

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

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

CANDIDATE'S SIGN.....

DATE.....

KIRINYAGA CENTRAL SUB-COUNTY JOINT EXAMINATION - 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** in Section **C**.
- (f) All answers must be written in the spaces provided.
- (g) This paper consists of **12** printed pages.
- (h) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

FOR EXAMINER'S USE ONLY

Section	Question	Maximum Score	Candidate's Score
A	1 - 21	30	
B	22 – 25	20	
C	26 - 28	40	
Total Score		90	

SECTION A: (30 MARKS)

Answer all questions in this section in the spaces provided.

1. What is agroforestry? (1 mark)

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2. Give **two** roles of agriculture in industrial growth. (1 mark)

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3. Differentiate between intercropping and mixed cropping. (1 mark)

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4. Name **four** financial documents used in the farm. (2 marks)

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5. Give **four** types of micro catchments used in the farm. (2 marks)

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6. State **four** sources of soil acidity.

(2 marks)

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7. State **two** advantages of carrying out pruning in banana production.

(1 mark)

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8. Given that a price of Ksh.100 per bag, 20 bags of maize are demanded, but when the price changes to Ksh.80 per bag, 22 bags are demanded. Calculate the elasticity of demand.

(½ mark)

9. In maize hybrid 614 what do the following figures stand for?

(1 mark)

- (i) 6.....
- (ii) 4.....

10. Give **two** ways in which pastures are classified.

(1 mark)

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11. State **four** properties of soil influenced by its texture.

(2 marks)

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12. Explain the meaning of the following terms as used in agricultural economics. (1 mark)

(i) Production function.

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(ii) Equimarginal returns.

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13. Name **four** practices carried out to improve and maintain permanent pasture. (2 marks)

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14. List **two** features of plastic pipes a farmer should consider before buying. (1 mark)

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15. Give **four** advantages of tissue culture.

(2 marks)

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16. Give **three** stages of controlling devils horsewhip by mechanical means. (1½ marks)

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17. State **four** functions involved on marketing of cabbages.

(2 marks)

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18. A farmer was advised to apply 40kg, P₂O₅ per hectare of maize at planting time. The phosphatic fertilizer available was single superphosphate containing 20% P₂O₅.

(i) Calculate how much single superphosphate fertilizer she should apply in two hectares. (2 marks)

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19. State **three** situation when the opportunity cost is zero.

(1½ marks)

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20. State **four** steps of gulley formation.

(2 marks)

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21. Define what a partial budget.

(½ mark)

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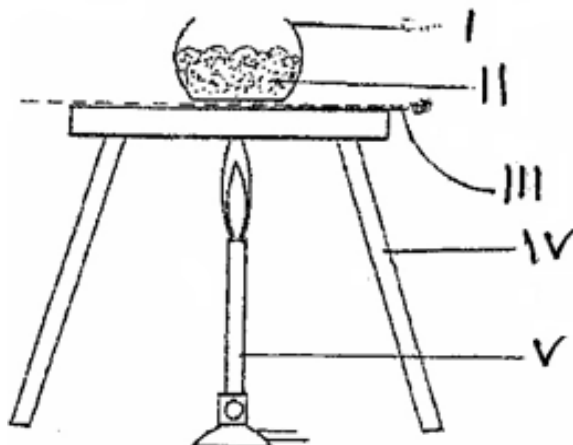
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SECTION B: (20 MARKS)

Answer all questions in this section in the spaces provided.

22. The diagram below shows a set up of apparatus for finding the percentage of humus contents in a soil by ignition.



(a) Label the apparatus.

(2 marks)

- I
- II
- III
- IV

(b) Outline the steps followed in carrying out the illustrated experiment. (3 marks)

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23. The following symptoms were noted on tomato seedlings in a farm.

- (a) Stem cankers on seedlings.
- (b) Spots on the seedling leaves.
- (c) Defoliation and falling of leaves.
 - (i) Name the disease affecting the crops. (1 mark)

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(ii) State a cause of the disease. (1 mark)

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(iii) State **three** control measures for the disease. (3 marks)

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24.



(i) Identify the weeds.

(2 marks)

G

H

(ii) State the economic importance of the weed shown in diagram **G**. (2 marks)

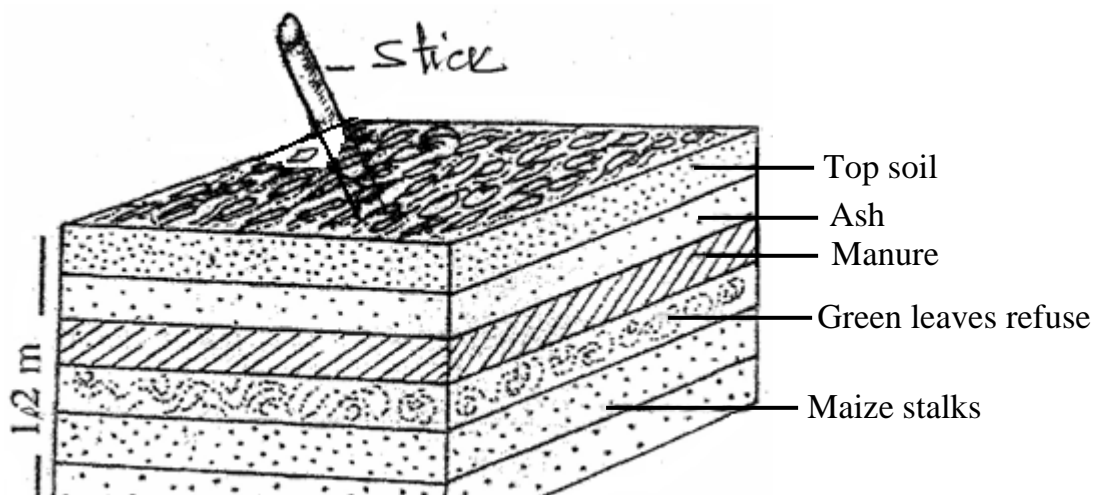
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(iii) Why is it difficult to control weed in diagram **G**?

(1 mark)

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25. The diagram below shows preparation of organic manure.



(a) Which type of organic manure is being prepared above? (1 mark)

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(b) Give the importance of inclusion of the following layers. (4 marks)

(i) Ash

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(ii) Topsoil

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(iii) Manure

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(iv) A stick.....

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SECTION C: (40 MARKS)

Answer any two questions from the section.

26. (a) Describe five objectives of agricultural research in Kenya. (10 marks)

(b) Describe ten cultural methods used to control pest. (10 marks)

27. (a) (i) What is open valuation? (2 marks)

(ii) What is closing valuation? (2 marks)

(iii) When is profit and loss account prepared? (1 mark)

(b) Prepare a profit and loss account ending 31st Dec, 2003 using the following information. The farm made the following transactions. Purchased items listed below. (10 marks)

Items	Kshs.
Seed and fertilizer	3600
Fuel worth	3400
Livestock feeds	3000
Machinery implements	60000

The farm also expected the following:-

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

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Kenya Certificate of Secondary Education
AGRICULTURE
PAPER 2
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B	18 – 21	20	
C	22 - 24	40	
Total Score		90	

SECTION A: (30 MARKS)

Answer all questions in this section in the spaces provided.

1. Define the following terms as used in Agriculture.

(i) Brooding in poultry.

(1 mark)

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(ii) Flushing.

(1 mark)

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2. Give **four** advantages of carrying out raddling in sheep management. ($\frac{1}{2} \times 4 = 2$ marks)

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3. What is compression ratio?

($\frac{1}{2}$ mark)

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4. Dorper breed of sheep breed was developed from two breed. Name them.

(1 mark)

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5. State **four** physiological parameters that can be used as indicators of ill health in livestock.

(2 marks)

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6. Outline **four** factors that should be considered when siting farm building and structures. (2 marks)

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7. State the predisposing factors of the following livestock disease. (1/2 mark)

(a) Coccidiosis in poultry.

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(b) Gumboro disease in poultry. (1/2 mark)

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8. Name **four** light breeds in poultry. (2 marks)

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9. State **four** functions of water in animal's body. (2 marks)

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10. Give **three** functions of carburetor in a tractor.

(1½ marks)

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11. State when it is necessary to use a jembe instead of a plough.

(2 marks)

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12. (a) Give an intermediate host for the following internal parasites.

(i) Taenia saginate.

(½ mark)

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(ii) Taenia solium.

(½ mark)

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(b) State **four** effects of parasites on host.

(2 marks)

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13. Define the following terms as used in animal production.

(i) Epistasis.

(1 mark)

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(ii) Heterosis (Hybrid vigour).

(1 mark)

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14. Give **four** reasons why farm tools should be properly maintained.

(2 marks)

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15. State **four** advantages of natural calf rearing.

(2 marks)

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16. State **three** importance of seasoning timber.

(1½ marks)

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17. State **three** functions of an egg shell.

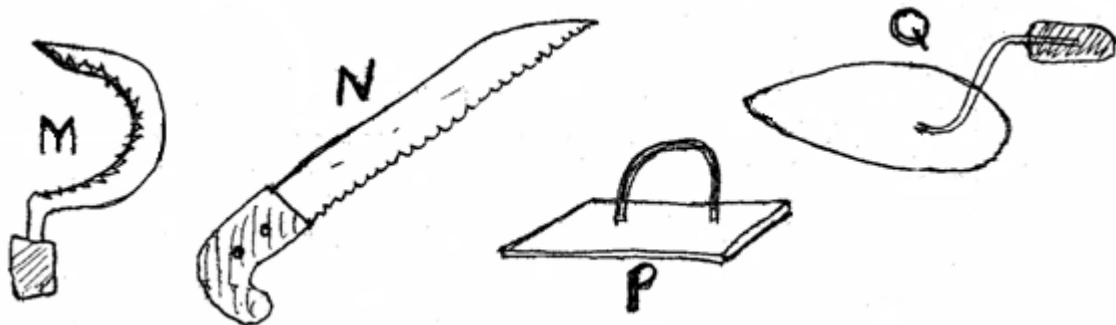
(1½ marks)

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SECTION B: (20 MARKS)

Answer all questions in this section in the spaces provided.

18. Diagram M, N, P and Q represent farm tools.



(a) Identify the tools.

(2 marks)

M

N

P

Q

(b) Give the use of each of the tools named above.

(2 marks)

M

N

P

Q

(c) State **two** maintenance practices that should be carried out on tool M. (1 mark)

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19. A cow was diagnosed with the following symptoms, swollen feet, animal walking with limping gait, lameness and pus with rotten smell oozing out of the hooves and animals spending most time lying down.

(a) Suggest the disease the animal was suffering from. (½ mark)

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(b) Name the possible cause of the above disease. (½ mark)

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(c) Apart from cattle name other two farm animals attacked by the above disease. (2 marks)

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(d) State **four** control methods of the disease. (2 marks)

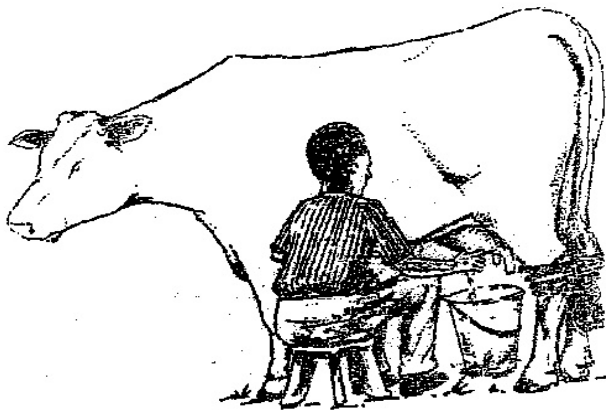
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20. Below is an illustration of a farm operation. Study it carefully and answer the questions that follow.



- (i) What activity is being carried out? (½ mark)

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- (ii) Give **three** activities carried out on the animal before the above operation. (1½ marks)

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- (iii) Outline the procedure of carrying out operation. (3 marks)

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21. (a) Define the term digestible crude protein.

(1 mark)

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(b) A farmer wanted to prepare 200kg of calf rearing ration containing 20% DCP. Using the pearsons square method, calculate the amount of maize containing 10% DCP and sunflower containing 35% DCP the farmer would need to prepare the ration. (Show your working). (4 marks)

SECTION C: (40 MARKS)

Answer any two questions from the section.

22. (a) Describe ten general methods of disease control in livestock. (10 marks)
- (b) Describe the advantages of fences. (10 marks)
23. (a) Describe the principle of operation of four stroke (four cycle) petrol engine. (8 marks)

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