mark)

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(b) Name the part labelled

E (1 mark)

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F (1 mark)

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(c) Explain **two** activities **not** shown in the illustration but very important for the practice to succeed. (2 marks)

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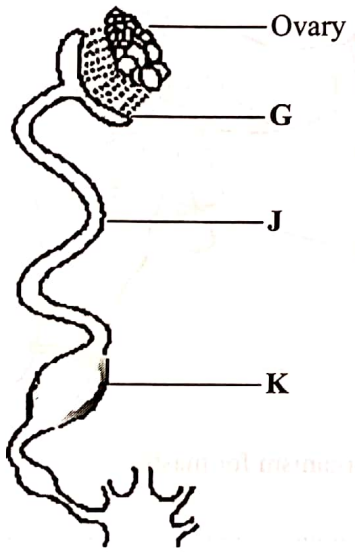
17. The diagram below shows the reproductive system of a hen.



(a) Name the part labelled **K** (1 mark)

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(b) State **one** function of each of the parts labelled

G (1 mark)

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J (1 mark)

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(c) (i) What is the maximum number of eggs a hen can lay in a day? (1 mark)

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

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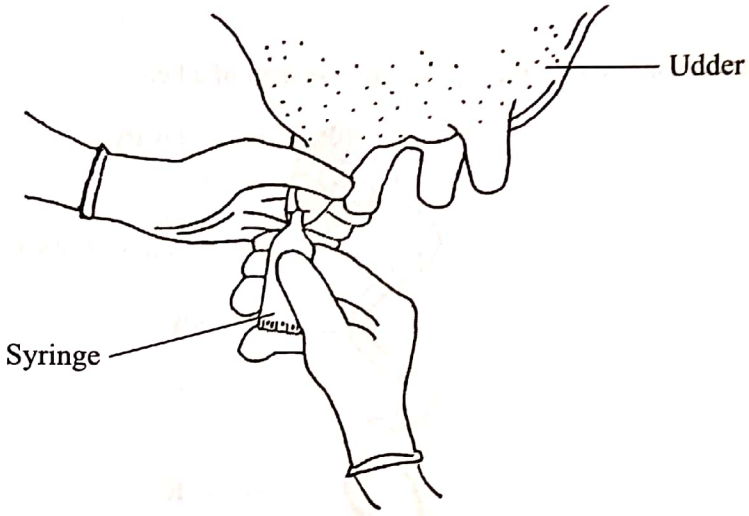
18. The diagram below illustrates a treatment practice for a cow's udder infected with mastitis.



(a) Name the causal organism for mastitis. (1 mark)

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(b) Explain the treatment practice illustrated. (1 mark)

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(c) How is mastitis infection detected in a lactating cow? (1 mark)

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(d) How is an infected cow handled during milking to prevent spread of the disease to other animals? (2 marks)

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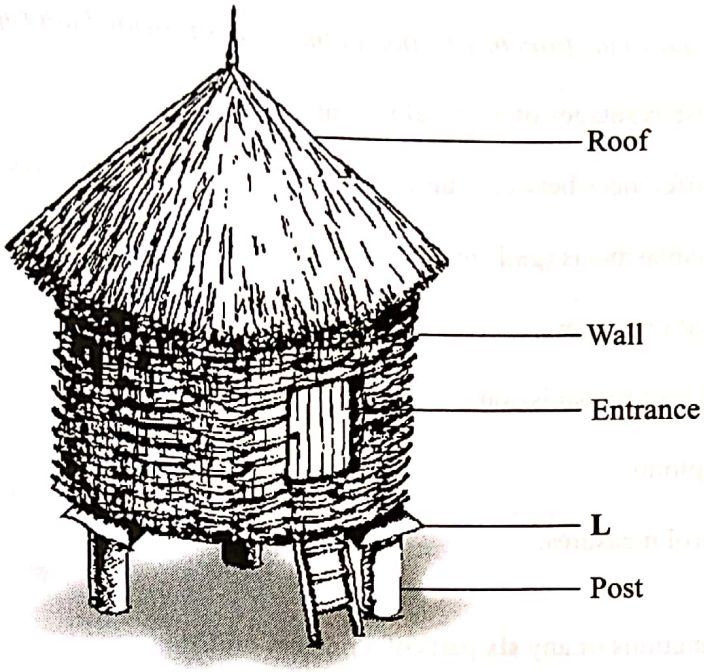
19. The diagram below shows a farm structure for storing grains



(a) Identify the farm structure. (1 mark)

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(b) State the function of the part labelled **L**. (1 mark)

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(c) State **one** disadvantage of the roofing material used on the farm structure. (1 mark)

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(d) State **two** ways in which the structure is made ready for grain storage. (2 marks)

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SECTION C (40 marks)

*Answer any **two** questions from this section in the spaces provided after **question 22**.*

20. (a) State **five** disadvantages of artificial insemination. (5 marks)

(b) State **five** differences between ruminant and non-ruminant digestive systems. (5 marks)

(c) Describe anaplasmosis (gall sickness) disease under the following sub-headings:

(i) causal organism (1 mark)

(ii) modes of transmission (2 marks)

(iii) symptoms (4 marks)

(iv) control measures. (3 marks)

21. (a) State the functions of any **six** parts of a piggery unit. (6 marks)

(b) Explain **six** disadvantages of animal drawn implements. (6 marks)

(c) State **eight** symptoms of tapeworm infestation in cattle. (8 marks)

22. (a) Explain **five** precautions taken by dairy farmers to ensure clean milk production. (10 marks)

(b) Describe how chicken is dressed for sale. (10 marks)

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