Name: .......................................................................................... Index Number ……...………

School: ................................................................... Candidate’s Signature ……………………

Date…………………………

443/1

AGRICULTURE PAPER 1

**March/April, 2023.**

**Time: 2 hours**

**AGRICULTURE PAPER 443/1**

**ARISE AND SHINE TRIAL EXAMINATIONS -2023**

**Kenya Certificate of Secondary Education (KCSE)**

**Instructions to Candidates**

* *Write your* ***name, index number*** *in the spaces provided.*
* *This paper has three sections A, B and C.*
* *Answer* ***all*** *the questions in section* ***A*** *and* ***B*** *in the spaces provided.*
* *Answer any* ***two*** *questions in section* ***C.***

**For Examiner’s Use Only**

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| --- | --- | --- | --- |
| **SECTION** | **QUESTIONS** | **MAXIMUM**  **SCORE** | **CANDIDATE’S**  **SCORE** |
| A | 1 – 13 | 30 |  |
| B | 14 – 17 | 20 |  |
| C | 18 | 20 |  |
| 19 | 20 |  |
| 20 | 20 |  |
|  | **Total Score** | **90** |  |

**SECTION A (30 MARKS)**

***Answer All the Questions in This Section in the Spaces Provided***

1. State **two** biotic factors that are useful in agricultural production. (1 mark)

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1. Give **four** reasons why it is important to stake tomatoes. (2 marks)

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1. State **two** methods of utilizing sorghum as a forage crop. (1mark)

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1. Give **four** signs that could enable a farmer to identify compost manure that is ready (2 marks)

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1. List **four** farming practices that may help to achieve minimum tillage on a farm. (2 marks)

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1. Give **four** reasons why seed selection is important in the establishment of crops**.** (2 marks)

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1. Give **four** reasons for keeping breeding records in a dairy farm. (2 marks)

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1. State **two** characteristics of shifting cultivation. (1 mark)

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1. State **four** factors that determine spacing of crop. (2 marks)

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1. Differentiate between olericulture and pomoculture as used in crop production. (1 mark)

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1. State **two** characteristics of a large scale farming system. (2 marks)

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1. State **four** steps followed in land adjudication. (2 marks)

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1. State **two** physical agents of weathering. (1 mark)

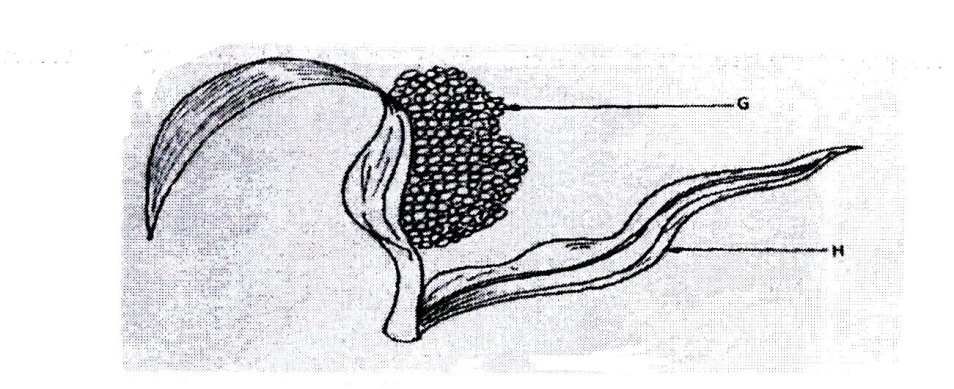
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**SECTION B (20 MARKS)**

***Answer All the Questions in the Spaces Provided***

1. The diagram below illustrates one of the arable field crops. Study it carefully and answer the questions that follow.



1. Identify the field crop. (1 mark)

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1. State the common disease that attack the parts labeled G and H (2 marks)

G……………………………….……………….. H………………………………….……….

1. Name a variety of the crop that is resistant to birds attack. (1 mark)

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1. State one cultural method to control the diseases named in (b) above. (1 mark)

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1. (a) Name the deficient nutrient element in plants showing the following symptoms;
2. Stunted growth, die back of the plant tips, leaves roll up and chlorosis along margins of younger leaves. (1 mark)

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1. Yellowing of leaves appears first on lower leaves; leaves turn brown and fall prematurely, stunted growth. (1 mark)

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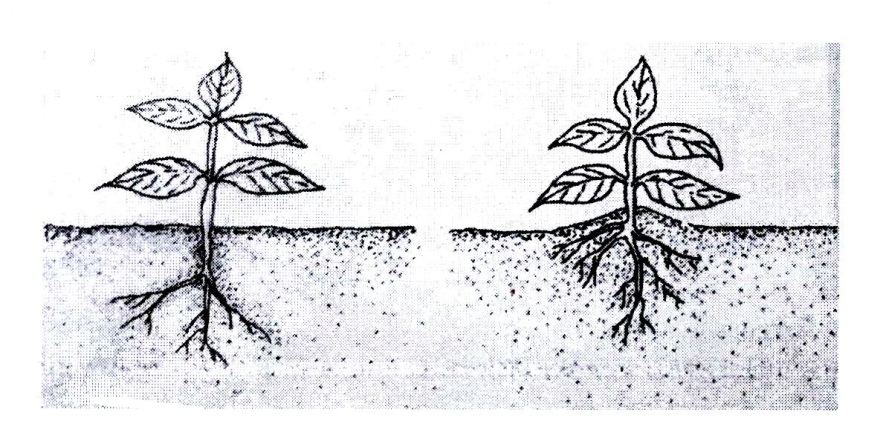
1. Leaf curling, yellowing of leaves tips and edges of leaves scorched and has small mottles. (1 mark)

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1. Purpling of leaves, stunted growth, slender stalks and lateral buds remain dormant. (1 mark)

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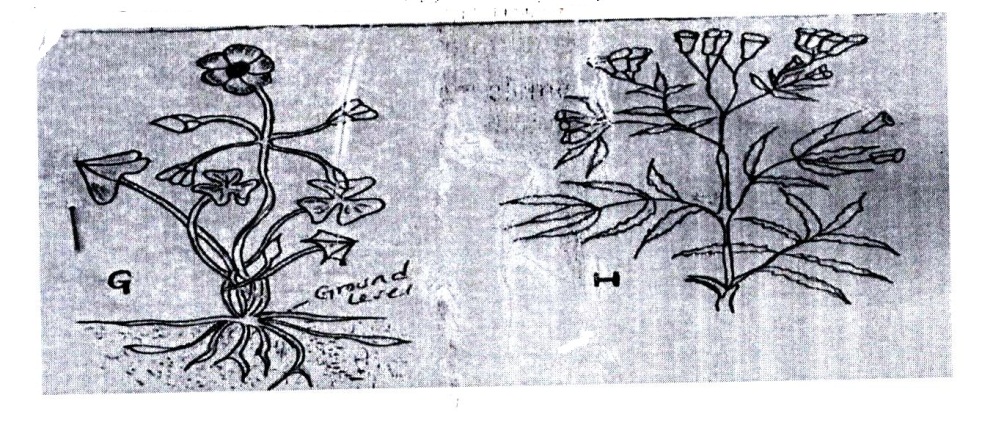
(b) The diagram below show a practice out on various crops on the farm. Study them carefully and answer the questions that follow.



Identify the practice in the diagram above. (1 mark)

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1. Diagram G and H below show some weeds.



1. Identify the weeds G and H. (2 marks)

G ..................................................................................................................................................

H....................................................................................................................................................

1. State one economic importance of weed H (1 mark)

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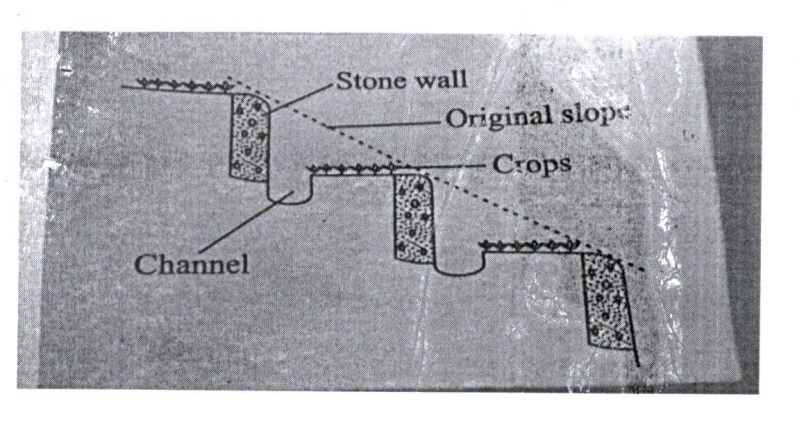
1. Why is it difficult to control weed G? (1 mark)

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1. Name an example of a systematic herbicide which can be used to control weed G (1 mark)

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1. Study the structure below and answer the questions that follow.



1. Identify the type of terrace illustrated above (1 mark)

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1. Under what **two** circumstances should the construction of the above terrace be justified?

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1. Name **two** other types of terraces.

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**SECTION C (40 MARKS)**

***Answer Any Two Questions From This Section In The Spaces Provided.***

1. (a) Describe the production of tomatoes under the following;
2. Transplanting. (5 marks)
3. Field management practices. (5 marks)

(b) Give **six** advantages of drip irrigation. (6 marks)

(c) Describe the precautions a farmer should put into consideration when harvesting cotton. (4 marks)

1. (a) Outline various ways through which vegetation cover reduces soil erosion. (4 marks)

(b) Outline various conditions which necessitate land clearing. (4 marks)

(c) Give **six** benefits of planting annual crops early. (6 marks)

(d) Describe **six** practices carried out in a vegetable nursery to ensure healthy seedlings at transplanting (6 marks)

1. (a) Describe **eight** cultural methods of controlling diseases in crop production. (8 marks)

(b) Explain **three** ways in which biotic factors discourages agricultural production. (3 marks)

(c) State **four** effects of high temperature in crop production. (4 marks)

(d) Describe **five** ways through which a farmer can maintain soil fertility in his coffee farm. (5 marks)

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