CENTRAL KENYA NATIONAL SCHOOLS JOINT MOCK - 2015

Kenya Certificate of Secondary Education
AGRICULTURE
PAPER 1
TIME: 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 questions in Section A and B.
(e) Answer ANY Two questions in Section C in the spaces provided.

FOR EXAMINER’S USE ONLY

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<th>Section</th>
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Agriculture Paper 1

SECTION A: (30 MARKS)

Answer all questions in this section in the spaces provided.

1. Agriculture is viewed as an Art and a Science. State four practice in the farm that makes Agriculture an Art. (2 marks)

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2. State four ways in which a farmer can improve the structure of a water logged clay soil. (2 marks)

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3. Despite efficient water supply to his tomatoes, Mr. Gikandi still noted wilting of some plants. Suggest two possible causes of this wilting. (1 mark)

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4. Outline the stages undergone in the development of a gully. (2 marks)

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5. (a) Explain why zone 2 in the zones of production is called a Rational Zone. (1 mark)
Agriculture Paper 1

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Cekenas Joint Mock

(b) Differentiate between a complete budget and a partial budget. (1 mark)

6. (a) State four deficiency symptoms that would be seen in crop lacking potassium. (2 marks)

(b) A farmer was advised to apply 150kg of CAN of maize. Calculate the amount of Nitrogen applied per Hectare if CAN contains 21%N. (1 mark)

7. List down three types of Nurseries. (1½ marks)
8. State four achievements that can be made with high level of education and technology in agriculture. (2 marks)

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9. Name four examples of liabilities in a balance sheet. (2 marks)

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10. State four ways in which a farmer can increase labour productivity in the farm. (2 marks)

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11. Give four farming practices that may help in achieving minimum tillage. (4 marks)

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12. State four reasons why timely weed control is advisable in cop production. (2 marks)

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13. Give **two** forms of collective land tenure system in Kenya. (1 mark)

14. Define the term “Economic Injury Level” of a crop. (1 mark)

15. State **three** characteristics of shifting cultivation. (1½ marks)

16. Name the disease that is characterized by mass of dark spores on the flowering part of maize.

**SECTION B: (20 MARKS)**

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

17. Three maize pests are shown in the diagram below. Study them and answer the questions that follow.

![Diagram of maize pests A, B, C]
(a) Identify the pests in the diagrams labeled A, B and C. (2 marks)

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(b) At what stage of maize production does pest A and B damage the crop? (2 marks)

A  _________________________________________________________________

B  _________________________________________________________________

(c) Give two ways in which C causes losses in field crops. (2 marks)

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18. Study the following types of soil structures and answer the questions that follow.

(a) Identify the type of soil structure labeled. (2 marks)

A  _________________________________________________________________
(b) Which type of soil structure is best suited for farming. (1 mark)

(c) Identify four characteristics which make the soil structure named in (b) above suitable for farming. (2 marks)

(a) Identify varieties L and M. (2 marks)

(b) Which of the two varieties of sorghum is less likely to be damaged by birds? (1 mark)

(c) Give a reason for your answer in (b) above. (1 mark)
20. Differentiate between a Hybrid and a composite as applied in maize production. (1 mark)

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21. Why are the following weeds difficult to control?
   (a) Couch grass. (1 mark)

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   (b) Oxalis latifolia. (1 mark)

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   (c) Double thorn. (1 mark)

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SECTION C: (40 MARKS)

Answer any two questions in this section in the spaces provided after question 24.

22. (i) Explain five structural structures used to control soil erosion. (10 marks)

   (ii) State and explain five factors which may influence the spacing of crops. (10 marks)

23. (a) Describe ten cultural methods used in controlling crops pests. (10 marks)

   (b) Describe production of paddy rice under the following sub headings:
       (i) Land preparation. (3 marks)
       (ii) Water control. (3 marks)
       (iii) Role of irrigation water. (3 marks)
       (iv) Sighs of maturity. (1 mark)

24. Using the data below answer the questions that follow.
(a) Work out the Marginal revenue, Marginal cost and Net revenue at all levels of production and complete the table. (7 marks)

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(b) On the graph paper provided, draw a graph of output against input. (4 marks)
Agriculture Paper 1

(c) From the graph, work out the maize output at the input levels 3 and 9. (2 marks)

(d) State the level of input where maximum profit is realized and give a reason. (2 marks)

(e) What is elasticity of demand? (Ed) (1 mark)

(f) Enumerate the factors that determine the elasticity of demand. (4 marks)
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Agriculture Paper 2

SECTION A: (30 MARKS)

Answer all questions in this section in the spaces provided.

1. State the major physical difference between a Landrace and a Large White Pig. (2 marks)

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2. (a) Name two livestock diseases that are controlled through use of same vaccine. (2 marks)

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(b) Name the vaccine as in 2 (a) above. (½ mark)

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3. Name two diseases that attack bees. (2 marks)

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4. State two distinguishing external characteristics of Californian White Rabbit. (2 marks)

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5. State the functions of the following hormones in livestock.
   (a) Oxytocin. (1 mark)

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6. Name **four** species of fresh water fish reared in Kenya. (2 marks)

7. Give **three** methods of feeding colostrums to a Newly Born Calf. (1½ marks)

8. State **four** advantages of using Kenya Top Bar Hive over Log Hive. (2 marks)

9. List **four** factors that would ensure clean milk production. (2 marks)

10. State **two** reasons for clipping the Upper Beak in poultry management. (1 mark)

(b) Stilboesterol. (1 mark)
11. State two ways of preventing predation in a fish pond. (2 marks)

12. Differentiate between crutching and ringing. (1 mark)

13. Name two major physical differences between Dromedary and Bactrian Breeds of camel. (2 marks)

14. State four major Routes of Administering vaccines in a day old chick. (2 marks)
15. State **four** measures that prevent egg eating in poultry. (2 marks)

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16. Give **four** factors determining the amount of water taken by an animal. (2 marks)

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17. List **two** factors considered in sorting and grading eggs for market. (2 marks)

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18. List any **four** predisposing factors of livestock diseases. (2 marks)

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19. (a) Define the term immunity as used in livestock health. (1 mark)

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(b) List four causes of livestock diseases.  
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20. Name two structures used in the control of ticks.  
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(a) State two possible causes of soft shelled eggs.  
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(b) State two qualities of good eggs for incubation.  
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SECTION B: (20 MARKS)

Answer all questions in this section in the spaces provided.

22. The diagram below show some workshop tools. Study the diagrams and answer the questions that follow.
(a) Identify tools labelled. (3 marks)

A _________________________________________________________________

B _________________________________________________________________

C _________________________________________________________________

(b) What functional advantage does the tool labelled B have over tool C? (1 mark)

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Agriculture Paper 2
(c) State the function of the tool labelled A. (1 mark)

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(d) State the function of part X in the tool labelled B. (1 mark)

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23. Below are diagrams illustrating the behaviour of chicks in various brooders. Study the diagrams and answer the questions that follow.
(a) State the environment problem in each brooder as illustrated by the behaviour of the chicks. (3 marks)

A ________________________________________________________________

B ________________________________________________________________

C ________________________________________________________________

(b) State one way of solving the problem in B. (1 mark)

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Agriculture Paper 2 7 Cekenas Joint Mock

24. Study the illustration shown below and answer the questions that follow.

(a) Name the condition shown above. (1 mark)

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(b) What causes the condition shown in 24(a) above? (1 mark)

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(c) Explain the treatment of the condition named in 24(a) above. (2 marks)
25. A farmer computed 100kg ration with 20% DCP from oats which contains 10% DCP and simsim seed cakes containing 60% DCP. Using the Pearson Square method, calculate the amount of each feedstuff in the ration. (5 marks)

Agriculture Paper 2

26. Below is a diagram of two stroke engine cylinder.

Name one farm machine where the above engine is used. (1 mark)

SECTION C: (40 MARKS)

Answer any two questions in this section in the spaces provided after...
question 29.

27. (a) Describe the management practices that should be carried out on a sow and piglets during the furrowing period. (12 marks)
(b) Explain five reasons why a breeding boar may be culled. (5 marks)
(c) State four maintenance practices of forked jembe. (3 marks)

28. (a) Describe how the transmission system of a tractor transmits power that is developed in a cylinder to the wheels for motion. (15 marks)
(b) Describe five long term tractor services and maintenances. (5 marks)

29. (a) State six features of an ideal calf pen. (6 marks)
(b) Describe the uses of fences in the farm. (8 marks)
(c) State six factors considered when siting farm structures. (6 marks)