**NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ADM NO \_\_\_\_\_\_\_\_\_\_\_\_ CLASS \_\_\_\_\_\_\_\_\_**

**443/2**

**AGRICULTURE**

**PAPER 2**

 **SEPTEMBER 2022**

 **MECS JOINT EXAMINATION**

 **INSTRUCTIONS TO CANDIDATES**

**a) Write your name and Admission number in the spaces provided above.**

**b) This paper consists of three sections A, B and C.**

**c) Answer all the questions in section A and B.**

**d) Answer any two questions in section C.**

**e)This paper has nine printed pages.**

 **For Examiners Use Only**

|  |  |  |  |
| --- | --- | --- | --- |
| **SECTION** | **QUESTIONS** | **MARKS** | **SCORE** |
| **A** | **1 – 22** | **30** |  |
| **B** | **23 – 26** | **20** |  |
| **C** |  | **20** |  |
|  |  | **20** |  |
| **TOTAL SCORE** |  | **90** |  |

 **SECTION A (30MARKS)**

1. State **four** disadvantages of natural mating. (2marks)

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1. Give **two** reasons for supplementary feeding of bees (1mark)

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1. Name any **two** methods used to identify goats. (1mark)

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1. List **three** signs of lambing. (1½marks)

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1. Explain the meaning of cropping as used in fish production. (1mark)

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1. State **two** reasons why jersey breed is suitable than Friesian in marginal areas. (1mark)

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1. State **four** methods used to control cannibalism in a flock of layers in a deep litter system. (2mark)

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1. State **two** reasons why we have a footbath in a cattle dip. (1mark)

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1. State **four** uses of solar energy in the farm. (2marks)

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1. List f**our** functions of water in an animal’s body. (2marks) …………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..
2. State **four** reasons for controlling livestock diseases. (2marks)

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1. State **one** importance of guard rails in a farrowing pen. (1mark) …………………………………………………………………………………………………………………………………………….................
2. List **two** groups of vitamins used in livestock feeding. (1mark) …………………………………………………………………………………………………………………………………………………….……………………………………………………………………………………………………………………………………………………. ………..
3. State the functions of the following farm tools

Shovel ……………………………………………………………………………………………………………………… (½mark)

Rubber ring and elastrator ..………………………………………………………………………………………. (½mark)

1. List **three** control measures for fowl pox disease in poultry (1½mark)

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1. What is a production ration? (1mark) ……………………………………………………………………………………………………………………………………………………..……………………………………………………………………………………………………………………………………………………………….
2. State **two** maintenance practices carried out on slasher. (1mark) …………………………………………………………………………………………………………………………………………………….………………………………………………………………………………………………………………………………………………………………
3. Name the hormone responsible for milk let down (½mark)

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1. List any **two** chemicals used to treat wood against weather elements. (1mark)

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1. State any **four** characteristics of exotic breeds of cattle. (2marks)

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1. State **three** uses of biogas on a farm. (1½marks)

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1. State **four** practices done to make wooden fence posts last longer. (2marks)

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**SECTION B (20mks)**

1. A dairy farmer is required to prepare 100kgs of dairy meal containing 20% DCP (Digestible crude protein). Using the pearsons square method, Calculate the quantity of soya beans 40% DCP and rice 16% DCP the farmer requires for the dairy meal. (5marks)
2. The following diagrams illustrate some workshop tools. Study them carefully and answer the question that follows.

(a). Identify the tools labeled E and F (2marks)

E……………………………………………………………………………………………………………………………………………………

F……………………………………………………………………………………………………………………………………………………

(b). State the functional advantage tool E has over tool F. (1marks)

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(c) State **two** maintenance practice carried out on tool E. (2marks)

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25. Study the diagram below of an egg and use it to answer the questions that follow.

1. Name the parts labeled B, C, D and F. (2marks)

B)………………………………………………………………………………………………………………………………………………….

C)………………………………………………………………………………………………………………………………………………….

D)………………………………………………………………………………………………………………………………………………….

F)…………………………………………………………………………………………………………………………………………………..

b) List any **two** structural qualities of an egg to be incubated. (2marks)

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(c) Give the functions of part labeled E in a fertilized egg (1mark)

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26. The diagram below shows the parts of the digestive system of cattle. Study it and answer the questions that follow.

a) Name the parts labeled N, P, R and Q. (2marks)

 P …………………………………………………………………………………………………………………………………………………

 T ………………………………………………………………………………………………………………………………………………..

 S ………………………………………………………………………………………………………………………………………………..

 Q ……………………………………………………………………………………………………………………………………………….

b) List **three** microbial activities that take place in part labeled P. (3marks)

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**SECTION C (40MARKS)**

**ATTEMPT ANY TWO QUESTIONS IN THIS SECTION**

27**.** a) Discuss the preparation of the brooder before the arrival of chicks. (5marks)

 b) Describe the management practices carried out on ewes two weeks before mating to weaning of lambs.

 (15marks)

28. (a) Outline any **eight** control measures for ticks. (8marks)

 (b) Outline the daily maintenance practices that should be carried out on a farm tractor. (12 marks)

29. (a) Describe the uses of **five** materials and equipment required during hand milking (10marks)

 b)Discuss mastitis disease under the following sub –heading

1. Animals affected (1mark)
2. Casual organism (1mark)
3. Predisposing factors (4marks)
4. Control and treatment (4marks)

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