**SUNRISE EVALUATION EXAMS FORM 4 - 2021**

**NAME……………………………………………………ADM NO.………………. CLASS………**

**DATE: …………………………….. SIGN: …………………….………**

**443/2 AGRICULTURE**

 **PAPER 2**

 **(THEORY)**

**SEPTEMBER 2021**

**DURATION:: 2HRS**

***Kenya Certificate of Secondary Education (K.C.S.E)***

**Instructions to candidates**

*a) Write your name and index in the spaces provided above*

*b) Sign and write the date of examination in the spaces provided above*

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

*d) Answer* ***all*** *the questions in sections* ***A*** *and* ***B****.*

*e) Answer any* ***two*** *questions in section* ***C***

*f)* ***All*** *answers should be written in the spaces provided in the question paper.*

**For Examiner’s Use Only**

|  |  |  |  |
| --- | --- | --- | --- |
|  **Section** | **Question** | **Maximum Score** | **Candidates Score** |
| **A** | **1 – 29** | **40** |  |
| **B** | **30 - 35** | **30** |  |
|  **C** |  **36 - 38** | **20** |  |
| **Total Score** | **90** |  |

1. What is apiculture? (1 mark)

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

1. **Name one** livestock disease that is transmitted by the following parasites.
2. Brown ear tick (½ mark)

........................................................................................................................................................................(b) Tsetsefly (½ mark)

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

1. State the intermediate host for liver fluke Fasciola spp. (½ mark)

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

1. **State four** breeds of rabbits. (2 marks)

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

1. **State two** functions of a crop in a digestive system of chicken. (1 mark)

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

1. **State three** ways of restraining cattle (1½ marks)

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

1. **State two** livestock diseases caused by virus. (1 mark)

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

1. **State two** types of selection practiced by livestock farmers (1 mark)

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

1. **State three** ways of preventing predation in a fish pond (1mark)

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

1. **State four** functions of feed additives in livestock production. (2 marks)

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

1. **State two** types of calf pens. (1 mark)

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

1. State advantages of embryo transplant. (2 marks).

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

1. **State two** roles of testis in male reproductive system. (1 mark)

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

1. **Differentiate** between mothering ability and prolificacy (2 marks)

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

1. **State three** ways in which feeding contributes to disease control. (1½ marks)

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

1. **State two** functional differences between rumen and abomasums. (2marks)

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

1. Name four practices carried out in the crush (2 mks)

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

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

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

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

1. Give three dual purpose cattle breeds (1½ mks)

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

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

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

1. Give three terms used to describe the following: - (1½ mks)

 (i) Mature male pig ........................................................................................................................

 (ii) Sterilised birds ........................................................................................................................

 (iii) Mature female goat ................................................................................................................

1. State four reasons for identifying farm animals (2mks)

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

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

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

1. State two factors that determine the quality of honey (1mk)

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

1. Give four categories of livestock diseases (2 mks)

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

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

1. Name three tools used for plumbing (1½ mks)

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

1. State two maintenance practices carried out on an ox-drawn plough ( 1 mk)

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

1. List two sources of farm’s power which are environmental friendly (1 mk)

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

1. State four functions of the lubricating system in a tractor (2mks)

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

1. State two conditions under which a farmer would prefer to use an ox-cart instead of a tractor-drawn trailer (1mks)

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

1. State four qualities considered when selecting a heifer for dairy purposes (1mks)

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

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

1. Give one role of a damp proof course in the foundation of a farm building (1mk)

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

**SECTION B (30MKS)**

1. The illustrations below represents the stages of development of a three –host tick. Study it carefully and then answer the questions that follow:



 (a) Briefly explain what is happening in the following stages (4 marks)

1…………………………………………………..…………………………………………………............................................................................................................................................................

4…………………………………………………..…………………………………………………............................................................................................................................................................

5…………………………………………………..………………….……………………………..

............................................................................................................................................................7…………………………………………………..…………………………………………………..........................................................................................................................................................

(b) Why do you think that tick control is difficult using acaricides? (1 mark)

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

(c) Name the most common sites the tick can be found on the body of an animal. (2 marks)

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

 (d) Give **two** examples of a three host tick (1mark)

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

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

1. The diagram below illustrates a certain practice carried out in sheep management. Study carefully and answer the questions that follow



1. Identify the practice illustrated above (1mark)

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

1. State two precautions a farmer should put into consideration when carrying out this practice. (2marks)

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

1. How often should the practice be carried out? (1mark)

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

1. Below in an activity carried out in poultry production. Study it carefully then answer the questions that follow.

 

1. Identify the practice being carried out...................................................................... (1 mk)
2. State three defects that can be detected by this practice (3 mks)

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

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

1. State two disadvantages of artificial incubation. (2 mks)

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



1. Use the above diagram of a calf pen to answer the questions that follow.

a) How high should the calf pen be raised from the ground (1mk)

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

b) Give any two reasons why calves are housed singly (2mks)

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

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

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

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

c) Why should the calf pen be near the milking parlour? (2mks)

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

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

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

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

1. Study the diagram below of a diesel fuel system then answer the questions that follow.



a) Identify the parts labelled (3 mks)

A.....................................................................................................................................................

B.....................................................................................................................................................

C.....................................................................................................................................................

b) State three maintenance practices carried out on the system (2mks)

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

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

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

1. Outline the procedure of proper milking technique (3 mks)

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

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

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

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

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

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

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

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

**SECTION C (20MKS)**

1. a) Outline five signs of heat in a cow (5 mks)

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

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

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

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

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

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

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

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

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

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

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

 b) Outline five causes of stress in poultry and describe their control (10mks)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

c) Using Pearson’s square compute a ration with 20% DCP from oats which contains 10% DCP

 and simsim seedcake containing 60% DCP. (show your working) (5mks)

1. a) Outline the daily maintenance practices that should be carried out on a farm tractor (8 mks)

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

b) Outline twelve general symptoms of endoparasite attack in livestock. (12 mks)

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

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

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

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

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

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

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

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

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

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

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

1. a) State four advantages of using a sub soiler in seedbed preparation (4mks)

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

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

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

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

 b) Give five advantages of artificial insemination in cattle management (5mks)

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

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

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

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

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

 c) State five function of water in animal’s body (5mks)

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

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

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

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

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

d) Describe control measures for tape worm in livestock (6mks)

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

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

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

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

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

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

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

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

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

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