# Nyaraya Cluster Examination

**Kenya Certificate of Secondary Education**

**Form Four Mock Evaluation Programme**

**NAME**.................................................................................................... **INDEX. NO**........................ /.......... **SCHOOL** ........................................................................ **STREAM**…………….. **ADM. NO**………

**443/2**

**AGRICULTURE PAPER 1 (THEORY) FORM FOUR**

**JULY, 2023. TIME: 2 HRS**



**INSTRUCTIONS**

 Write your **Name, Index Number, School, Date, Admission Number** and **signature** in the spaces provided **above**.

 This paper consists of **THREE** Sections **A, B** and**C**.

 Answer **ALL** the questions in Section **A** and **B** and any **TWO** question in Section **C**.

 **ALL** answers **must be** written in the spaces provided in the question paper.

**FOR E XA MINER’S U S E ONL Y**

|  |  |  |  |
| --- | --- | --- | --- |
| **Section** | **Questions** | **Maximum Score** | **Candidate’s Score** |
| **A** | **1 - 16** | **30** |  |
| **B** | **17 - 20** | **20** |  |
| **C** | **21** | **20** |  |
| **22** | **20** |  |
| **23** | **20** |  |
| **Total Score** | | **90** |  |

***This paper consists of 12 printed pages. Each candidate should confirm that all the pages are printed and that no page is missing.***

***Turn Over***

**SECTION A: (30 MARKS)**

***Answer ALL questions in this section:***

1. State **THREE** influences of soil pH on crop growth. (1½ Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

2. State **FOUR** factors considered when selecting planting materials. (2 Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

3. Name **FIVE** sources of agriculture credit in Kenya (2½ Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

4. State **FOUR** reasons for pruning in coffee. (2 Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

5. Give **TWO** limitations of chemical weed control. (1 Mark)

.................................................................................................................................................................................

.................................................................................................................................................................................

6. List any **FOUR** basis for classification of crop pests (2 Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

7. Name **FOUR** disadvantages of mulching. (2 Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

8. State **TWO** importance of tissue culture. (1 Mark)

.................................................................................................................................................................................

.................................................................................................................................................................................

9. State **FOUR** factors that influence crop rotation programme. (2 Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

10. Give **FOUR** nursery management practices. (2 Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

11. State **FOUR** factors that determined spacing of crops (2 Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

12. Differentiate between a ***complete*** and ***incomplete fertiliser.*** (2 Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

13. Give **FOUR** objectives of land tenure reform in Kenya (2 Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

13. List **THREE** post-harvest practices carried out in the growing of maize. (1 ½ Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

14. Name **THREE** materials required during budding. (1½ Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

15. Give **THREE** methods of forage conservation. (1½ Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

16. Give **THREE** disadvantages of using plastic pipes. (1 ½ Marks)

.................................................................................................................................................................................

.................................................................................................................................................................................

.................................................................................................................................................................................

**SECTION B (20 MARKS)**

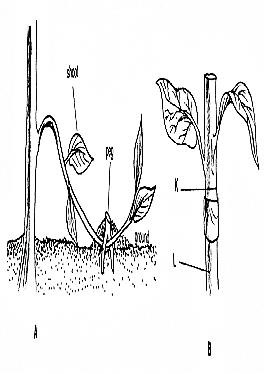
*Answer all questions in this section in the spaces provided*

17. The diagrams labelled **A** and **B** below illustrate some of the methods used to propagate some field crops. Study the diagrams and use them to answer the questions that follow.

.

**Shoot**

**Peg**



**K**

**L**

**A B**

a) Identify the two methods of propagation. (2 Marks)

...........................................................................................................................................................................

........................................................................................................................................................................... b) Name **one** crop each propagated using methods **A** and **B** above. (2 Marks)

...........................................................................................................................................................................

........................................................................................................................................................................... c) Name the parts labelled **K** and **L** in **B**. (1 Mark)

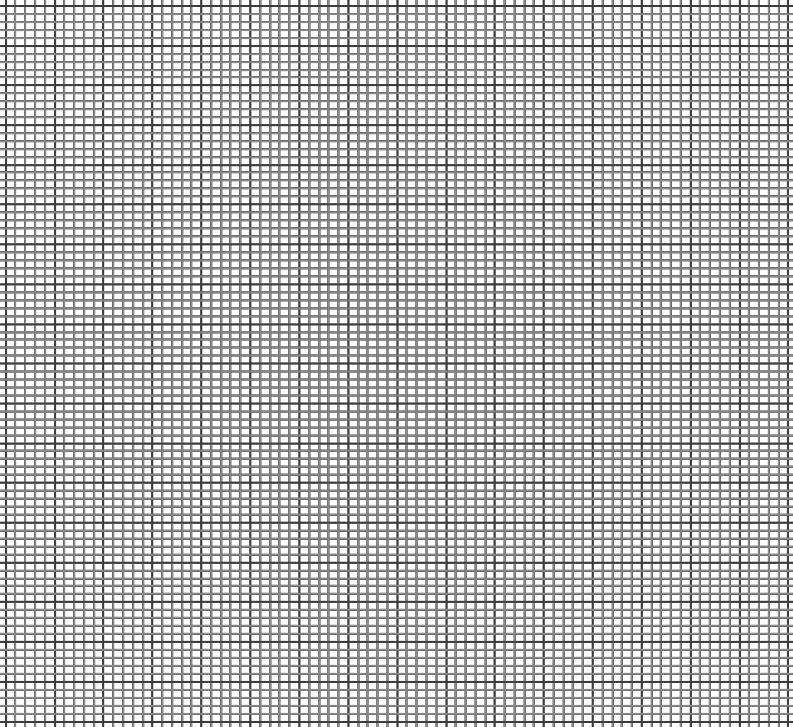
...........................................................................................................................................................................

...........................................................................................................................................................................

18. A farmer has a 2 hectare piece of land on which to grow wheat. His farm records for wheat production for 9 year period is as follows.

|  |  |  |
| --- | --- | --- |
| **Year** | **Fertilizer Applied (50kg bags)** | **Wheat output (90kg bags)** |
| 1999 | 0 | 4 |
| 2000 | 2 | 10 |
| 2001 | 4 | 28 |
| 2002 | 6 | 42 |
| 2003 | 8 | 52 |
| 2004 | 10 | 60 |
| 2005 | 12 | 66 |
| 2006 | 14 | 66 |
| 2007 | 16 | 64 |

a) (i) Using the appropriate scale draw a graph on the space provided below to show the relationship between input and output. (3 Marks)



(ii) From the graph above, how many bags of wheat would be produced if the farmer applied 9 bags

of fertilizer. (½ Mark)

..........................................................................................................................................................................

(iii) Calculate the farmer’s marginal product for the year 2001. (½ Mark)

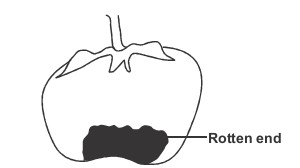
..........................................................................................................................................................................

b) Assuming the average price of wheat is Kshs. 1,000.00 per bag and the cost of fertilizer is Kshs. 1,200.00 a bag. Calculate the gross income for the year 2002. (1 Mark)

..........................................................................................................................................................................

..........................................................................................................................................................................

19. Study the illustration below of a tomato fruit as observed in field production.



i) Identify the condition illustrated above. (1 Mark)

.......................................................................................................................................................................... ii) State **TWO** conditions that predispose a tomato plant to the conditions stated in (a) above (1 Mark)

..........................................................................................................................................................................

.......................................................................................................................................................................... iii) Suggest **FOUR** possible ways of controlling the condition stated in (a) above (2 Marks)

..........................................................................................................................................................................

..........................................................................................................................................................................

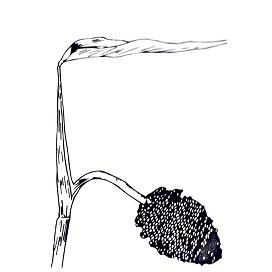
..........................................................................................................................................................................

.......................................................................................................................................................................... iv) Name **TWO** other tomato diseases (1 Mark)

..........................................................................................................................................................................

..........................................................................................................................................................................

20. The diagrams below show certain varieties of a field crop. Study them and use them to answer the questions that follow.



**A B**



a) Identify the field crop shown above. (1 Mark)

............................................................................................................................................................................. b) What is the advantage of **B** over **A**? (1 Mark)

............................................................................................................................................................................. c) Describe the harvesting of the field crop shown above. (3 Marks)

.............................................................................................................................................................................

.............................................................................................................................................................................

.............................................................................................................................................................................

**SECTION C (40 Marks)**

**Answer two questions from this section.**

21. (a) Outline the factors to consider when selecting a farm enterprise. (12 Marks) (b) Explain any **four** cultural methods of soil erosion control (8 Marks)

22. (a) State and explain **THREE** factors that influence choice of the type of irrigation to be used. (6 Marks) (b) Sate **SIX** importance of farm records. (6 Marks) (c) Describe the various management practices carried out in the nursery bed. (8 Marks)

23.(a) State and explain **FIVE** factors considered when choosing seed rates. (10 Marks) (b) Explain **FIVE** reasons why crop rotation is important. (10 Marks)

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................

.....................................................................................................................................................................................