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| **AGRICULTURE** |  | **NAME**……………………………………… **CODE……………****JUMBO CATEGORY****Male ( ) Female ( )****ALLIANCE GIRLS’ HIGH SCHOOL TECHNICALS CONTEST 2023****Kenya Certificate of Secondary Education*****Instructions to Candidates*** |  |
|  **FORM 4**  *AGRICULTURE***DURATION: 1 Hour** |  | 1. Write **ALL** the details in the spaces provided above.
2. Answer **ALL** the questions in the spaces provided.
3. Non-programmable calculators may be used.
4. All working must be shown within the working spaces provided.
5. This paper consists of **7** printed pages.
6. Candidates should check and ascertain that **ALL** the pages are printed that no question is missing.

***For Examiner’s Use Only***

|  |  |  |
| --- | --- | --- |
| ***Questions*** |  ***Max. Score*** | ***Candidate’s Score*** |
|  ***1-17*** |  ***50*** |  |

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1. What is the role of a footbath in a poultry house? (1 mark)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Below is a diagram showing a house and a brooder set up for brooding chicks.



1. What is the purpose of the part labelled D. (1 mark)

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..

1. State two ways in which the temperature in this brooder may be raised. (1 mark)

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. State four observations that would be made on the behaviour of chicks to determine when the temperature in the brooder is too high for chicks. (2 marks)

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1. Give any three examples of joint product in livestock production. (3 marks)

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1. A deep litter poultry house measures 900cm x 300cm. Suppose the amount of space allowed for one bird is 0.27m2, calculate the number of birds that can be kept comfortably in this house. Show your working .

3 marks

1. State four pre-milking practices in a dairy herd. (2 marks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. The diagrams below show two methods of calf rearing. Study them carefully and answer the questions that follow.

 A B

* 1. Identify method of feeding calf shown in the diagram A and B. (2 marks)

A………………………………………………………………

B….…………………………………………………………..

* 1. Give two disadvantages of calf rearing using method A. (1 mark)

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

#### Give two examples of one-host tick. (2 marks)

#### *…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………...*

#### Explain three characteristics of a good acaricide. (1 ½ marks)

#### *…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..*

#### Name three larval stages of a liverfluke. (1 ½ marks) *……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..*

1. Complete the following table; (4 marks)

|  |  |  |  |
| --- | --- | --- | --- |
| Fixed input (Layers) | Variable input (layers mash) | Total Physical Product (eggs) | Marginal product |
| 100 | 0 | 140 | 0 |
| 100 | 10 | ………………….. | 15 |
| 100 | 20 | 180 | ……………… |
| 100 | 30 | 240 | 35 |
| 100 | 40 |  | 100 |
| 100 | 50 | 470 | ……………… |

#### Explain ways in which infectious diseases can be spread from one Livestock to another in a farm. (3 marks)

#### *……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………*

1. Study the diagram of livestock below and answer questions that follow.

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1. What has led to the above condition. (1 mark)

…………………………………………………………………………………………………………………………………………………………………………………………………..

1. State two effects of the above condition in poultry management. (1 mark)

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. The diagram below shows two different livestock families. Use it to answer the following questions.

 

* 1. Identify the breeding system between:
1. C and A (1 mark)

………………………………………………………………………………………………………………………………………………………………………

1. D and T (1 mark)

………………………………………………………………………………………………………………………………………………………

* 1. State two advantages of breeding system identified in a (ii) above. (1 mark)

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

##### The diagram below shows the relationship between feed requirements and foetal development in sheep. Use the graph to answer the questions.

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##### What are the feeding management practices in sections A, B and C? Give a reason for each. (3 marks)

#### A-

.

#### B-

####

#### C*-*

#### Use the graph to estimate the gestation period in sheep.(1 mark)

#### *……………………………………………………………………………………………………………………………………………………………………………………..……………………………………………*

#### Study the diagram below shows the power transmission mechanism of a tractor engine.

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#### Name the parts 1 – 6. (3 marks)

#### ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

#### What technical term refers to attaching an implement to a tractor. (1 mark)

………………………………………………………………………………………………………………………………………………………………………………………………….

1. a) Distinguish between silvopasture and agrisilviculture as used in agroforestry. (1 mark)

………………………………………………………………………………………………………..

b) Identify the following methods of harvesting trees. (2 marks)

  

 A………………………. B……………………………………

1. State six ways in which a farmer can adjust to risks and uncertainties. (6 marks)

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..

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