**TRIAL EXAMINATIONS 2021**

**Kenya Certificate of Secondary Education (KCSE)**

**443/2 - AGRICULTURE - Paper 2**

**(THEORY)**

**Dec. 2021 – 2 hours**

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

**Stream**: ……………….. **Candidate’s** **Signature**: …….………………....**Date**:…..……………

**Instructions to candidates**

1. *Write your name and index number in the spaces provided above.*
2. *Sign and write the date of the examination in the spaces provided above.*
3. *The paper consists of* ***three*** *sections* ***A, B and C.***
4. *Answer* ***all*** *questions in section* ***A and B***
5. *All answers should be written in the spaces provided.*
6. ***This paper consists of 12 printed pages.***
7. ***Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.***
8. ***Candidates must answer the questions in English***

**For Examiner’s Use Only**

|  |  |  |  |
| --- | --- | --- | --- |
| **Section** | **Question** | **Maximum Score** | **Candidate’s Score** |
| **A** | **1-15** | **30** |  |
| **B** | **16-19** | **20** |  |
| **C** |  | **20** |  |
|  | **20** |  |
| **TOTAL SCORE** | | **90** |  |

**SECTION** **A** (30 marks)

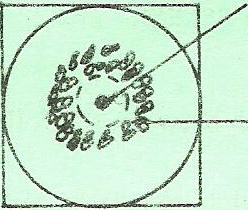
***Answer ALL the questions in this section in the spaces provided.***

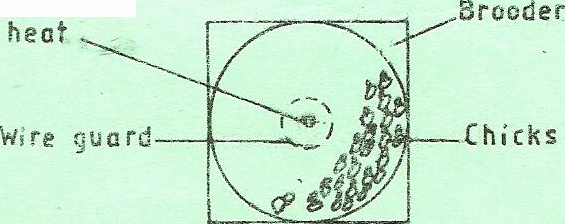
1. State **two** control measures for fowl pox disease in poultry. (2 marks) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………
2. Give **two** reasons for carrying out maintenance practices on a mower. (2 marks) ……………………………………………………………………………………………………………………………………………………………………………………………………………………
3. Give **two** limitations of using solar power on the farm. (2 marks) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………
4. Name **two** methods used in selection of breeding stock in livestock production. (2 marks) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………
5. State **four** methods of controlling roundworms in livestock. (2 marks) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………
6. Name the type of breed into which each of the following breeds of cattle are classified.
7. Aberdeen Angus. (½ marks) ………………………………………………………………………………………………………
8. Guernsey. (½ marks) ………………………………………………………………………………………………………
9. Sahiwal. (½ marks) ………………………………………………………………………………………………………
10. Redpoll. (½ marks) ………………………………………………………………………………………………………
12. Give **two** ways in which proper nutrition help to control livestock diseases. (2 marks) …………………………………………………………………………………………………………………………………………………………………………………………………………
13. Name **two** nutritional diseases in cattle. (2 marks) …………………………………………………………………………………………………………………………………………………………………………………………………………
15. State **two** advantages of housing calves singly in cattle management. (1 mark) …………………………………………………………………………………………………………………………………………………………………………………………………………
16. State **four** advantages of natural calf rearing. (2 marks) ………………………………………………………………………………………………………………………………………………………………………..........................................................................................................................................................................................................................................................................................................................................................................
17. State **four** reasons for dehorning in cattle management. (2marks) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………
18. Name **two** methods of harvesting fish in fish pond. (1 mark) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………
20. State **four** causes of egg eating in flock of layers. (2 marks) ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………
21. State **two** advantages of fold system on poultry rearing. (1 mark) …………………………………………………………………………………………………………………………………………………………………………………………………………
22. Name **four** parts of farm building that can be reinforced using concrete. (2 marks) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………
23. State function of the following farm tools and equipment.
24. Pipe cutter (1 mark) ……………………………………………………………………………………………………………………………………………………………………………………………………..……….
25. Wire strainer (1 mark) ………………………………………………………………………………………………………………………………………………………………………………………………………………
26. State **four** ways in which vaccine can be administered to livestock. (2 marks) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………
27. State **two** disadvantages of using plunge dips in tick control. (1 mark) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………
28. State **two** features on the animal which may predispose it to livestock diseases. (1 mark) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**SECTION B** (20 marks)

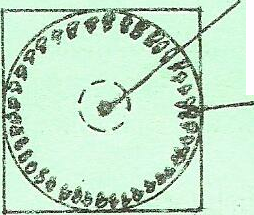
*Answer* ***all*** *the questions in this section in the spaces provided.*

1. The following illustrations show the behavior of chicks in a brooder. Study them carefully and answer the questions that follow.



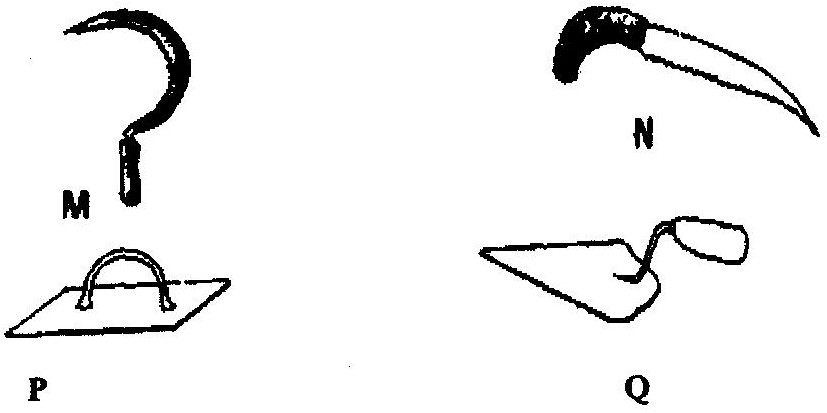


**A B** Source of **heat**

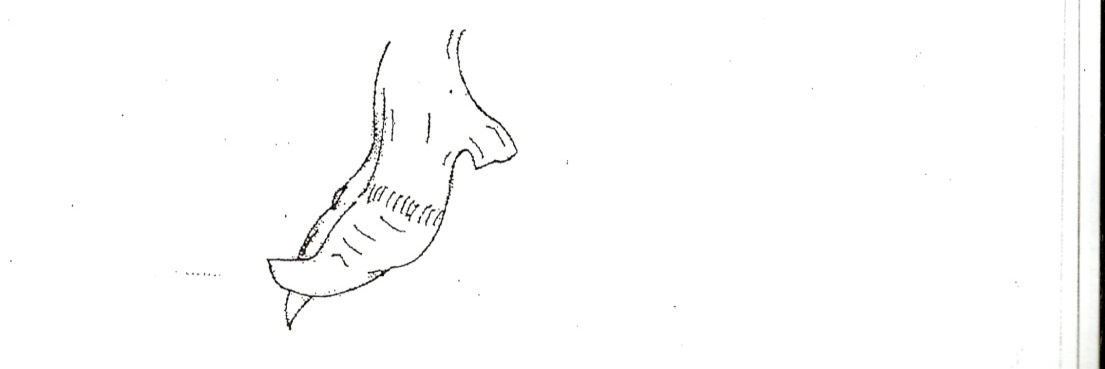


**C**  Source of heat

1. Explain the cause of behavior observed in chicks for each of the illustrations labeled A, B and C. (3 marks) ....................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................
2. Give a reason for making the brooder wail round in shape. (1 mark) …………………………………………………………………………………………………………………………………………………………………………………………..………………………………………………….
3. State **one** way of correcting the behavior of chicks shown in an above. (1 mark) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………
4. Diagrams M, N, P and Q represents some farm tools.



1. Identify the tools; M, N, P and Q. (2 marks) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………
2. Give the use of each of the tools named above. (2 marks) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………
3. State **two** maintenance practices that should be carried out on tool M. (1 mark) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………
4. The diagram below illustrate a hoof of a sheep .Study it carefully and answer the questions that follow.



1. Name the routine management practice that should be carried out on the hoof illustrated above. (1 mark) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………
2. State **two** reasons for carrying out the management practice in (a) above. (2 marks) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………
3. Name the **two** tools used to carry out the routine management practice named in (a) above. (2 marks) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………
4. A farmer wanted to prepare a 200kg of calf rearing ration containing 20% DCP. Using the Pears Square Method, calculate the amount of Maize containing 10% DCP and Sunflower containing 35% DCP the farmer would need to prepare the ration.(Show your working) (5 marks)

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

**SECTION C**

***Answer any two questions in this section in the spaces provided***

1. State **five** indicators that can be observed on a goat to confirm sickness. (5 marks)
2. Describe **eight** physical characteristics of a poor layer in a flock of hens. (8 marks)
3. Give **seven** harmful effects of liver fluke in sheep rearing. (7 marks)
4. Outline **five** characteristics of a clean milk. (5 marks)
5. Describe Brucellosis disease under the following sub-headings.
6. Causal organism. (1 mark)
7. Signs of attack. (3 marks)
8. Control measures. (3 marks)
9. State **eight** advantages of Artificial Insemination (8 marks)
10. Describe **five** structural requirement of a good calf pen. (10 marks)
11. Describe the cycle of a four stroke petrol engine. (10 marks)

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

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

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

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

**THIS IS THE LAST PRINTED PAGE.**