KAKAMEGA CENTRAL SUB-COUNTY JOINT EVALUATION EXAM

Kenya Certificate of Secondary Education

443/1 Agriculture Paper 1 2 hours

INSTRUCTIONS TO CANDIDATES:

• This paper contains three sections A, B and C
• Answer ALL the questions in section A and B
• Answer any Two questions from section C
• All answers should be written in the spaces provided.

FOR EXAMINERS USE ONLY

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This paper consists of 8 printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.

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SECTION A (30 MARKS)

Answer ALL questions in this section in the spaces provided.

1. State three physical characteristics used in soil classification (1 ½ mks)

2. Give two types of metal pipes used on the farm to convey water (1 mk)

3. List four methods of drainage (2 mks)

4. Distinguish between minimum tillage and sub-soiling as used in agricultural production (2 mks)

5. Name the branches of horticulture that deal with the following (1 ½ mks)

6. Name two methods used in preparation of compost manure (1 mks)

7. Name three types of farm records that a sheep farmer should keep (1 ½ mks)

8. Give three symptoms of sulphur deficiency (1 ½ mks)

9. Name three vegetative materials used in propagation of pineapples (1 ½ mks)

10. State three materials used to prepare rooting mixture to fill polythene sleever (1 ½ mks)

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11. Give three disadvantages of mulching in crop production (1 ½ mks)

12. State three factors that result in tomatoes due to application of too much nitrogenous fertilisers (1 ½ mks)

13. Outline four causes of land fragmentation and subdivision in Kenya. (2 mks)

14. Differentiate between settlement and resettlement as used in agricultural economics (2 mks)

15. State four factors influencing mass wasting / solifluction (2 mks)

16. Name four types of terraces (2 mks)

17. a) State five environmental factors that affect the selectivity and effectiveness of herbicides (2 mks)

   b) State three methods of weed control in paddy rice (1 ½ mks)
SECTION B (20 MARKS)

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

18. The diagrams below illustrate common weeds on the farm. Study them carefully and answer the questions that follow

![D] ![E] ![F]

a) Name the weeds illustrated by figures D, E, and F (3mks)

D…………………………………………………………………

E…………………………………………………………………

F…………………………………………………………………

b) Why is control of weed F difficult (1mk)

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

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19. The diagrams below illustrate methods of crop propagation. Study them carefully and answer the questions that follow

![L] ![K]

b) State two methods of budding (2mks)

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20 a) What is plant population? (1mk)

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b) Patricia was advised to plant her maize crop at a spacing of 90 x 30cm. Calculate the plant population if her plot measures 93m x 42 m.

Show your working

(2mks)

(3mks)

21. The diagram below illustrates a soil profile. Study it carefully and answer the questions that follow:

a) Name the layers represented by numbers 2, 3, 4, and 5

2………………………………………………………………………..

3………………………………………………………………………..

4………………………………………………………………………..

5………………………………………………………………………..

b) State two characteristics of the layer marked 2

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

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

22. The diagrams below illustrate common crop pests on the farm. Study them carefully and answer the question that follow.
a) Name the pest illustrated in figure P and S
P …………………………………………………………………………………
S …………………………………………………………………………………

b) State two control methods of the pests in fig P
.............................................................................................................................
.............................................................................................................................

SECTION C (40 MARKS)
Answer any two questions on separate answer sheets provided

23 a) State and explain how soil loses fertility (12 mks)
b) Outline four problems associated with manure use in agricultural production (4 mks)
c) Give four characteristics of plants suitable for green manure (4 mks)

24 a) Explain the factors considered in choosing seed rates (8 mks)
b) Describe the production of cabbages under the following sub headings
   i) Nursery establishment and management (6 mks)
   ii) Transplanting (6 mks)

c) Give the reasons for top dressing pastures. (5 mks)

25. a) Give the reasons for top dressing pastures. (5 mks)
b) Outline the advantages of zero grazing (stall feeding) (5 mks)
c) State and explain five physical measures of controlling crop pests (10 mks)
INSTRUCTIONS TO CANDIDATES:

1. Write your name and index number in the spaces provided.

2. Sign and write the date of examination in the spaces provided.

3. This paper consists of three section A, B and C.
4. Answer all the questions in section A and B
5. Answer any two questions in section C
6. All the questions should answered in the spaces provided

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And no questions are missing.

SECTION A (30 MARKS)

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

1. (a) What is a notifiable disease (lmk)

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

(b) Name two notifiable diseases of cattle (lmk)

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

2. Give four faults in the eggs that are detected during egg candling (2mks)

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

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3. **Give two reasons for maintaining farm tools**

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

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

4. (a) **Give two roles of litter in a deep litter poultry house**

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

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

(b) **State one role of footbath in a poultry house**

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

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

5. **Mention four advantages of embryo transplant**

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

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

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

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

6. **Give functional difference between the following tools**

(a) **Stock and die and pipe cutter**

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

(b) **Ball pein hammer and claw hammer**

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

7. **State four features of an ideal calf pen**

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

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

……………………………………………………………………………………………………
8. **State four** signs of furrowing observed in pigs (2mks)

9. **State three** methods of restraining cattle (1 ½ mk)

10. **List four** structural requirements of a grain store (2mks)

11. **Name two** types of mowers a farmer can use in the farm (lmk)

12. **Name the dairy breed of cattle which** (lmk)

(a) Produces the highest yield of milk
(b) Produces milk with the highest butterfat content

13. **State four** pre-disposing factors of mastitis (2mks)

14. **Name any two** renewable sources of power in the farm (lmk)

15. **State four** factors considered when computing a ration for livestock on the farm (2mks)

**SECTION B (20MARKS)**

*Answer all questions in the spaces provided*

16. **State two** ways in which digestion of food in pigs differs from that in Ruminants (2mks.)

17. **State two** conditions which would make it necessary to feed bees (lmk)

18. **State four** disadvantages of natural mating as a method of breeding in dairy cattle management (2mks)
SECTION B (20 MARKS)

Answer all questions in this section in the spaces provided

19. The diagram below is a cross section of part of a cow’s udder.

![Diagram of a cow's udder]

a) Label the parts marked A, B, C and D (2mks)

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

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

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

D ............................................

b) Name two hormones that control milk - let down in a dairy cow. (2mks)

..............................................................................................................................................
20. The diagram below shows the head of a chicken having symptoms of a poultry disease.

21. A diagram of a sheep is shown below. Study the diagram and answer the questions that follow

(a) Identify the disease. (1mark)

(b) Give two reasons why the disease is of economic importance. (2marks)

(c) Outline two methods of controlling the above disease. (2marks)
21. A diagram of a sheep is shown below. Study the diagram and answer the questions that follow

[Diagram of a sheep with labeled parts A and B]

i) What operation is usually carried out on the part labeled A?

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

(1 mark)

ii) Give two reasons for carrying out the operation stated in a(i) above?

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

(2 mark)

iii) Which routine is usually carried out on the part labeled B.

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

(1 mark)

iv) Name the disease that is likely to affect the sheep if the operation stated in a(iii) above is not carried out.

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

(1 mk)

22. The following diagram shows parts of a roof. Study it carefully and answer the questions that follow.
(a) Name the parts labeled P, Q, R and S

P ..............................................
Q ..............................................
R ..............................................
S ..............................................

(b) State the functions of P and Q

P .........................................................................................................................
Q .........................................................................................................................

(c) State two ways of treating timber

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

SECTION C (40 mks)

Answer any two questions from this section in the spaces provided after question

23. (a) Discuss the management of layers from one day old to the start of laying in a deep litter
(b) Explain management practices that would improve fish production. (6 mks)

24 (a) Discuss mastitis disease under the following subheading:

(i) Specific causal organisms (2 mks)

(ii) Predisposing factors (5 mks)

(iii) Symptoms (4 mks)

(iv) Control and treatment (5 mks)

(b) State four ways by which a farmer can identify an animal suffering from worm infestation. (4 mks)

25. a) Discuss the importance of farm fences. (9 mks)

b) State the factors considered when siting farm structures. (11 mks)