**Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Adm No.:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Class\_\_\_\_\_\_\_\_\_

**Candidate’s Signature**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**443/1**

**AGRICULTURE**

**Paper 1**

**MAR/APR 2024**

**Time: 2 hours**

LANJET JOINT EXAMINATION 2024

***Kenya Certificate of Secondary Education***

**443/1 Paper 1**

**AGRICULTURE**

**INSTRUCTIONS TO CANDIDATES**

* Write your name, class and admission number, in the spaces provided above.
* Sign and write the date of the examination 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** questions from section **C.**
* All answers must be written in the spaces provided in this paper.

**For Examiner’s Use Only**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | | |  |  |  |  |
| **SECTION** | **QUESTIONS** | |  |  | **MAXIMUM SCORE** | | | | **CANDIDATES SCORE** |
|  |  |  |  | | |  |  |  |  |
| **A** | **1−15** | | **30** | | |  |  |  |  |
|  |  |  |  | | |  |  |  |  |
| **B** | **16−19** | | **20** | | |  |  |  |  |
| **C** |  | | **20**  **20** | | | | | |  |
| **TOTAL SCORE** |  | | **90** | | | | | |  |

**Instructions: Answer all Question in A and B**

1. Explain the following terms as used in Agriculture
2. Agricultural economics. ( ½ mk)
3. Agricultural Engineering. ( ½ mk)
4. State two methods that can be used to detect mineral deficiency in crops. (1mk)
5. State two conditions under which shifting cultivation is favorable . (1mk)
6. State two conditions under which seeds are seeded at high rate. (2mks)
7. How do trees help in maintaining soil fertility. (2mk)
8. Explain the meaning of opportunity cost. (1mk)
9. Outline condition at which opportunity cost is zero. (2mks)
10. Give three causes of hard pan in soil. (2mks)
12. Explain the meaning of additives as used in animal feeds. (1mk)
13. What are the role of additive in making silage. (2mks)
14. Give four advantages of diversification in farming as a method of farming.(2mks)
15. Give reasons why Agriculture is regarded as S|cience. (2mks)
16. Differentiate between Extensive farming system and intensive farming system.(2mks)
17. Why should top dressing be done on pasture. (2mks)
18. Give reasons for innoculating legume seeds before planting. (1mk)
20. Outline the classification of pasture. (1mk)
21. Name four practices carried out to improve and maintain permanent pasture . (2mks)
22. Name four advantages of tissue culture procedure in plant species. (2mks)
23. Outline four mechanical method used in control of weeds. (2mks)

**SECTION B**

1. The diagram below shows a set of apparatus for finding the % of humus in the soil by heating.
2. Label the apparatus. (2mks)



7. Explain the steps followed in carrying out the illustrated experiment. (3mks)
8. Explain why it is difficult to control weeds that have rhizoid roots. (1mk)
9. Outline the practices that are used to train weak stem plants. (3mks)
10. Study the diagram below then annwer the question that follows.
11. Identify the method of drainage above. (1mk)
12. State other method used in draining a swampy area. (3mks)
13. Study the process of chemical water treatment below and answer the question
14. Identify the labeled parts A (½ mk)

B ( ½ mk)

C ( ½ mk)

D ( ½ mk)

1. Mention two substances added at B and give the function. (2mks)
2. Give three uses of water in crop production. (3mks)
3. Outline two source of water. (2mks)

**SECTION C(Select only two question)**

1. Explain what is planting. ( ½ mk)
2. Outline the materials used in planting. (3mks)
3. Explain five factors that affects rooting of cutting. (10mks)
4. Outline and explain factor that must be considered when selecting planting materials. (10mks)
6. Explain what is meant by the term seed dorminancy. (2mks)
7. Outline four methods of breaking seed dorminancy and explain them briefly. (8mks)
8. Explain five factors that should be considered in choosing seed rate. (10mks)
10. Discuss production of guatemala (trypsacum laxum) under the following sub-topics.
11. Ecological requirement. (2mks)
12. Establishment and management. (6mks)
13. Harvesting. (2mks)
14. Discuss methods of sowing in pasture. (10mks)