**Name……………………………………………………………………….Index Number………………………………Class.………**

**443/2 AdmNo………………………Date………………………….**

**AGRICULTURE Candidates Signature…………………………**

**PAPER 1**

**2 Hours**

**MOKASA II EXAMINATION**

**Instructions to candidates**

*Write your name and Index number in the spaces provided. Date and signature also be filled in the spaces provided.*

*The paper consist with three sections* ***A , B*** *and* ***C****. Answer all questions in sections A and B and any Two questions in Section C. All answers be written in the spaces provided after each question.* The paper has 16 printed pages.

**FOR Examiner’s Use Only**

|  |  |  |  |
| --- | --- | --- | --- |
| **Section** | **Question** | **Maximum Score** | **Candidate’s Score** |
| *A* | *1 - 17* | *30* |  |
| *B* | *18 - 21* | *20* |  |
| *C* |  | *20* |  |
|  | *20* |  |
| **Total Score** | **90** |  |

**SECTION A ( 30 MARKS)**

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

1. Give four uses of health records kept in the farm (2mks)

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1. State three effects of soil organism which benefit crop growth (11/2mks)

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1. Outline three conditions which necessitate the use of basin irrigation (11/2mks)

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1. State four functions of 4-K clubs (2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. State three types of records that a maize farmer would keep in the farm (11/2mks)

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1. Give three reasons why timely ploughing is important in crop production. (11/2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. List any three physical agents of weathering (11/2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. State three reasons for mulching in crop production. (11/2mks)

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1. Distinguish between the terms
2. Intercropping and mixed cropping (1mk)

……………………………………………………………………………………………………………………………………………………………………………………

1. Why is gapping carried out in a field of crops? (1/2mks)

……………………………………………………………………………………………………………………………………………………………………………………

1. State four factors that contribute to the competitive ability of weeds. (2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Outline three factors that affect the effectiveness of a pesticide (11/2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Give three disadvantages of commercial land tenure system. (11/2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Outline three farming practices that may lead to soil erosion. (11/2mks)

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1. Give three reasons for conserving forage. (11/2mks)

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1. List four methods used to drain farm land. (2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. (a) State three qualities that should be considered when selecting seeds for planting.

(11/2mks)

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(b) A crop is planted at a spacing of 30cm by 10cm.

Calculate the plant population in a plot of land measuring 12m by 9m

(2mks)

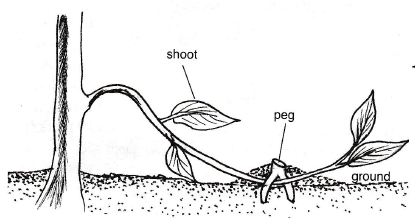
1. List four factors that determine the depth of planting. (2mks)

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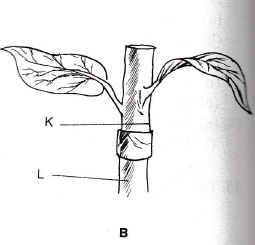
**SECTIONS B (20MARKS)**

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

1. The diagrams labelled **A** and **B** below illustrates some of methods used to propagate some field crops. Study them and answer questions that follow.



**A**



1. Name the methods of propagation.

**A**……………………………………………………………………….. (1mk)

**B**……………………………………………………………………… (1mk)

1. Name one crop that can be propagated using methods **A** and **B**

**A**…………………………………………………………………….. (1/2mk)

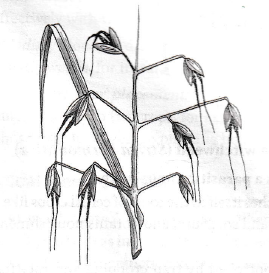
**B**……………………………………………………………………… (1/2mk)

1. Name the parts labelled **K** and **L** in **B** above

**K**…………………………………………………………………… (1mk)

**L**…………………………………………………………………………(1mk)

1. The diagram below illustrates common weeds in arable land. Study them well and answer questions that follow.

**C**

**D**

1. Identify the weeds labelled **C** and **D**

**C**……………………………………………………………………… (1mk)

**D**………………………………………………………………………. (1mk)

1. State two harmful effects of weed **D**. (2mks)

……………………………………………………………………………………………………………………………………………………………………………………

1. Classify weed **C** according to plant morphology (1mk)

………………………………………………………………………………………….

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Land (ha)** | **NPK fertilizer**  **Inputs (kg)** | **Total maize**  **Production (90kg/bag)** | **Marginal**  **Product (90kg/bag)** |
| 1 | 0 | 10 | 0 |
| 1 | 40 | 17 | 7 |
| 1 | 80 | 33 | 16 |
| 1 | 120 | 52 | 19 |
| 1 | 160 | 64 | 12 |
| 1 | 200 | 70 | 6 |
| 1 | 240 | 73 | 3 |
| 1 | 280 | 75 | 2 |
| 1 | 320 | 75 | 0 |
| 10 | 360 | 68 | -7 |

1. Calculate the marginal product from the table (21/2mks)
2. At what point of fertilizer input does the law of diminishing return start to operate. (1/2mk

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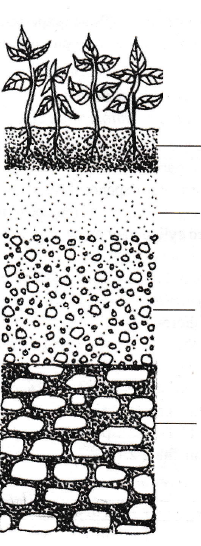
1. State the law of diminishing returns (1mk)

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1. Differentiate between variable input and fixed input. (1mk)

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1. The diagram below illustrates a feature observed after digging the soul several meters deep. Study it carefully and answer the questions that follow.



**B**

**D**

**C**

**A**

**Superficial layer**

1. Identify the feature that the diagram above represents in the study of soil.

(1mk)

……………………………………………………………………………………………………………………………………………………………………………………

1. Name the part of the diagram labelled **C**. (1mk)

……………………………………………………………………………………………………………………………………………………………………………………

1. Identify the parts of the diagram that,
2. Is a source of minerals in the soil (1mk)

……………………………………………………………………………………………………………………………………………………

1. Is referred to as a layer of accumulation and roots penetration.

(1mk)

……………………………………………………………………………………………………………………………………………………

1. Contain most of the plant nutrients due to the presence of living organisms. (1mk)

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**SECTION C (40 MARKS)**

**Answer any two questions from this section in the spaces provided.**

1. (a) Explain four ways in which trees are harvested in agroforestry (8mks)

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(b) Explain seven roles of a farm manager in agricultural production. (7mks)

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1. Describe the effects of soil erosion. (5mks)

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1. (a) Describe the ten problems encountered in marketing Agricultural produce

(10mks)

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(b) State five negative effects of strong wings on crops. (5mks)

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(c) Describe five roles of agricultural based women groups in farming. (5mks)

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1. (a) Describe the field production of irrigated rice under the following sub-headings.
2. Land preparation (4mks)

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1. Water control (3mks)

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(b) Explain the precautions observed during harvesting of cotton. (3mks)

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(c) Explain five various land tenure system practised in Kenya. (10mks)

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