**NAME: …………………………………………………….. SCHOOL……………............**

**ADM NO:………………………… DATE:……………….. SIGNATURE………….……**

**443/1**

**AGRICULTURE**

**THEORY**

**PAPER 1**

**FORM FOUR**

**TIME: 2 Hours**

**CATHOLIC DIOCESE OF KAKAMEGA EVALUATION TEST.**

**AUG/SEPT EXAM 2022,**

**INSTRUCTIONS TO CANDIDATES**

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

2. Sign and write the date of examination in the spaces provided.

3. This paper consists of **THREE** sections; **A, B**, and **C**.

4. Answer all questions in sections A and **B**.

5. Answer any **TWO** questions in section **C.**

6. All the questions should be answered in the spaces provided

**For Examiners’ Use Only**

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| --- | --- | --- | --- |
| Section | Questions | Maximum Score | Candidates score |
| A | 1-17 | 30 |  |
| B | 18-21 | 20 |  |
| C |  | 20 |  |
|  | 20 |  |
| **TOTAL SCORE** | | 90 |  |

**SECTION A (30MKS**)

Answer **ALL** the questions in this section.

1. Give four reasons why ranching is important in the arid and the semi-arid areas of Kenya. (2mks)

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2. Explain three ways on how good transport and communication net-work improves agricultural production. (11/2mks)

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3. (a) A maize farmer at Lumakanda ploughed his land twice using a tractor-drawn disc plough. What name do we give to the second ploughing. (1/2mk)

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(b) State three reasons why rolling of land is recommended before planting some crops. (11/2mks)

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4. Define the following terms as used in agriculture. (2mks) (a) Drainage

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(b) Pumping of water

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(c) Piping of water

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(d) Irrigation

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5. What is soil fertility? (1/2mk)

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6. (a) A farmer at Bulimbo would obtain Kshs.240,000, if he grew beans, Kshs.200,000 for maize and kshs.300,000 if he grew sugarcane on his 2 acres piece of land. He chooses to grow sugarcane. What was the opportunity cost? (1mk)

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(b) Give two conditions under which opportunity cost exists. (1mk)

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7. (a) What is elasticity of demand? (1mk)

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(b) State two conditions that exists for a market to be purely competitive. (1mk)

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8. Maize is grown in a plot measuring 4m x 3m at spacing of 7cm x 30cm, 2 seeds per hole.

The outer rows begins 35cm all ground the width of the plot.

(i) Calculate the number of rows falling on the width side of the plot. (1mk)

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(ii) Calculate the number of plants per row. (1mk)

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9. Give two activities carried out during hardening off of tomato seedlings. (1mk)

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10. (a) State three disadvantages of traditional stores. (11/2mks)

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(b) Give the meaning of the following practices in crop production. (11/2mks) (i) Changing of cycle

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(ii) Training

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(iii) Tipping

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11. (a) Name three early maturing cabbage varieties. (1/2mk)

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(b) Give a reason why well rotten manure is not recommended in production of carrots. (1/2mk)

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12. (a) Explain two ways how trees help in soil and water conservation. (1mk)

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(b) Differentiate between level and graded terraces. (1mk)

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13. Distinguish between the intensity of defoliation and frequency of defoliation in pasture management. (1mk)

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14. (a) List two signs shown by crops when they are attacked by nematodes. (1mk)

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(b) Define the term “economic injury level” (EIL) of a crop. (1mk)

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15. Give two reasons why a bean plant growing in a carrot crop field may be treated as a weed. (1mk)

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16. Fill in the missing blanks in the table below. (2mks)

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| Fixed factor  land (Ha) | Variable input  NCK fertilizer  (kg) | Total product  maize (90kg bag) | Marginal product  maize (90kg bag) | Average products  maize (90kg bag) |
| 1 | 30 | 10 | 10 | (c) |
| 1 | 60 | 27 | (a) | 13.5 |
| 1 | 90 | 42 | 15 | 14 |
| 1 | 120 | 56 | (b) | (d) |

17. (a) What is the meaning of the following in agroforestry. (1mk) (i) Pruning

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(ii) Looping

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(b) Name two trees that are used as livestock feeds. (1mk)

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**SECTION B (20MKS**)

Answer **ALL** the questions in this section.

18. The Sacred Heart Girls High School, Mukumu Form Four student was to apply a compound fertilizer **5:20:10** at the rate of 200kg/Ha on her agricultural project plot measuring 3m x 4m.

(a) (What do the figures 5 and 10 in the compound fertilizer stand for? (2mks)

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(b) Calculate the amount of fertilizer she would require for the plot. ***(show your working)*** (3mks)

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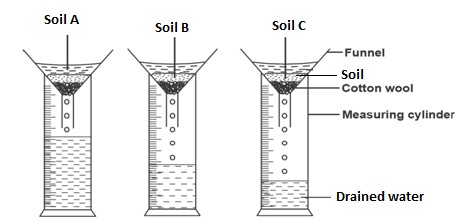
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19. The diagram below illustrates an experiment on soil.



(a) State the aim of the experiment. (1mk)

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(b) If the volume of water illustrated in the measuring cylinder was observed after the hour. Identify the soil sample **A** and **B**. (2mks)

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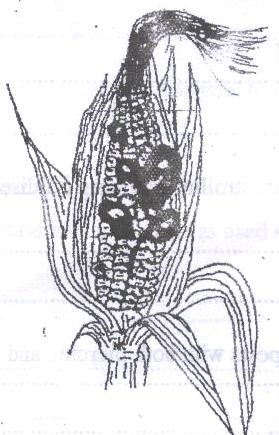
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(c) State two ways in which the soil structure of the sample labelled **C** above can be improved. (2mks)

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20. The diagram below shows a crop disease. Use it to answer questions that follow.



(a) Identify the crop disease. (1mk)

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(b) Name two other crops apart from the one shown above that are attacked by the same disease. (2mks)

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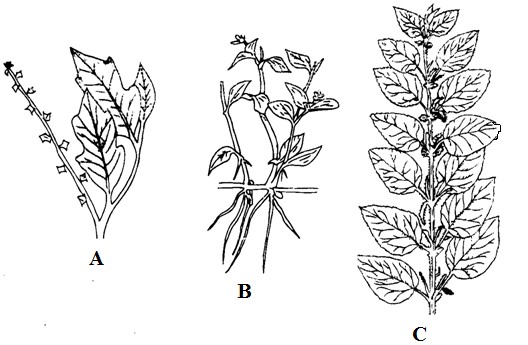
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(c) State two control measures of the above disease. (2mks)

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21. The diagrams below show some common weeds in East Africa.



(a) Name the class of weeds that in which the above weeds belong basing on morphology. (1mk)

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(b) Identify two weeds that lower the work output of human labour on the farm. (2mks)

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(c) Give two reasons why it is difficult to control weed **B** by cultivation. (2mks)

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**SECTION C (40MKS)**

Answer **ANY TWO** questions in this section.

22. (a) Describe the production of tomatoes (Lycoperscon escalentum)

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| (i) | Ecological requirements. | (3mks) |
| (ii) | Transplanting | (3mks) |
| (iii) | Field management practices | (4mks) |

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(b) State five measures of which are taken to minimize water pollution in the farm. (5mks)

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(c) Describe precautions to be observed when harvesting pyrethrum. (5mks)

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23. (a) Describe six physical /structural methods of controlling soil erosion. (6mks)

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(b) Explain four practices of maintaining soil fertility. (4mks)

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(c) Describe five principles of crop rotation. (5mks)

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(d) State five conditions that necessitate effective settlement of people. (5mks)

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24. (a) Describe six importances of budding and grafting in crop propagation. (6mks)

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(b) State six factors that will lead to wider spacing when planting a crop. (6mks)

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(c) The following information was obtained from Mr. Oseso’s Farming Enterprise. Use

it to prepare cash analysis for the year. (8mks) Kshs.

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| 30/6/2003 | - Cash at bank (opening balance) | 50,000 |
| 01/7/2003 | - Bought 20 empty egg trays | 400 |
| 01/7/2003 | - Bought 5 bags of DAP fertilizer | 10,000 |
| 01/7/2003 | - Sold 10 trays of eggs | 12,000 |
| 01/7/2003 | - Bought 5 bags of broilers starter | 7,500 |
| 01/7/2003 | - Sold milk 200kg bag | 4,000 |
| 20/7/2003 | - Sold maize | 6,000 |
| 30/7/2003 | - Bought milk churn | 500 |
| 31/12/2003 | Closed the financial year |  |

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