**NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ADM: \_\_\_\_\_\_\_\_\_\_\_**

 **DATE: \_\_\_\_\_\_\_\_\_\_\_**

 **SIGN: \_\_\_\_\_\_\_\_\_\_\_\_**

**443/2**

**FORM 4**

**AGRICULTURE**

**PAPER 2**

**DECEMBER 2021**

**TIME: 2HRS**

 **END OF TERM -2-2021 EXAMINATION**

**INSTRUCTIONS TO ALL CANDIDATES:**

1. ***Write your name and admission number in the spaces provided.***
2. ***This paper consists of section A, B and C.***
3. ***Answer all questions in section A and B and any TWO questions in section C in the spaces provided.***

***FOR EXAMINER USE ONLY***

|  |  |  |  |
| --- | --- | --- | --- |
| **SECTION** | **QUESTIONS** | **MAXIMUM SCORE** | **CANDIDATE SCORE** |
| **A** | **1-17** | **30** |  |
| **B** | **18-21** | **20** |  |
| **C** | **22-24** | **40** |  |
|  | **TOTAL** | **90** |  |

 **SECTION A (30 MKS)**

**ANSWER ALL QUESTIONS IN THE SPACES PROVIDED.**

1. State three harmful effects of ticks on a cow.(11/2mks)
2. Outline four ways which farmers can control mastitis in a herd of dairy animals.(2mks)
3. Name three channels through which Kenyan beef farmers can market their products.(1½ mks)
4. Differentiate between drift lambing and pen lambing in sheep management.(2mks)
5. a) Outline two factors that lower the quality of concrete.(1mk)

b) Give two reasons for treating timber for construction of a farm building. (1mk)

1. A student from Macmillan Academy saw a brown cow with a white patch on the face, leg, parts below the knees and hocks, tail switch and flanks. Identify the breed of the cow. ( 1 ½ mks)
2. Give three functions of the rumen in food digestion in cattle.(1 ½ mks)
3. Name four tools that are used when laying foundation of a farm building.(2mks)
4. State four factors considered when sitting a fish pond.( 2mks)
5. State the functional difference between a cold chisel and tin snip.(1mk)
6. Give four benefits a farmer gets by dehorning his cattle.(2mks)
7. State four characteristics of the African wild bee.(Apis mellifera adansonii) (2mks)
8. State four factors considered in selecting a gilt for breeding stock.(2mks)
9. Name four methods of identification in livestock.(2mks)
10. Distinguish between crutching and ringing as used in sheep management.(2mks)
11. State four factors affecting digestibility in livestock.(2mks)
12. Outline four details that should be included a pig breeding record.(2mks)

 **SECTION B (20MKS)**

**ANSWER ALL QUEESTIONS IN THE SPACES PROVIDED.**

1. The diagram below shows a practice carried out in poultry production.



1. Identify the practice.(1mk)
2. Give two abnormalities in an egg that can be observed when using the practice.(2mks)
3. Give two observations of a fertile egg that can be observed after seven days when using the practice above.(2mks)
4. The following is an illustration of an ox-plough, use it to answer the questions that follow.

 a) Name the parts labeled F and G

F \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ½ mks

G \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ½ mks

b) State the function of the parts labeled F and G

F \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1mk

G \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_1mk

c)List two situations in which the above implement would be more useful than a tractor. (2mks)

1. The diagram below illustrates a calf rearing practice.



a) Identify the practice illustrated above. (1mk)

 b) Give one precaution taken while using the rearing practice stated in (a) above. (1mk)

 c) Enumerate three advantages of carrying out above practice. (3mks)

1. The following is a illustration of an internal parasite.



1. Identify the parasite.(1mk)
2. Name the final host of the above parasite.(1mk)
3. Describe the control measures of the above parasites. (3mks)

 **SECTION C (40MKS)**

 **ANSWER ANY TWO QUESTIONS IN THIS SECTION IN THE SPACE PROVIDED**.

1. a) Explain the problems that affect dairy farming in Kenya.(6mks)

b) Describe five management practices that ensure clean milk production in a dairy farm. (5mks)

c) Describe milk fever disease under the following subheadings.

i) Animals attacked. (2mks)

ii) Symptoms (4mks)

iii) Control measures (3mks)

1. a) Describe causes of egg eating in a flock of layers.(6mks)

b) Describe the maintenance practices carried out on a tractor before it is put to daily use. (6mks)

c) Explain the uses of farm fences. (6mks)

d) Explain the following observation; Tough muscles in the gizzard of poultry. (2mks)

1. a) Describe the life cycle of a one host tick.(7mks)

b) Write short notes on Friesian breed of dairy cattle under the following sub-headings.

i) Origin (1mk)

ii) Characteristics (4mks)

c) Describe the procedure of wool shearing in sheep. (8mks)