**SUKELLEMO MOCK 2020**

**443/1**

**AGRICULTURE**

**PAPER 1**

**2 HOURS**

**NAME----------------------------------------------------------------------------------INDEX NO.-----------**

**INSTRUCTIONS TO CANDITATES.**

Write your name and index number in the spaces provided above.

This paper consists of 3 sections A, B and C . Answer all the questions in section A and B in the spaces provided.

Select any TWO questions in section C.

ALL answers should be written in spaces provided.

 FOR EXAMINERS USE ONLY

|  |  |  |  |
| --- | --- | --- | --- |
| SECTION | QUESTION | MAXIMUM SCORE | CANDIDATES SCORE |
| A | 1-19 | 30 |  |
| B | 20 -22 | 20 |  |
| C | 23-25 | 40 |  |
| TOTAL |  | 90 |  |

1. State **four** reasons of planting sweet potatoes on ridges.(2mks)

-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------2. Differentiate between rouging and field hygiene as used in crop production.(1mk)

 ---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------3. Calculate the amount of N in 670kg of a compound fertilizer 20:15:10. (2mks)

 -----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------4. State **four** natural factors that discourage soil erosion. (2mks)

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6.a)differentiate between a delivery note and purchase order documents.( 1mk)

 ----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------7.a) state **four** factors that are considered when siting a composite pit.(2mks)

 -----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------b) Write down three pieces of information that should be written on the envelope bearing the composite sample being taken to the national laboratories of Kenya. ( 1.5mks)

 ---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------8. Give **two** forms in which credit is offered to farmers.(1mk)

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9. Why should a farmer understand the lifecycle of parasites?(1mk)

 --------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------10. Give **four** diseases which attack tomatoes. (2mks)

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11. Give **four** factors that affect the selectivity and effectiveness of herbicides.(2mks)

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 --------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------13. State **two** physical characteristics used in classifying soil. (1mk)

 --------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------14.Give **three** reasons why the million acre scheme was started.( 1.5mks)

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15. Name **four** micro catchments aimed at conserving soil water around crops (2mks)

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17. Name **three** tools a farmer can use to dig a virgin land (1 1/2marks)

 ----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------18. Give two forms in which credit is offered to farmers.(1mk)

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19. Give **four** roles of phosphorus in crops.(2mks)

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**SECTION B (20 MARKS)**

20. Study diagram below and answer questions that follow.



 (i) Name the farming practice illustrated above.(1mark)

--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------- (ii) Give the procedure followed to carry out the practice you have named in (i) above (4marks)

------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------ (iii) state the importance of carrying out the farming practice named above. (1 mark)

 --------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------21. The diagram below illustrates a method of soil conservation. Study it and answer questions that follow.



(i) Name the method of soil control measure. (1 mark)

 -------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------- (ii) in what kind of topography is the above control measure carried out?(1 mark)

 ------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------- (iii)state **four** other **biological soil**  control measures apart from the one named in (i) above.(2marks)

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 22. A Farmer has a piece of land on which he grows beans . His farm record on beqan production for nine years is shown below.

|  |  |  |
| --- | --- | --- |
| YEAR | FERTILIZER APPLIED (100KG BAGS) | TOTAL OUTPUT OF BEANS (90KG BAGS) |
| 2011 | 0 | 6 |
| 2012 | 2 | 12 |
| 2013 | 4 | 30 |
| 2014 | 6 | 44 |
| 2015 | 8 | 54 |
| 2016 | 10 | 62 |
| 2017 | 12 | 68 |
| 2018 | 14 | 68 |
| 2019 | 16 | 66 |

a) Using an appropriate scale draw a graph to show the relationship between inputs and outputs.(5mks)

 b) Calculate the farmers marginal product for the year 2013.(1mk)

 --------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------c) From the data given , what rate of fertilizer application would the farmer choose if he wanted to grow maize in 2020? (1mk)

 ------------------------------------------------------------------------------------------------------------------------------d) Give an explanation for your choice above.

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e) Calculate the average product for the year 2015.( 2mks)

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**SECTION C (40 MARKS) (SELECT ANY TWO QUESTION)**

23. a) Describe the advantages of land consolidation in agriculture production (7 marks)

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 (c) Discuss **four** physical agents of weathering (8 marks)

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24. (a) Discuss **five** methods of harvesting agro forestry trees. (10 marks)

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 (b) Explain how old agro forestry with good root characteristics trees can be grafted (5marks)

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25. (a) Discuss **three** aspects of rainfall that a farmer should consider when deciding on what crop to grow in an area (6marks)

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 (i) Varieties (3 marks)

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 (ii)Field management practices (2 marks)

 ----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------- (iii) Harvesting(2 marks)

 --------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------(c)use the information below to Answer question that follow. Johns farm for the year ended 31st December 2019

 Closing valuation 240,000/=

 Debts payable 115,000/=

 Animal feed purchase 100,000/=

 Sale of 2 heifers 180,000/=

 Debts receivable 130,000/=

 Wages 80,000/=

 Opening valuation 220,000/=

 Milk sales 62,000/=

 Veterinary bills 57,000/=

 i) Prepare a profit and loss account of Johns farm.( 5mks)

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ii) What is the percentage profit or loss made by the farm? (1mk)

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iii) of what use the profit and loss account to the farmer? ( 1mk

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