NAME……..ADM No ….……CLASS…..C/NO…..

INDEX No ……..SIGNATURE……

NYABURURU GIRLS' NATIONAL SCHOOL
OUR LADY OF LOURDES

DATE DONE……..

INVIGILATOR……..

DATE RETURNED……

DATE REVISED……..……..

Kenya Certificate of Secondary Education
AGRICULTURE PAPER 443/1
PAPER 1
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

- Write your name and index number in the spaces provided above.
- This paper consists of **THREE** sections: A , B and C
- Answer **ALL** the questions in sections A and B and any **TWO** questions in section C
- ALL answers **MUST** be written in the spaces provided.
- This paper consists of 8 printed pages.
- Candidates should check to ensure that all pages are printed as indicated and no question is missing

FOR EXAMINER'S USE ONLY

	Questions	Maximum score	Candidate's score
A	**1 - 19**	**30 marks**	
B	**20 - 23**	**20 marks**	
C	**24 – 26**	**40 marks**	
Total		**90**	

SECTION A (30 MARKS)

Answer all the questions in this section in the spaces provided

1. State three ways by which biological agents enhance the process of soil formation. (1½marks)

2. Distinguish between olericulture and pomoculture as used in crop production. (1mark)

3. Give four advantages of drip irrigation. (2marks)

4. State four factors that would determine the amount of fertilizer used to top dress a crop in the field. (2marks)

5. State four steps followed in the development of a gully. (2marks)

6. Give two benefits of ridging as a tertiary operation in crop production. (1mark)

7. Give two examples of variable and fixed inputs. (2marks)

   i). Variable inputs

   ii). Fixed inputs.

8. State four advantages of liming as a measure of improving soil condition. (2marks)

9. Give four reasons of using certified seeds for planting. (2marks)

10. Give four reasons for planting crops at the correct spacing. (2marks)

11. State four benefits of budgeting to a farm manager. (2marks)

12. Give three advantages of multiple stem pruning over single stem pruning in coffee.
(1 ½ marks)

13. Name any two types of micro-catchments. (1mark)

14. State two methods which can be used to detect mineral deficiency in crops. (1mark)

15. State four farming practices that cause water pollution. (2marks)

16. List four effects of excess nitrogen to crops. (2marks)

17. State two excellent adaptations of weeds to their environment. (1mark)

18. Explain the term ‘rogueing’ as used in crop production. (1mark)

19. What is meant by concession in relation to land tenure. (1mark)

SECTION B (20 MARKS)

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

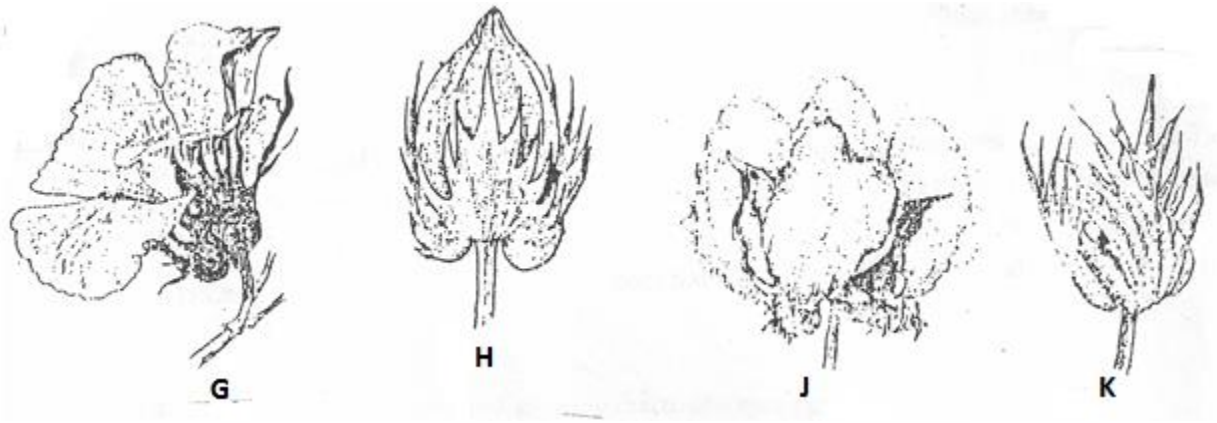
20. Below is a diagram of a bird.

(a) Identify the bird illustrated above. (1mark)

(b) State two ways in which the bird above causes loss to crops. (2marks)

(c) State two control measures of the bird. (1mark)

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

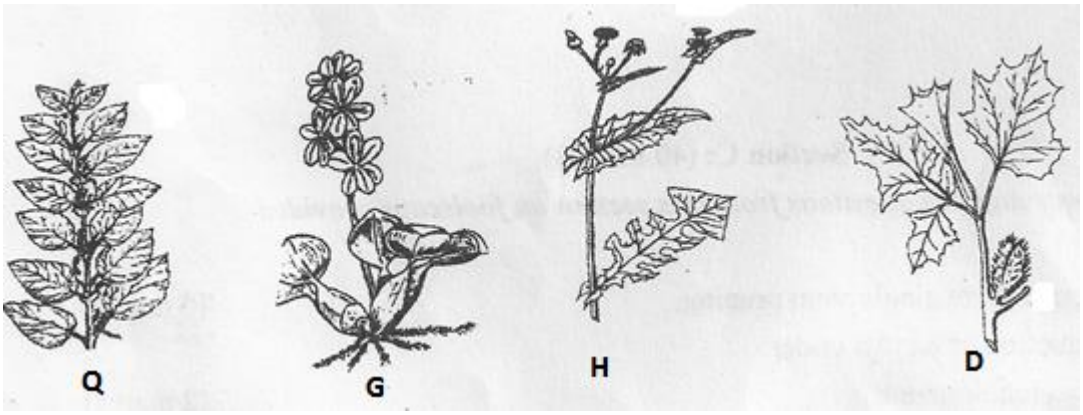


(a) Arrange the stages in order, from the youngest to the oldest. (2marks)

(b) Identify the correct stage of harvesting the cotton flower. (1mark)

(c) Give three precautions to be observed during the harvesting of cotton. (3marks)

22. Below are illustrations of weeds. Study them carefully and answer the questions that follow.



(a) Identify the weeds labeled Q, G, H and D. (2marks)

Q

G

H

D

(b) List one harmful effect for each of the weeds above. (2marks)

Q

G

H

D

23. (a) What is opportunity cost? (1mark)

(b). A farmer can grow tomatoes, cabbages or kales on his one hectare of land. Expected yield is 40 bags, 30 bags and 50bags respectively. One bag of tomatoes is sold at sh. 4000, of cabbages at sh. 3500 and of kales at sh. 3000.

i) Calculate the expected revenue from each crop. (3marks)

ii) Which crop is the farmer likely to grow? (1mark)

(iii) What is the opportunity cost of the crop identified in (ii) above. (1mark)

(iv). If the farmer is to practice crop rotation, which crops cannot follow each other in the rotation programme? Give reason for your answer. (1mark)

SECTION C (40 MARKS)

Answer ONLY two questions in this section in the spaces provided.

24. (a) The following accounts information is from Nyabururu school farm for the year ending 31 –12 – 2007.

Opening valuation	sh. 6000
Payment of wages	sh. 5000
Purchase of farm equipment.	sh. 8000
Purchase of pigs- feed	sh. 4000
Sale of pigs manure worth	sh.7000
Purchase of drugs	sh. 4,100
Purchase of pesticides	sh. 2, 200
Sale of vegetables	sh. 4,400
Sale of piglets	sh. 5,500
Closing valuation	sh. 5,600

i). Using the information above, prepare a profit and loss account for Nyabururu school farm (9marks)

ii). From the calculations in (i) above, state whether Nyabururu school farm made a profit or a loss. (1mks)

(b) Describe the steps farmers should follow when planning a farm business. (10marks)

25. (a) Explain ways used by the government to regulate the amount of imported agricultural products. (4marks)
    (b) Outline the factors the affect the quality of farm yard manure. (6marks)
    (c) Describe the procedure of soil sampling. (6marks)
    (d) Outline two advantages and two disadvantages of tissue culture. (4marks)
26. (a) Describe the production of carrots under.
    i). Planting (4marks)
    ii) Field practices. (5marks)
    (b). Describe rice production under.
    i) Seed bed preparation. (4marks)
    ii) Water management. (6marks)