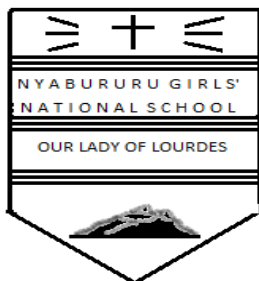


NAME.....CLASS... C/No..... ADM. No.....

SIGNATURE.....



DATE DONE.....

INVIGILATOR.....

DATE RETURNED.....

DATE REVISED.....

FORM FOUR KCSE EXAMINATION

JANUARY SERIES

AGRICULTURE PAPER 1

443/1

Time: 2 Hours

**INSTRUCTIONS TO CANDIDATES:**

- This paper contains **three** sections **A, B and C** in
- Answer **ALL** the questions in section **A** and **B**
- Answer any **Two** questions from section **C**
- All answers should be written in the spaces provided.

**FOR EXAMINERS USE ONLY**

SECTION	QUESTIONS	MAX SCORE	CANDIDATES SCORE
A	1-16	30	
B	17- 120	20	
C	21-23	40	
TOTAL		90	

**SECTION A. (30 MARKS).**

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

1. Give **FOUR** qualities of trees and shrubs suitable for agroforestry (2marks)

.....  
.....  
.....  
.....  
.....

2. List **THREE** chemical processes of weathering of rocks (1 ½ marks)

.....  
.....  
.....

3. State **TWO** ways of adding organic matter to the soil. (1 mark)

.....  
.....

4. Give **TWO** disadvantages of communal land tenure. (1 mark)

.....  
.....  
.....  
.....  
.....

5. Give **FOUR** Factors considered in designing a crop rotation programme (2 marks)

.....  
.....  
.....  
.....  
.....  
.....  
.....

6. Define  
(a) Integrated pest management. (1 mark)

.....  
.....

(b) Economic injury level

(1 mark)

.....

.....

7. State **TWO** symptoms of nitrogen deficiency in a maize crop.

(1 ½ marks)

.....

.....

.....

.....

8. Tabulate **FOUR** reasons for pruning crops

(2 marks)

.....

.....

.....

.....

9. Give **THREE** characteristics of a productive soil.

(1 ½ marks)

.....

.....

.....

.....

10. State **THREE** ways of utilizing a pasture crop.

(1 ½ marks)

.....

.....

.....

11. Give **TWO** factors that determine the quality of a Napier- grass crop used as silage.

(1 mark)

.....

.....

.....

.....

12. Give **THREE** mechanical weed control measures.

(1 ½ marks)

.....

.....

.....

.....

13. Give **FOUR** advantages of land consolidation

(2 marks)

.....

.....

.....

.....

.....

14. (a) Name **FOUR** features of certified seeds.

(2 marks)

.....

.....

.....

.....

(b) Why must a farmer wilt colombus variety of shorghum before feeding it to livestock ? (1 mark)

.....

.....

.....

.....

15. (a) Define organic farming.

(1 mark)

.....

.....

(b) Give **FOUR** advantages of organic farming.

(2 marks)

.....

.....

.....

.....

.....

.....

16. (a) Distinguish between 'routine field practices' and 'post-harvesting practices' in the crop growing of rice. (1mark)

.....

.....

.....

.....

(b) List **FIVE** routine field practices in the growing of paddy rice.

(2 ½ marks)

.....

.....

.....

.....

.....

.....

.....

**SECTION B (20 marks)**

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

17. An onion grower is advised to apply 50kg of Nitrogen per hectare as top-dressing, three months after planting. Calculate each of the following:

a) The amount of CAN (Calcium Ammonium Nitrite) (21%N) that the farmer will require for 5 acre farm. (1mark)

b) The number of bags of CAN that the farmer will require to purchase (CAN is packed in 50kg bags). (1 mark)

c) The amount of money in Ksh that the farmer will spend (One bag of CAN costs Ksh 2100) (1mark)

d) Define opportunity cost (1 mark)

.....

.....

e) State **TWO** effects of excessive use of CAN fertilizer in tomato production (2mks)

.....

.....

.....

.....

18. Shown below are various stages of development of cotton flower.

a) Arrange the stages in order (from the youngest to the oldest) (2marks)

b) Identify the most appropriate stages of harvesting the cotton flower (1mark)

c) Give **THREE** precautions taken during the harvesting of the cotton flower. (3marks)

.....

.....

.....

.....

19. Shown below is a representative of a cassava stem cutting to be used in propagation. The farmer intends to obtain two pieces from the cutting given.

a) On the diagram and using dotted lines, indicate the points at which the cuts should be made.

(3 marks)

b) Give **TWO** control measures of cassava mosaic disease.

(2mark)

.....  
.....  
.....  
.....

20. Shown below is a section through the soil showing the root system of a tea bush (for clarity, the roots have been painted white). Strings have been placed at 0.3m intervals.

On the diagram indicate the various horizons of the soil profile.

(2marks)

### SECTION C (40 marks)

Answer any **TWO** questions in this section in the spaces provide.

21. Discuss the growing of dry beans under the following subheadings.

a). Ecological requirements.

(5marks)

.....  
.....  
.....  
.....  
.....

b). Varieties

(4marks)

.....  
.....  
.....  
.....

c). Field practices.

(5marks)

.....

.....

.....

.....

.....

.....

.....

d). Harvesting. (6marks)

.....

.....

.....

.....

.....

.....

.....

22. Discuss water supply at the farm under the following subheadings

a) Strategies against shortage of water. (7marks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

b) Maintenance of water supply systems. (4marks)

.....

.....

.....

.....

.....

.....

.....

[illegible][illegible][illegible][illegible]

.....

.....  
.....  
.....  
.....  
.....

d) Transplanting procedure

(4mks)

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....