

THE KENYA NATIONAL EXAMINATIONS COUNCIL  
Kenya Certificate of Secondary Education

443/2

Paper 2

**AGRICULTURE**  
(Theory)

**Mar. 2022 – 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 the questions in English.**

**For Examiner's Use Only**

Section	Question	Maximum Score	Candidate's Score
<b>A</b>	<b>1-15</b>	<b>30</b>	
<b>B</b>	<b>16-19</b>	<b>20</b>	
<b>C</b>		<b>20</b>	
		<b>20</b>	
<b>Total Score</b>		<b>90</b>	



**SECTION A (30 marks)**

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

1. Give **four** maintenance practices carried out on a knapsack sprayer. (2 marks)

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2. State **four** reasons why rabbits are kept by farmers in Kenya. (2 marks)

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3. State **four** maintenance practices carried out on a piggery unit. (2 marks)

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4. Name the **four** stomach compartments of a ruminant. (2 marks)

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5. State **four** causes of stress in poultry. (2 marks)

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6. Give **one** reason why the milkman should:

- (a) milk at regular intervals ( $\frac{1}{2}$  mark)

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- (b) avoid milking with wet hands ( $\frac{1}{2}$  mark)

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- (c) milk quickly and evenly ( $\frac{1}{2}$  mark)

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- (d) practice complete milking ( $\frac{1}{2}$  mark)

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7. State **four** factors that determine the amount of feed an animal consumes. (2 marks)

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8. Give **one** use of each of the following farm tools:

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

(a) pipe wrench

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(b) tenon saw

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

(c) spoke shave

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

(d) elastrator.

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

9. State **four** control measures for *Brucellosis* in cattle.

(2 marks)

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10. (a) Give **two** roles of wood shavings used as litter in the artificial brooder.

(1 mark)

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(b) Give **two** reasons why a chicken brooder should have a round shape.

(1 mark)

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11. Name **four** parts of the ignition system of a petrol engine. (2 marks)

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12. (a) State **two** signs that show a rabbit is about to give birth. (1 mark)

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- (b) If a doe was served on 7th March 2021, determine the date it gave birth. ( $\frac{1}{2}$  mark)

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- (c) What is the name given to the young one of a rabbit? ( $\frac{1}{2}$  mark)

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13. State **four** advantages of artificial calf feeding. (2 marks)

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14. Give **four** characteristics of clean milk. (2 marks)

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15. (a) Name **two** methods of service used in livestock breeding. (1 mark)

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- (b) Name **two** cattle diseases controlled through Government-imposed quarantine in Kenya. (1 mark)

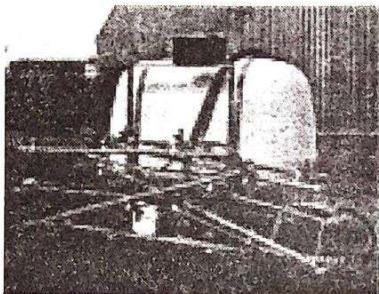
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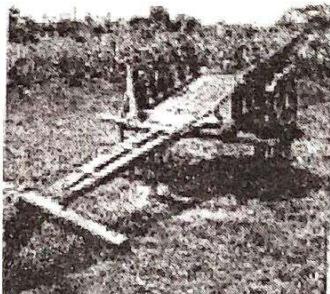
## SECTION B (20 marks)

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

- 16.** The diagrams **R** and **S** show farm implements.



**R**



**S**

- (a) Name the source of power used to operate the farm implement labelled:

**R**

(1 mark)

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**S**

(1 mark)

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- (b) State the means by which the farm implement labelled **S** is attached to its source of power. (1 mark)

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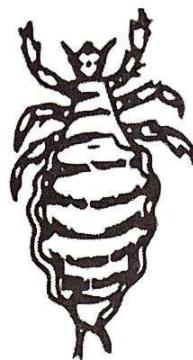
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- (c) Give **two** maintenance practices carried out on the implement labelled **R**. (2 marks)

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17. The diagram below shows a parasite commonly observed on sheep.



(1 mark)

- (a) Identify the parasite.

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- (b) State **four** harmful effects of the parasite in sheep rearing.

(4 marks)

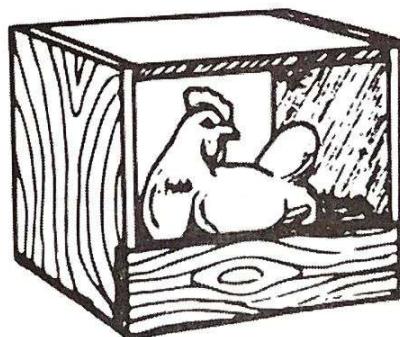
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18. The diagram below shows a method of incubation in poultry rearing.



- (a) Identify the method of incubation shown above.

(1 mark)

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- (b) State **four** advantages of the method of incubation shown in Question 18. (4 marks)

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19. A poultry farmer wants to prepare 200 kilograms of chick mash containing 20% Digestible Crude Protein (DCP). Calculate the amount of maize (10% DCP) and fish meal (60% DCP) the farmer requires to make the chick mash. Use the Pearson's square method and show your working. (5 marks)

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## **SECTION C (40 marks)**

**SECTION C (40 marks)**

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

— will be 16 hours under the following subheadings:

20. (a) Describe calf scours under the following sub-headings. (1 mark)

  - (i) causal organism. (3 marks)
  - (ii) predisposing factors. (4 marks)
  - (iii) control measures. (12 marks)

(b) Describe the rearing of day-old layer chicks up to the age of eight weeks. (5 marks)

21. (a) Describe milk secretion in a dairy cow. (6 marks)

(b) Describe **six** factors that are considered when selecting a gilt for breeding. (9 marks)

(c) Give **nine** reasons why the battery cage system of rearing is popularly used by large scale poultry farmers. (5 marks)

22. (a) Describe **five** management practices carried out on a fish pond. (5 marks)

(b) (i) Give **five** reasons for farm mechanisation. (5 marks)

     (ii) Describe **six** symptoms observed on a calf heavily infested with internal parasites. (6 marks)

(c) Give **four** routine rearing practices in the handling of livestock. (4 marks)