

NAME..... INDEX NO.....

443/1
AGRICULTURE
PAPER 1
JULY/AUGUST, 2015
TIME: 2 HOURS

CANDIDATE'S SIGN.....

DATE.....

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.
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- (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

Section	Question	Maximum Score	Candidate's Score
A	1 - 16	30	
B	17 - 21	20	
C	22 - 24	40	
Total Score		90	

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)

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

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)

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

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

(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)

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

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

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

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)

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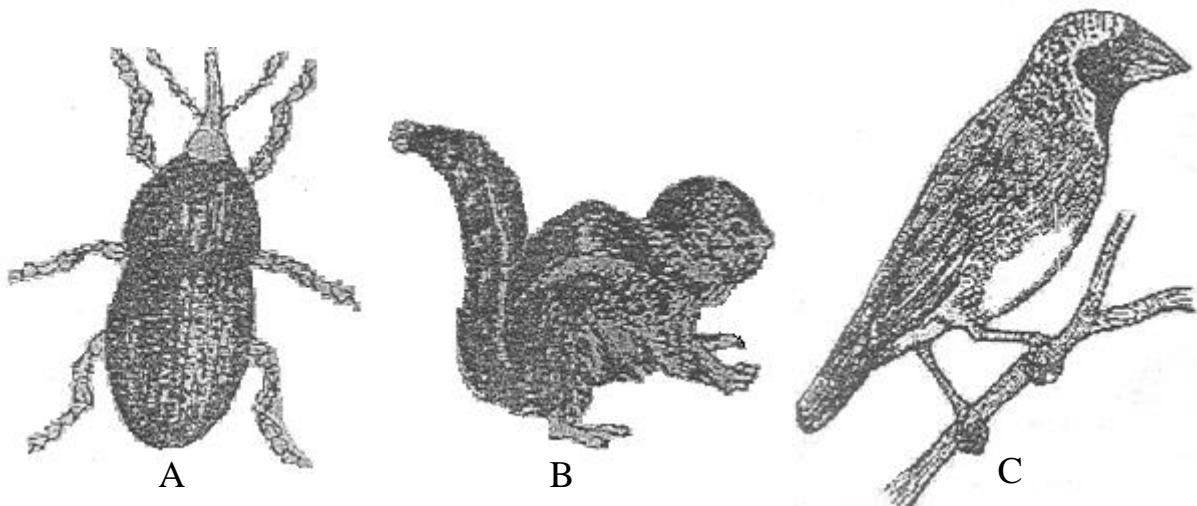
15. State **three** characteristics of shifting cultivation. (1½ marks)

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.



(a) Identify the pests in the diagrams labeled **A**, **B** and **C**. (2 marks)

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

A _____

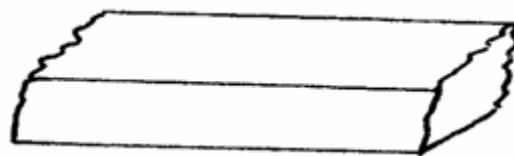
B _____

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

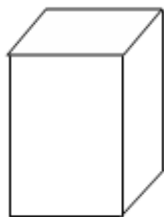
18. Study the following types of soil structures and answer the questions that follow.



A



B



C



D

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

A _____

B _____

C _____

D _____

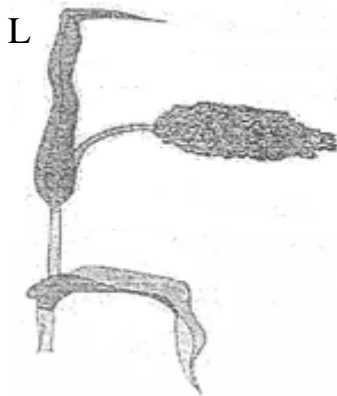
(b) Which type of soil structure is best suited for farming. (1 mark)

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

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19. The diagram below shows panicles of two sorghum varieties. Study the diagrams and answer the questions that follow.



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

L _____

M _____

(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)

21. Why are the following weeds difficult to control?

(a) Couch grass. (1 mark)

(b) Oxalis latifolia. (1 mark)

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(c) Double thorn.

(1 mark)

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)

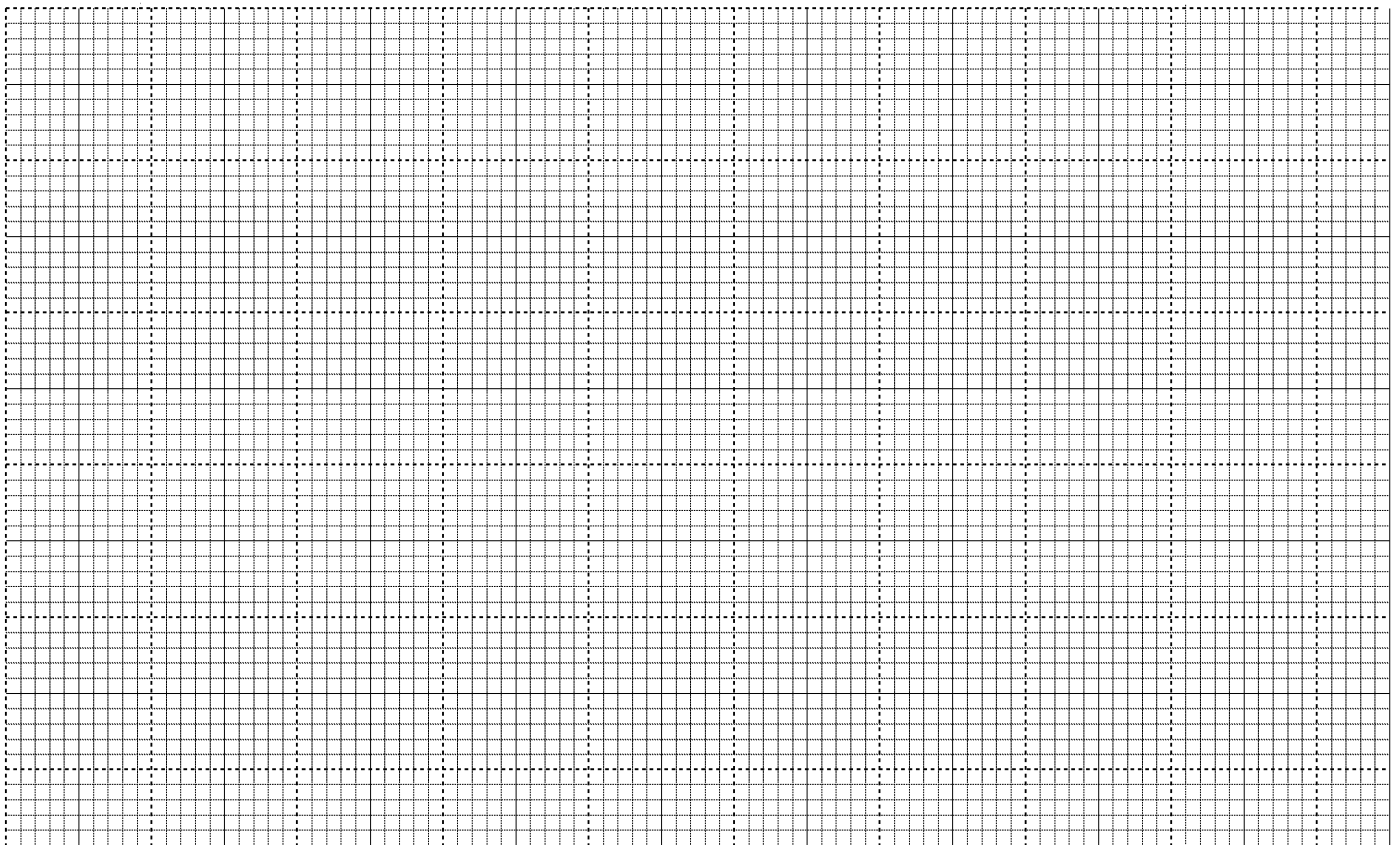
- (b) Describe production of paddy rice under the following sub headings:
- (i) Land preparation. (3 marks)
 - (ii) Water control. (3 marks)
 - (iii) Role of irrigation water. (3 marks)
 - (iv) Signs of maturity. (1 mark)

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)

Fertilizer input (Bags)	Maize output (Bags)	Total Revenue Kshs.	Total Cost Kshs.	Marginal Revenue Kshs.	Marginal Cost Kshs.	Net Revenue Kshs.
0	0	0	0	0	0	0
2	14	28000	5600	-	-	-
4	39	78000	11200	-	-	-
6	61	122000	16800	-	-	-
8	78	156000	22400	-	-	-
10	87	174000	28000	-	-	-
12	88	176000	23600	-	-	-

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



- (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)

NAME..... INDEX NO.....

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Section	Question	Maximum Score	Candidate's Score
A	1 - 21	30	
B	22 - 26	20	
C	27 - 29	40	
Total Score		90	

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)

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

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

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

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

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

(b) Stilboesterol.

(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)

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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 Bacterian 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)

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

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

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

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

(b) List **four** causes of livestock diseases. (2 marks)

20. Name **two** structures used in the control of ticks. (1 mark)

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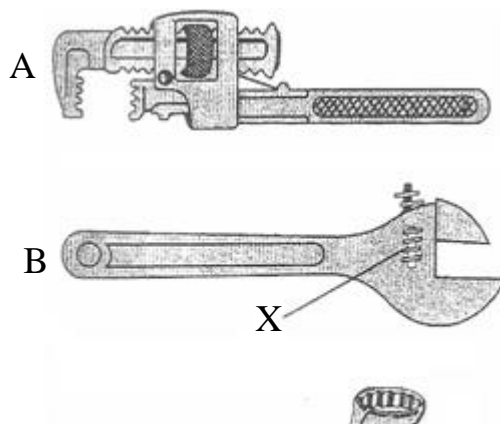
21. (a) State **two** possible causes of soft shelled eggs. (1 mark)

(b) State **two** qualities of good eggs for incubation. (1 mark)

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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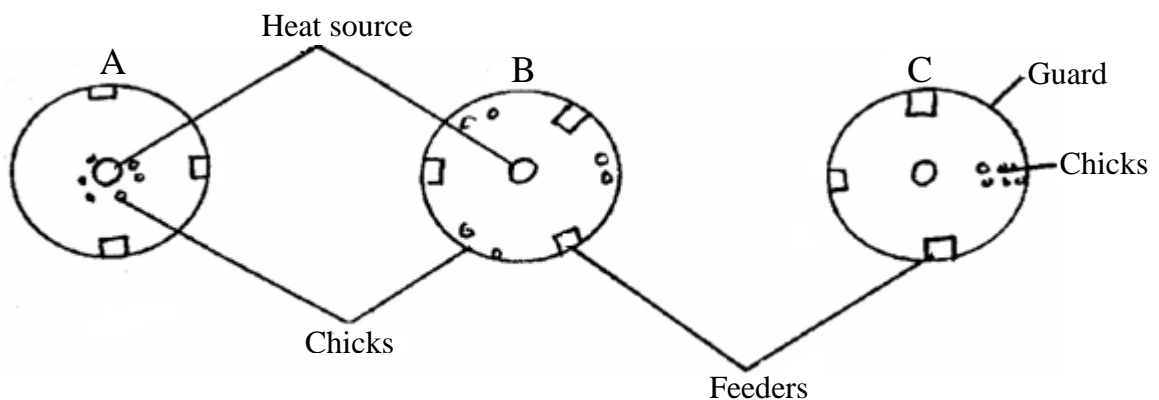
(c) State the function of the tool labelled **A**.

(1 mark)

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

(1 mark)

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)

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



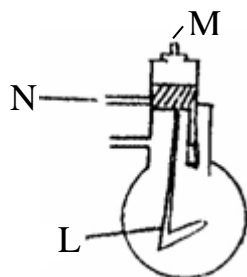
- (a) Name the condition shown above. (1 mark)

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

- (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)

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 farrowing 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)
