NAME………………………………………………………..IDEX NO…………………………………………………………………………..

SCHOOL………………………………………………………..SIGN………………DATE…………………………………………………….

**443/2**

**AGRICULTURE**

**PAPER 2**

**TIME: 2 HOURS**

**DECEMBER, 2020**

**MERU CENTRAL CLUSTER EXAMINATION (2020)**

 **Kenya certificate of secondary education (k.c.s.e)**

**INSTRUCTIONS TO CANDIDATES**

* Write your name, school and index number, in the spaces provided above.
* Sign and write the date of the examination in the spaces provided above.
* This paper consists of three sections: A, B and C.
* Answer **all** the questions in section **A** and **B** and **any two** questions from section **C.**
* All answers must be written in the spaces provided in this booklet

.

For Examiner’s Use Only

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
| **SECTION** | **QUESTIONS** | **MAXIMUM SCORE** | **CANDIDATES SCORE** |
|  |  |  |  |  |  |
| A | 1−18 | 30 |  |  |
|  |  |  |  |  |  |
| B | 18−22 | 20 |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  20  |  |  |
|  C |  |  |  |  |  |
|  |   |  |  20 |  |  |
|  |  |  |  |  |  |
|  | Total score |  90 |  |



**SECTION A**

**ANSWER ALL THE QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED**

1. Name **two** dairy goat breeds found in Kenya. (1 Mk)

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

1. Outline **four** reasons for maintaining farm tools and equipment in good condition. (2 Mks)

………………………………………………………………………………………………

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

1. Outline **two** predisposing factors of foot rot. (1 Mk)

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

1. Name **two** rules that should be observed when milking. (1 Mks)

………………………………………………………………………………………………

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

1. Outline **two** duties of a worker bee in a colony of bees. (1 Mks)

………………………………………………………………………………………………

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

1. Study the table below fill in the blanks to show the term used to refer to parturition and young ones of the following animals. (2 Mks)

|  |  |  |
| --- | --- | --- |
| **Type of animal** | **Act of parturition**  | **Term to refer to the young one** |
| Cattle | Calving | Calf |
| Goats | ………………………………… | ………………………………….. |
| pig | …………………………………. | ………………………………….. |

1. State **four** harmful effects of ticks. (2 Mks)

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

1. State **four** desirable factors to consider when siting a fish pond. (2 Mks)

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

9. Name the most appropriate tools used in the following operations

a) Removing metal chippings in file (1mrk )

........................................................................................................................................................................................................................................................................................................................

b) Cutting wood along grains (1mrk)

........................................................................................................................................................................................................................................................................................................................

c) Branding (1mrks)

........................................................................................................................................................................................................................................................................................................................

10. State **four** characteristic of Boran cattle (2mrks)

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

11. Name **three** methods of out breeding in livestock production ((1 ½ marks)

........................................................................................................................................................................................................................................................................................................................

........................................................................................................................................................................................................................................................................................................................

12 .What do you understand by the following terms as used I animal production .

1. Caponisation (1mrk)

....................................................................................................................................................................................................................................................................................................................

 b) Bullock (1mrk)

................................................................................................................................................................................................................................................................................................................................................

 c. Epistasis(1mrk)

................................................................................................................................................................................................................................................................................................................................................

13State **four** control measures of a liver fluke in livestock. (2 marks)

..........................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

14What is “dry cow therapy” in dairy cattle management?

(1/2 mark)

....................................................................................................................................................................................................................................................................................................................

15State **four** causes of stress in poultry. (2 marks)

16.Distinguish between mothering ability and prolificacy as used in livestock breeding.( 1mks)

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

17 Name **two** sources of protein for livestock nutrition. (2 marks)

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

18State **four** signs of parturition shown by a in calf cow. (2 marks)

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

**SECTION B ( 20 mks)**

**ANSWER ALL THE QUESTIONS IN THIS SECTION**

19The diagram below shows a certain practice carried out on pig

 

1. Identify the practice illustrated above (1mrk)

........................................................................................................................................................................................................................................................................................................................

1. Draw another illustration depicting pig number 37(1mrk)
2. Name the tool used to carry out the practice illustrated above (1mrk)

............................................................................................................................................................................................................................................................................................

1. State two other method of identifying piglet (2mrks)

 i)……………………………………………………………………………………………………………………………………………..

 ii)…………………………………………………………………………………………………………………………………………….

20. The diagrams below show some farm tools. study them and answer the question that follow.



 **K**



a) Name the tools.

(2 marks)

A

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

B

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

C

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

W

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

1. State the functional differences between tools K and W. (1 mark)

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

c) What advantage does C have over A and B? (1 mark)

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

1. State **one** common maintenance practice carried out in tool C and W. (1 mark)

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

21a) The diagram below shows a structure of the udder of a cow. Name the part labeled W, X, Y and Z.(2 marks)



W

…………………………………………………………………………………………………

X

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

Y

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

 Z

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

1. What is milk let down (1 mrk)

......................................................................................................................................................................................................................................................................................................................

c) Name **two** hormones that control milk let down in dairy cow. (2 mrk)

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

22. Below is an illustration of a method of extracting honey from combs .Study the diagram and answer the question that follow .

 

1. Identify the above method of extracting honey (1mrk)

........................................................................................................................................................................................................................................................................................................................

1. Give a reason why container x should not be heated directly (1mrk

........................................................................................................................................................................................................................................................................................................................

1. Name the parts labeled w and y(2mrks)

 W……………………………………………………………………………………………………

 Y……………………………………………………………………………………………………

1. Besides the above method ,State one other method of extracting honey (1mrk)

................................................................................................................................................................................................................................................................................................

**SECTION C (40 MKS)**

**ANSWER ANY TWO QUESTIONS IN THIS SECTION**

23(a) State **five** reasons why bees swarm. (5 marks)

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

 b) Describe **five** maintenance practices carried out on a tractor battery. (5 marks)

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

 c) Explain **five** factors considered when culling livestock. (5 Mks)

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

 d. Explain **five** mechanical methods of controlling ticks.(5 mks)

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

24a) Describe the process of egg formation in chicken up to the point of laying. (10 Mks)

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

b) State the differences between four stroke cycle and two stroke cycle engine. (5 Mks)

....................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

..............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

....................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

c) Describe the process of digestion in rumen. (5 Mks)

...................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

........................................................................................................................................................................................................................................................................................................................

25. a) Describe trypanosomiasis disease under the following sub-headings.

i) Causal organism (1 Mk)

........................................................................................................................................................................................................................................................................................................................

ii) Animal attacked (1 Mk)

.......................................................................................................................................................................................................................................................................................................................

iii) **Five** symptoms of attacked animals (5 Mks)

...................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

iv) **Three** control measures (3 Mks)

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

b) Control **five** control measures for cannibalism (5 Mks)

..............................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

(c) Explain **five** parts of a piggery unit (10mrks)

..............................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

.......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

..............................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

..............................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

..............................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

.............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................