

NAME.....INDEX NO.....
CANDIDATE'S SIGNATURE.....DATE.....
SCHOOL.....

443/1

AGRICULTURE

PAPER 1

MAY/JUNE 2014

TIME: 2 HOURS

EKSIKA JOINT EVALUATION TEST.

Kenya Certificate of Secondary Education (K.C.S.E)

443/1

AGRICULTURE

PAPER 1

MAY/JUNE 2014

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES.

- Write your name and index number in the spaces provided above.
- This paper consists of THREE sections A , B and C.
- Answers should be written in the spaces provided.

FOR EXAMINERS' USE ONLY.

SECTION	QUESTIONS	MAXIMUM MARKS	CANDIDATES SCORE
A	1 – 20	30	
B	21 - 25	20	
C	26 - 28	40	
	TOTAL SCORE	90	

This paper consists of 9 printed pages.

Candidates should check the question paper to ascertain that all pages are printed as indicated and no questions are missing.

SECTION A (30 MARKS)
Answer all questions in this section.

- 1 List **two** aspects of light that influence agriculture. (1mk)
-
-
- 2 State **two** reasons why land settlement schemes were established in Kenya.(1mk)
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- 3 Define the following terms as used in crop production. (2mk)
- a) Pomology
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- b) Olericulture
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- 4 Outline **two** methods used by farmers to harden – off seedlings in the nursery.(1mk)
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- 5 State **four** circumstances that could make shifting cultivation practicable in an area. (2mks)
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- 6 State **two** biotic factors that are useful in agricultural production. (1mk)
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- 7 State **four** advantages of overhead irrigation. (2mks)
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8 Give **four** signs that could enable you to identify a compost manure that is ready for use.

(2mks)

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9 State **four** agricultural services available to a crop farmer. (2mks)

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10 State **two** factors that must be considered when constructing a cut-off drains.(1mks)

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11 Give **four** methods of harvesting water in the farm. (2mks)

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12 Give any **two** factors that should be considered before deciding to use chemical method of pest control. (1mk)

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13 a) What is biological weed control? (1mk)

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b) State **two** advantages of biological weed control. (1mk)

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14 State **two** farming practices that can be carried out to increase the amount of moisture harnessed by crops. (1mk)

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15 Give **two** ways in which agriculture contributes to industrial development in Kenya.

(1mk)

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16 State any **three** characteristics of trees used in agro forestry.

(1 ½ mks)

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17 State what is meant by “trap crop” as used in crop pest control.

(1mk)

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18 Outline **two** factors that could determine the amount of fertilizer to be top dressed to a crop in the field.

(1mk)

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19 State **two** factors that determine the scale of agricultural production.

(1mk)

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20 State **four** benefits of budgeting to a farm manager.

(2mks)

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21 Give **three** reasons for practicing minimum tillage.

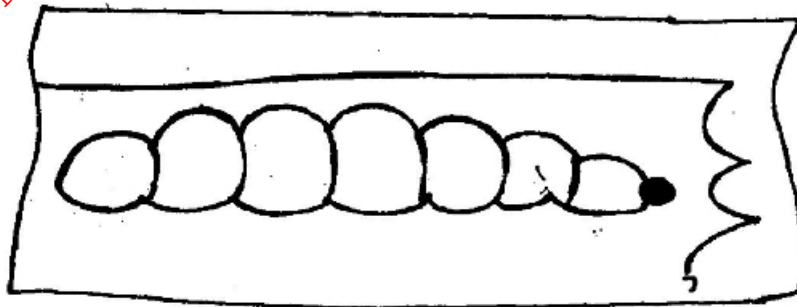
(1 ½ mks)

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SECTION B (20 MARKS)

Answer all questions in this section.

- 22 The diagram below shows a maize stalk infested by a certain pest. Observe it and answer the questions that follow.



- a) Identify the pest in the diagram above. (1mk)

- b) Give **two** damages caused by the pests identified in (a) above. (2mks)

- c) Other than maize name **two** other crops attacked by the pest (a) above. (1mk)

- d) Give **two** cultural measures for the pest (a) above. (1mk)

23 Below is a diagram of a tomato plant.



i) Identify the practice illustrated. (1mk)

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ii) Describe the procedure followed in spraying the crops with a fungicide in power form, water and a knapsack sprayer. (2mks)

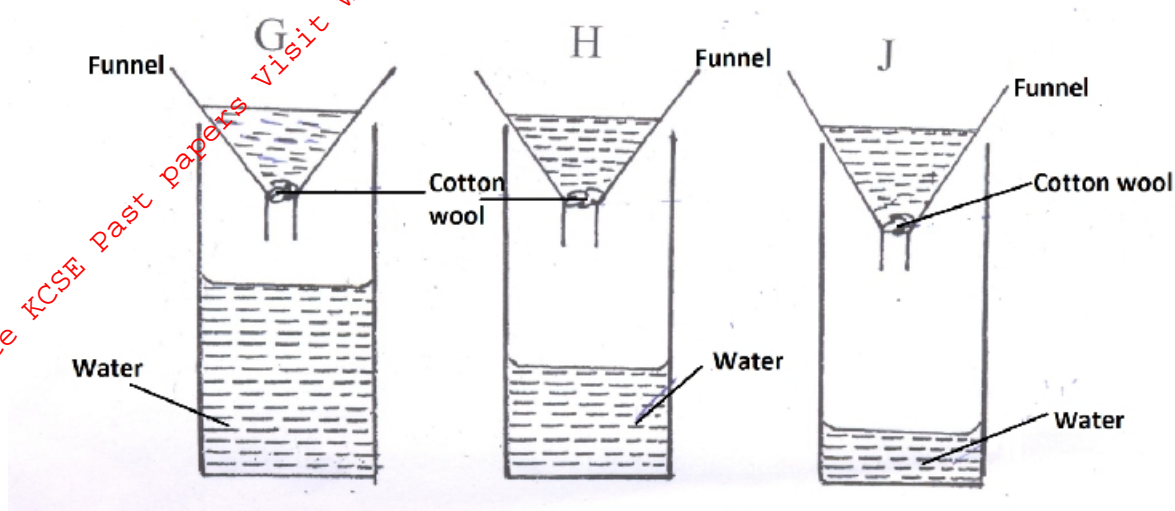
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iii) Name **one** fungal disease that can be controlled in the crop using the procedure above. (1mk)

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iv) State **two** safety measures that should be taken while spraying the crops with fungicides. (2mks)

- 24 The diagram below shows an experiment set up using soil types G , H and J. Observations were made after 24 hours. Study the diagram and answer the questions that follow



- a) What is the experiment above designed to study. (1mk)

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- b) Name the three soil type. (1 ½ mks)

G.....

H.....

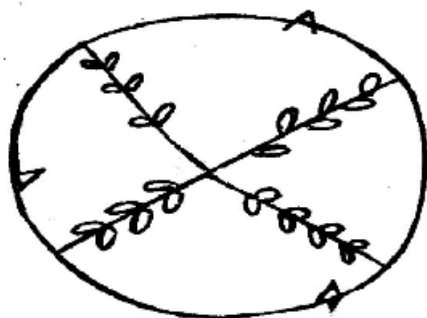
J.....

- c) Explain how the farmer can improve the soil type G. (1 ½ mks)

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- 25 The diagram below shows a method of bringing the tea into bearing. Study it carefully and use it to answer the question that follow.



- a) Identify the method in the diagram above. (1mk)
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- b) Why is it necessary to prune a young tea plant as illustrated in the diagram above. (1mk)
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-
- c) Outline the procedure followed when using the pruning method shown above. (3mks)
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SECTION C (40 MARKS)

Answer any two question from this section.

- 26 a) Explain **five** factors that influence soil productivity. (10mks)
- b) Outline **five** factors that a farmer would consider before deciding on the type of irrigation in crop production. (5mks)
- c) Describe the qualities of the mother plant that should be considered when selecting vegetative material for planting. (5mks)
- 27 a) Explain cultural measures used in the control of weeds in a field of cereal crop. (10mks)
- b) Explain **six** factors that can influence a well designed crop rotational program. (6mks)
- c) Give four reasons why timely ploughing of the seedbed is important in crop production. (4mks)
- 28 a) A farmer has 30 hectares of arable land, 20 hectares of which is planted with maize and 10 hectares with grass hay. He wishes to replace 10 hectares of maize with Irish potatoes next year. The fertilizer rate will have to be increased from 2 bags per hectare for maize to 4 bags per hectare for potatoes. As a result of the change extra 40 men days of actual labour per hectare will

be necessary at the rate of Kshs.100 per man a day. The average yield per hectare of maize is 35bags and for potatoes 120bags.The price paid is Kshs.1,000 per bag of maize and Kshs.600 per bag of potatoes. Maize seeds cost Kshs.750 per hectare and potatoes cost Kshs.800 per hectare. Fertilizer costs are 650 per hectare.

Draw up a partial budget and advice the farmer accordingly. (10mks)

b) Discuss maize production under the following sub-headings

- i) Ecological conditions. (3mks)
- ii) Field preparation. (3mks)
- iii) Planting and field management. (4mks)

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