

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

443/1  
AGRICULTURE  
PAPER 1  
JULY/AUGUST, 2016  
TIME: 2 HOURS

CANDIDATE'S SIGN.....

DATE.....

**KIRINYAGA CENTRAL SUB-COUNTY EFFECTIVE FORTY  
JOINT EXAMINATION – 2016**

**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
<b>A</b>	<b>1 - 19</b>	<b>30</b>	
<b>B</b>	<b>20 – 23</b>	<b>20</b>	
<b>C</b>	<b>24 - 26</b>	<b>20</b>	
		<b>20</b>	
<b>Total Score</b>		<b>90</b>	

**SECTION A: (30 MARKS)**

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

1. (a) State **three** factors that determine the method used to harvest a crop. (1½ marks)

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- (b) Give **four** ways in which cereals are stored in Kenya. (2 marks)

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2. Outline **two** disadvantages of tenancy system in farming. (1 mark)

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3. Give **three** reasons for sowing annual crops early. (1½ marks)

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4. Outline **two** control measures of downy mildew in onions. (1 mark)

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5. Name **two** pasture legumes grown in medium altitude zones. (1 mark)

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6. Give **three** effects of riverbank erosion. (1½ marks)

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7. Give **two** reasons why root pruning is done in the nursery management in agroforestry. (1 mark)

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8. State **four** sources of nitrogen in the soil. (2 marks)

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9. State **four** factors that determine the choice of a crop enterprise. (2 marks)

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10. Give **three** properties of soil that are influenced by its texture. (1½ marks)

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11. (i) Give **two** destructive effects of moles in crop production. (1 mark)

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(ii) Apart from moles name two other rodent pests. (1 mark)

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12. (a) Define the term joint products. (1 mark)

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(b) Outline **two** examples of joint products in crop production. (1 mark)

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13. Name the part planted for each of the following crops. (1½ marks)

(a) Sisal .....

(b) Irish potatoes.....

(c) Pyrethrum.....

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14. Suppose a farmer has to apply 30kg of  $P_2O_5$  per hectare and he had the fertilizer labelled 21: 15: 60 at his disposal, calculate the amount of the fertilizer 21: 15: 60 he will require for two hectares of land. (2 marks)

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15. State **four** financial documents used in the farm. (2 marks)

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16. List **two** methods of plucking tea. (1 mark)

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17. State **three** ways in which crop rotation can improve soil fertility. (1½ marks)

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18. Outline **two** basic economic concepts of agriculture. (1 mark)

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19. State **two** characteristics of plants used for green manure. (1 mark)

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**SECTION B: (20 MARKS)**

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

20. A farmer wishes to change her enterprise from vegetable production to dairy cattle rearing. The cost she incurs in growing of vegetables is as follows.

- Weeding Sh.200
- Harvesting Sh.300
- Fertilizer Sh.500
- Seeds Sh.400

When she changes her enterprise to dairy cattle she incurs the following:

- Cost of buying cattle Sh.5000
- Disease control Sh.200
- Salary of milk person Sh.2000
- Fencing Sh.500

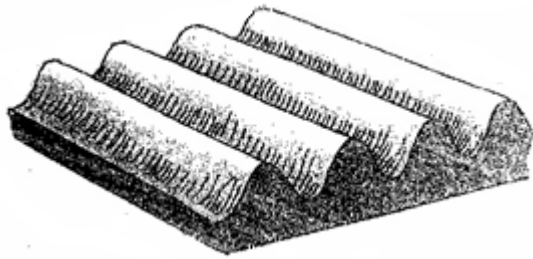
The revenues she gets when growing vegetable is Sh.10,000. In dairy production, the revenue she gets from milk sales is Sh.15,000 and manure sales Sh.1000.

Draw up the partial budget and indicate the effect of the change. (Show your working). (5 marks)

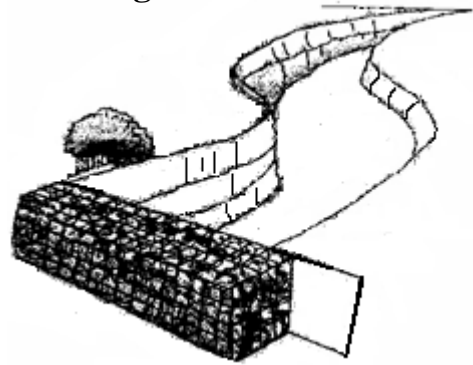
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21. The diagram below show practices carried out in the farm.

**Diagram A**



**Diagram B**



(a) Identify the practices. (2 marks)

**A** ..... **B**.....

(b) Give the reasons for carrying out the practices. (2 marks)

**A** .....

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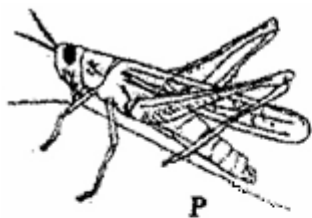
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**B** ..... (1 mark)

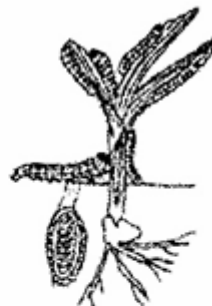
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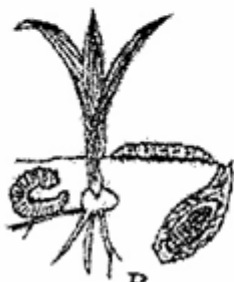
22. Below are the pests that commonly attack the crops. Study them carefully and answer questions that follow.



**P**



**Q**



**R**



**S**

(a) Identify the pests labelled **P**, **Q**, **R** and **S**. (2 marks)

**P**..... **Q**.....

**R**..... **S**.....

(b) What kind of mouth parts do they possess? (1 mark)

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(c) Give **two** ways in which pests can be categorised depending on their habitat. (2 marks)

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23. (a) Give **three** reasons why it is difficult to control Sodom apple; Solanum incanum. (3 marks)

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(b) State **two** mechanical methods used in separating soil in soil analysis. (2 marks)

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**SECTION C: (40 MARKS)**

**Answer any two questions from this section.**

24. (a) Describe harvesting of pyrethrum under the following sub-headings.

(i) Procedure. (5 marks)

(ii) Precautions. (5 marks)

(b) Outline **five** measures taken to prevent water pollution. (5 marks)

(c) Describe the effects of land fragmentation and subdivision. (5 marks)

25. (a) Explain **five** ways by which farmers minimize grain losses in store. (5 marks)

(b) Outline **eight** roles of a farm manager. (8 marks)

(c) Outline **seven** importances of agroforestry. (7 marks)

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26. (a) Describe production of napier grass under the following subheadings.
- (i) Land preparation. (3 marks)
  - (ii) Planting. (6 marks)
  - (iii) Utilisation. (3 marks)
- (b) Outline **four** importance of banking services to a Kenyan farmer. (4 marks)
- (c) State **two** effects of weeds on pastures. (4 marks)

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