MOKASA JOINT EVALUATION

AGRICULTURE PAPER I

Paper I

Theory

(2 Hours)

INSTRUCTIONS TO CANDIDATES

[a] Write your name and index number 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.
[g] Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
[h] Candidates should answer the questions in English.

For Examiners

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<thead>
<tr>
<th>SECTION</th>
<th>QUESTIONS</th>
<th>MAX.SCORE</th>
<th>CAND.SCORE</th>
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SECTION A: (30 MARKS)

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

1. State four limitations of pastoral farming (2 marks)

2. Give four benefits of timely planting of crops (2 marks)

3. State four factors of soil which influence productivity of crops (2 marks)

4. Give four conditions of land that would make it necessary to carryout reclamation practices (2 marks)

5. State two factors that influence the quantity of water used in the farm (1 mark)

6. State four reasons for keeping health records (2 marks)

7. Give two types of inventory records (1 mark)
8. Name two situations in which opportunity cost does not exist \( \text{ (1 mark) } \)

9. State three ways in which flooded water is important in the growing of paddy rice \( \text{ (1½ mks) } \)

10. State four ways of maintaining a healthy and high yield grass pasture after planting \( \text{ (2 marks) } \)

11. Give three factors considered while determining the size of a silo \( \text{ (1½ mks) } \)

12. Give two ways in which overheating can be avoided during silage making \( \text{ (1 mark) } \)

13. State four factors that will determine the depth of ploughing a maize field using tractor drawn implements \( \text{ (2 marks) } \)

14. Give four ways in which cover crops help in soil and water conservation \( \text{ (2 marks) } \)
15. List five biotic factors that affect livestock negatively  

16. State three characteristics of soil that are influenced by its texture  

17. Distinguish between contact and systemic herbicide  

18. Give two reasons why phosphatic are applied at planting time  

SECTION B: (20 MARKS)  

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

19. The diagram below shows a practice in crop production.
a)i) Give the identity of the field management practice illustrated above (½ mark)

ii) Give two reasons for carrying out the above field management practice (2 marks)

b) A plot measuring 4m x 3m was prepared for planting cabbages at a spacing of 60cm x 60cm. Calculate the plant population in the plot
   Show your working.

20. a) Identify the illustration P and Q which are materials used in propagation of sugarcane

   ![Diagram of P and Q]

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

b) Giving reasons which of the above is more suitable as a planting material in sugar cane? (2 marks)

c) How is planting material in sugarcane treated to control ratoon stunted disease (1 mark)
21. The diagrams below labelled H and J are illustrations of coffee plants established using two different pruning systems. Examine them closely and answer the questions that follow.

a) Name the pruning systems illustrated by diagrams H and J (1 mark)
   H ........................................................................................................................................
   J ........................................................................................................................................

b) Give two advantages of pruning system illustrated by diagram H over that one illustrated by diagram J (2 marks)
   ........................................................................................................................................
   ........................................................................................................................................

c) Name two types of pruning that should be carried out after the coffee bush has been established using the system J (2 marks)
   ........................................................................................................................................
   ........................................................................................................................................

22. The diagrams V and W illustrate some soil structures. Study the diagrams and answer the questions that follow.
23. The diagram below shows a maize stalk infested by a certain pest. Study it and answer the questions that follow.

a) Identify the pest

b) Give two types of damages caused to crops by the above pest

c) Other than maize name one other crop attacked by the pest

(½ mark)
SECTION C: (40 MARKS)

Answer any TWO questions from this section in the spaces provided.

24. a) Describe the field production of tomatoes under the following subheadings
   (i) Field management practices (7 marks)
   (ii) Grading of tomato fruits (3 marks)

b) Explain five factors considered when designing a crop rotation programme (10 marks)

25. a) Explain ten factors that influence soil erosion (10 marks)

b) Describe six benefits of land consolidation (6 marks)

c) Explain four main objectives of establishing the early African settlement schemes (4 marks)

26. a)i) Explain the difference between stocking rate and carrying capacity (2 marks)

ii) Discuss the advantages of rotational grazing system (5 marks)

iii) Describe the precautions when harvesting coffee (3 marks)

b)i) Explain harmful effects of weeds in the main field (5 marks)

ii) Discuss the cultural methods of controlling crop diseases (5 marks)
INSTRUCTIONS TO CANDIDATES

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[c] This paper consists of three sections A, B, and C.
[d] Answer all the questions in sections A and B. Answer two questions in section C.
[e] Answers should be written in the spaces provided on the question paper.

FOR EXAMINERS USE ONLY.

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SECTION A [30 MARKS]
Answer all the questions in this section in the spaces provided.
1. Name a breed of goats that has long hair. [0.5mks.]
2. Give three factors that should be considered when sitting a bee-hive in the farm [1.5 marks]
3. State four management practices that would ensure maximum harvest of fish in a fish pond [2 marks]
4. Give two reasons why walls of dairy sheds should be white—washed instead of painted with water or oil paint. [1 mark]
5. What is the intermediate host for liver fluke? [0.5mks.]
6. What is the duration of estrus cycle in a cow? [0.5mks.]
7. If a dairy cow was noticed to be showing first signs of heat at 6.00am, what time should she be inseminated? [1 mark]
8. Give four factors that determine the amount of water required by an animal. [2 marks]
9. Name three holding tools and equipment. [1.5 marks]
10. Give three functions of a combination squire. [1.5 marks]
11. State three functions of the differential in a tractor's power transmission. [1.5mks]
12. State three factors that contribute to a high working efficiency of a disc harrow. [1.5 marks]
13. List three products obtained from dromedary camel. [1.5 marks]

14. If the records showed that a rabbit doe was served on 27th September 2014 what date did she give birth/kindle? [0.5 marks]

15. Give two signs that would show that a rabbit doe is about to parturite. [1 mark]

16. Under what conditions would it be necessary to use a file to smoothen a piece of wood instead of using a smoothing plane? [0.5 marks]

17. What is the use of a plumb-bob? [0.5 marks]

18. State four characteristics of a Corriedale sheep breed. [2 marks]

19. State any two disadvantages that may arise from inbreeding in livestock production. [1 mark]

20. Name four cattle diseases caused by bacteria. [2 marks]

21. Name any two methods recommended for identifying goats. [1 mark]

22. State three field conditions under which a disc plough should be used instead of a mould board plough. [1.5 marks]

23. Give three symptoms of milk fever in dairy cattle. [1.5 marks]

24. Give four reasons for steaming up dairy animals. [2 marks]
SECTION B [20MARKS]
Answer all questions in this section in the spaces provided.
25. The drawing below shows the cross-section of a house under construction. Study it carefully and answer questions that follow.

[a] Assuming that the wooden beams are strong enough to hold the roof load. What is the most likely thing to happen when the roof load exerted presses at point Y and Z. [1mark]

[b] On the diagram provided draw and label two constructional features you would add to this structure in order to make it more efficient. [2marks]

[c] State two importance of the fascia board in the farm building. [2marks]

26. The following illustration show the behavior of chicks at different temperatures of the brooder.
[a] Explain the temperature conditions in each of the four diagrams A, B, C, and D. [2 marks]
A.......................................................... B..............................................................
C.......................................................... D..............................................................
[b] Give one method of assessing temperature in the brooder. [1 mark]
.................................................................................................................................
[c] Name two other behavioral observations on chicks when temperature is very high in the brooder. [2 marks]
.................................................................................................................................
.................................................................................................................................
27. The illustration below shows a pig farrowing pen. Study it and answer questions that follow.

![Image of a pig farrowing pen]

[a] What is the use of the raised metal rails. [1 mark]
.................................................................................................................................
[b] Give two uses for the parts labeled D. [2 marks]
.................................................................................................................................
.................................................................................................................................
28. Below is an illustration representing a practice carried out in sheep. Study it and answer questions that follow.

![Image of a sheep being trimmed]

[a] Identify the practice illustrated above. [1 mark]
[b] State three precautions taken when carrying out the above practice. [3 marks]

29. Study the illustration below of a poultry digestive system and answer questions that follow.

[a] Give two functions of part E. [2 marks]

[b] State one function of part H. [1 mark]

SECTION C [40 MARKS]
Answer any two questions from this section in the spaces provided after each question.
30. [a] Describe ten factors that are considered during the selection of a breeding stock. [10 marks]
Describe five effects of parasites on livestock [5 marks]

[c] Describe the mechanical control measures of ticks [5 marks]

31. [a] Outline five reasons why bees swarm away [5 marks]

[b] Discuss the preparations and practices that should be carried out on a pregnant sow 10 days before she farrows [5 marks]

[c] Describe Gumboro disease under the following sub headings:
   Causal organism [1 mark]
Livestock attacked [1mark]

Symptoms of the disease [6marks]

Control measures [2marks]

32. [a] Explain five advantages of animal draught power. [5marks]

[b] Discuss the importance of lubrication system in a tractor. [4marks]

[c] Explain six factors considered when selecting construction materials for farm structures. [6marks]

[d] Give five qualities of a good calf pen. [5marks]