



MARANDA HIGH SCHOOL

Kenya Certificate of Secondary Education
POST MOCK 1 EXAMINATIONS 2021

443/1

AGRICULTURE

Paper 1

January 2021 – TIME: 2Hours

Name: Adm No:

Class: Candidate's Signature: Date:/12/2021.

INSTRUCTIONS TO CANDIDATES

- Write your name, index number, admission number and class in the spaces provided.
- Sign and write the date in the spaces provided above.
- Answer all the questions in section A and B.
- Answer any two questions in section C.
- Answers should be written in the spaces provided.

FOR EXAMINER'S USE ONLY

Section	Question	Maximum score	Candidates score
A	1 - 19	30	
B	20– 23	20	
C	24 – 26	20	
		20	
	Total score	90	

SECTION A (30MARKS)

(Answer all the questions in this section in the spaces provided)

1) What is a vegetable?

(1mark)

2) List **three** tertiary operations carried out in the farm.

(1 ½marks)

3) Highlight **three** ways through which minimum tillage is achieved.

(1 ½marks)

4) State **two** disadvantages of too much nitrogen in crop production.

(1mark)

5) State **four** factors used in classification of inorganic fertilizers.

(2marks)

6) Highlight **four** aspects of rainfall that affects agricultural production.

(2marks)

7) Give **two** changes that would indicate an improvement of labor efficiency on a farm.

(1mark)

8) State the law of substitution.

(1mark)

9) Outline **three** ways by which afforestation helps in land reclamation.

(1½marks)

10) Outline any **four** steps followed in land adjudication.

(2marks)

11) State any **four** characteristics of trees used in agroforestry.

(2marks)

12) List **three** advantages of tenancy system.

(1 ½marks)

13) Under what conditions do opportunity cost exist as zero?

(1 ½marks)

14) Apart from broadcasting as a method of fertilizer application, list **four** other fertilizer application methods.

(2marks)

15) Highlight **three** importance of tissue culture in crop propagation.

(1 ½ marks)

16) Highlight **four** disadvantages of using seeds as a planting material.

(2marks)

17) State **four** factors affecting rooting of cuttings.

(2marks)

18) Explain what is meant by the following terms;

(1 ½ marks)

i) Chitting _____

ii) Certified seed _____

iii) Seed dressing

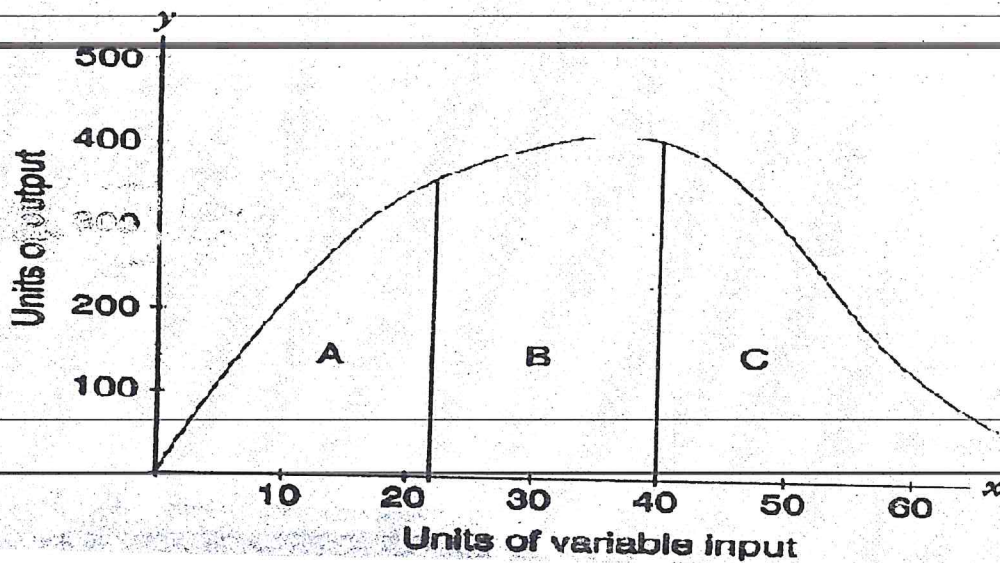
19) State any three significance of nursery in crop production.

(1 ½ marks)

SECTION B (20MARKS)

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

20) The diagram below shows a graphical representation of an economic law.



i) Name the law depicted by the curve above.

(1mark)

ii) Explain what is happening in each of the zones marked A, B and C.

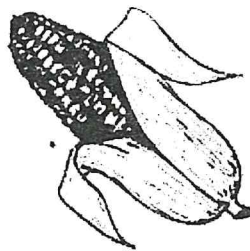
(3marks)

Zone A

Zone B

Zone C

21) The diagram below shows a maize cob which has been attacked by a certain disease. Study it and answer the questions that follow.



i) Identify the disease.

(1mark)

ii) Name the causal organism of the disease.

(1mark)

iii) State two cultural methods of controlling the disease.

(2marks)

22) Mr. Kioko has 5ha of arable land, 1.5ha of which is under maize, 1.0 ha under rice, 0.5 ha under fodder crop and the rest either under improved hay or natural grass. He wishes to know whether replacing 0.5 ha of maize with Irish potato the following season would be worthwhile. The fertilizer rate would have to be increased from 2bags per ha for maize to 3.0 ha bags per ha for Irish potato and extra 30 man-days of casual labor per ha would be necessary as a result of the change. Average yields of maize and Irish potato are 60 and 90 bags per ha respectively. The prices are Ksh. 1500 per bag of maize and Ksh. 400 per bag of Irish potatoes. Seed costs are Ksh.

Draw up the partial budget and indicate the effect of the change.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

The diagram illustrates the experimental setup for testing the effect of soil microorganisms on soil fertility. It consists of two conical flasks, labeled Flask 1 and Flask 2, each containing a layer of lime water at the bottom. A muslin bag is suspended in the air space above the lime water in each flask. In Flask 1, the muslin bag contains fresh moist soil. In Flask 2, the muslin bag contains soil that has been strongly heated. Both flasks are sealed with a rubber cork and a string. The labels for the components are as follows:

- Flask 1
- Flask 2
- Rubber cork
- String
- Conical flask
- Fresh moist soil
- Strongly heated soil
- Muslin bag
- Lime water

(1mark)

ii) What observation did the students make in the two flasks at the end of the experiment? (2marks)

iii) Give a reason for the observation made in flask 1. (1mark)

SECTION C (40MARKS)

Answer any two questions from this section

24) Describe the factors that determine the quality of Farm Yard Manure. (5marks)

i) Explain why green manure is not commonly used by farmers. (4marks)

ii) Explain the soil conservation measures that can be used to conserve soil on a sloping farm land. (8marks)

iii) State **three** ways by which soil pH influences soil fertility. (3marks)

25) i) State and explain the agricultural support services available to farmers. (10marks)

ii) Explain the various ways a farmer may adjust to risk and uncertainties. (8marks)

iii) State **two** factors that influence the market forces. (2marks)

26) i) State and explain **five** causes of land fragmentation in Kenya since independence. (10marks)

ii) Give reasons for the success of settlement schemes in Kenya after independence. (5marks)

iii) State the contribution of settlement schemes to agricultural development. (5marks)
