**Name……………………………………………… Index No. …………………….**

 **School……………………………………………. Signature…………………………**

443/2

**AGRICULTURE**

Paper 2

**Time: 2 Hours**

**FORM 4**

**Kenya Certificate of Secondary Education**

## INSTRUCTIONS TO CANDIDATES

* *This paper consists of THREE sections A, B and C.*
* *Answer ALL questions in section A and B and any TWO questions in section C.*
* *Answers to ALL questions MUST be written in the spaces provided.*

*For Examiner’s Use only*

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| --- | --- | --- | --- |
| **Section** | **Question** | **Maximum Score** | **Candidates Score** |
| **A**  | **1-22** | **30** |  |
| **B**  | **23-26** | **20** |  |
| **C** | **27-29** | **20****20** |  |
| **TOTAL** |  |

 **SECTION A (30 MARKS)**

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

1. Give two signs of broodiness in poultry. (1mk)

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2. Name two chemical methods of tick control in livestock. (1mk)

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3. State two conditions which make it necessary to feed bees. (1mk)

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4. State two factors that would affect digestibility in livestock. (1 Mk)

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5 .Give a reason for packing eggs with the broad side upwards in an egg tray . (1 Mk)

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6 .State two advantages of embryo transplant. (1 Mk)

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7. Give any two rules to be observed during milking for high production in dairy (1 Mk)

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8 .Name the tool a farmer can use for joining two pieces of barbed wire during fencing.

(½ Mk)

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9 .Three weeks after the onset of long rains a farmer noticed that his only dairy cow had a distended stomach. Which tool can he use to relieve the animal? (1 Mk)

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10 .State two reasons for identification in cattle. (1mk)

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11. Give three control measures of liver flukes n livestock production. (1 ½ mks)

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12 .Distinguish between raddling and ringing as used in livestock production. (2 mks)

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13 .State four advantages of a spray race over a plunge dip. (2 mks)

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14. Give two reasons for de-beaking in poultry production (1 Mk)

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15 .State two factors that may determine the type of fence a farmer may choose. (1 Mk)

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 16. What are the requirements of good maize store . (2 mks)

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17. Give two methods of extracting honey from the combs. (1mk)

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18. State four factors that determine the choice of building materials for farm structures. (2mks)

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19. (a) What is the Zero grazing?(1mk)

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(b) What is the duration of oestrus cycle in a cow? (1mk)

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(c) if a dairy cow is noticed to be showing first sign of heat at 6.00am what time should it be inseminated? (1mk)

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20. State one use of each of the following farm tools. (1mk)

 (i) Mason’s trowel

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 (ii) A pair of tin snips.

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21. Give two reasons why walls of dairy shed should be white – washed instead of painting with water or oil paints. (1mk)

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22. A cow gives birth to two offsprings in a period of three years. One offspring is a male named *Zedi* and another, female named *Sheka*. Two years later *Zed*i is mated to *Sheka* and another offspring, called *Tedi* is given birth to

 i) Identify the specific system of breeding between *Zedi* and *Shaka*. (1mk)

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(ii) Give four disadvantages of such a system of breeding. (2mks)

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**SECTION B (20 MARKS)**

23. Study the livestock production structure below and answer the questions that follow:



 a) Identify the structure. (1mk)

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b) State TWO animal status that may necessitate the use of the above structure other than a dip. (2mks)

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c) Name another structure that will serve under same conditions as in (b) above. (1mk)

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24. Below is a diagram of a digestive system of a ruminant.



 a) Identify the parts labeled Y and Z. (2mks)

 Y ………………………………………………

 Z ……………………………………………….

 b) State any TWO digestive processes taking place at the part marked X. (2mks)

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c) Name TWO enzymes secreted in the part labeled T that helps in digestion. (1mk)

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25. Study methods of identification represented below



 a) Identify each of the methods. (3mks)

 A ………………………………………………………..

 B ………………………………………………………..

 C ………………………………………………………..

b) Outline the procedure of making identification mark labeled B. (3mks)

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26. The diagram below shows the internal structure of an egg. Use it to answer the questions that follow.



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a) Name the parts marked P, and Q. (2mks)

 P ………………………………………….

 Q ………………………………………….

b) Give any TWO defects that may be found on part M making the egg unsuitable for incubation. (2mks)

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c) Give one role of part marked R. (1mk)

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**SECTION C (40 MKS)**

**ANSWER ANY TWO QUESTIONS IN THIS SECTION**

27 a) Describe the procedure of training a calf to drink milk from a bucket after separating it from its mother. (7 mks)

 b)Describe the preparations one would make before the arrival of a day old chicks and how the chicks should be cared for the first two days .(13 mks)

28. a) Describe the life cycle of a two host tick. (6 mks)

b) Explain the measures used to control external parasites in livestock production (8mk) c.)State five microbial activities that take place in the rumen. (6 mks)

29. a) Describe the uses of farm fences `. (10 mks)

b) Explain the differences between petrol and diesel engines of a tractor. (4 mks)

c) Name the main parts of an engine. (6 Mk)