

Name Index Number

443/1
AGRICULTURE
Paper 1
Nov. 2016
 2 hours

Candidate's Signature

Date



THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
AGRICULTURE
Paper 1
 2 hours

Instructions to candidates

- Write your name and index 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.**
- Answer **any two** questions in section **C.**
- All answers should be written in the spaces provided.
- This paper consists of 16 printed pages.**
- Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- Candidates should answer the questions in **English.**

For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1–18	30	
B	19–23	20	
C		20	
		20	
Total Score		90	



SECTION A (30 marks)

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

1. List **four** factors that would determine the stage at which a crop is harvested. (2 marks)

.....

.....

.....

.....

2. State **two** ways in which crop rotation controls weeds. (1 mark)

.....

.....

3. Give **two** factors which characterize small scale farming. (1 mark)

.....

.....

4. Give **two** examples for each of the following categories of water pipes.

- (a) Metal pipes (1 mark)

.....

.....

- (b) Hose pipes (1 mark)

.....

.....

5. State the information included in a sales receipt when a farmer is selling eggs. (2½ marks)

.....

.....

.....

.....

6. State **four** characteristics of a good vegetable seedling. (2 marks)

.....

.....

.....

.....

7. Name **three** forms of horticulture practiced in Kenya. (1½ marks)

.....

.....

.....

.....

8. State **two** mechanical methods of separating soil particles according to size, during soil analysis. (1 mark)

.....

.....

9. List **four** disadvantages of mono cropping in crop production. (2 marks)

.....

.....

.....

.....



10. State **two** reasons for practicing agro forestry on a

(a) river-bank

(1 mark)

.....

.....

(b) steep slope

(1 mark)

.....

.....

11. Give **three** reasons for growing crops under optimum temperature conditions.

(1½ marks)

.....

.....

.....

.....

12. State **four** reasons for treating water for use on a farm.

(2 marks)

.....

.....

.....

.....

13. Outline **two** ways of controlling damping off disease on vegetable seedlings in a nursery.

(1 mark)

.....

.....

.....

.....

14. State **four** factors that affect the quality of farm-yard manure. (2 marks)

.....

.....

.....

.....

15. Distinguish between grading and standardization in agricultural marketing. (2 marks)

.....

.....

.....

16. Give **four** disadvantages of broadcasting as a method of planting. (2 marks)

.....

.....

.....

.....

17. State **three** practices which encourage soil erosion. (1½ marks)

.....

.....

.....

.....

18. Name **two** types of non-competitive markets. (1 mark)

.....

.....

.....

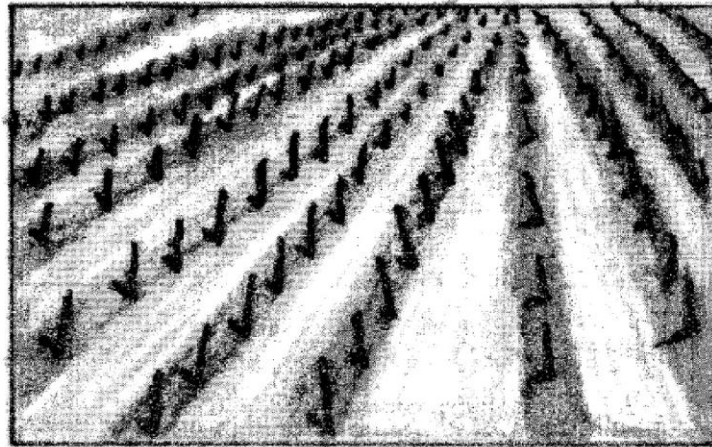
.....



SECTION B (20 marks)

Answer all questions in this section in the spaces provided

19. The diagram below shows crop establishment using a certain method of planting. Study it carefully and then answer the questions that follow.



- (a) Name the method of planting used for the crop. (1 mark)

.....

- (b) State **two** advantages of the planting method used for the crop. (2 marks)

.....

.....

.....

.....

- (c) State **two** factors that determine the depth of planting. (2 marks)

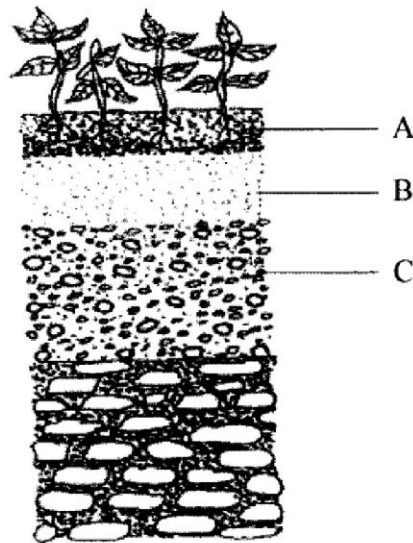
.....

.....

.....

.....

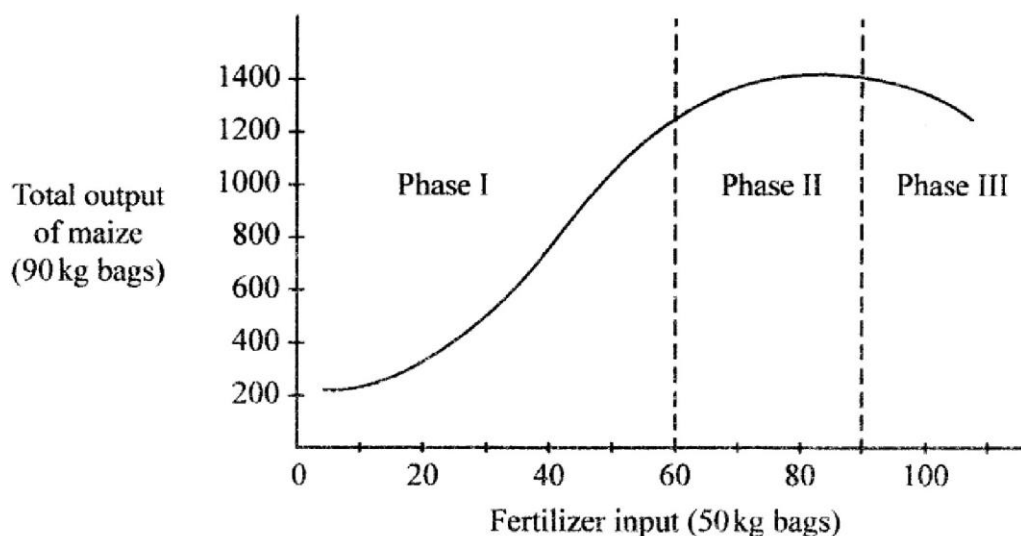
20. The diagram below illustrates a feature observed after digging the soil several meters deep. Study the diagram carefully and answer the questions that follow.



- (a) Identify the feature that the diagram above represents in the study of soil. (1 mark)
-
- (b) Name the parts of the diagram labeled A, B and C. (1½ marks)
- A
- B
- C
- (c) State **two** ways in which the knowledge of the above feature would be of benefit to a farmer. (2 marks)
-
-
-
-



21. Below is a graphical representation of a law in agricultural economics. Study the graph carefully and answer the questions that follow:



- (a) Identify the law illustrated by the graph. (½ mark)
-
-
- (b) Explain how each additional unit of fertilizer input relates to the total output of maize in phases II and III.
- Phase II (1 mark)
- Phase III (1 mark)
- (c) State the importance of the law identified in (i) above to the maize farmer. (1 mark)
-
-
22. The following is a list of plant nutrients; copper, calcium, nitrogen, molybdenum, zinc, phosphorous, carbon, sulphur, iron and magnesium. Which of the above plant nutrients are:
- (a) Macro-nutrients (1 mark)
-
-

- (b) Micro-nutrients (1 mark)

.....

.....

- (c) Fertilizer elements (1 mark)

.....

.....

- (d) Liming elements (1 mark)

.....

.....

23. The table below shows pH value of different soil samples. Study it and answer the questions that follow.

Soil Sample	pH Value
S ₁	3
S ₂	4
S ₃	5
S ₄	6
S ₅	7
S ₆	8
S ₇	9
S ₈	10

- (a) Which soil sample has the highest acidity? (1 mark)

.....

.....

.....

.....



- (b) State two ways in which the pH value of sample S_g can be lowered. (1 mark)

.....

.....

.....

.....

- (c) Which of the above soil samples is suitable for growing tea? (1 mark)

.....

.....

SECTION C (40 marks)

*Answer any **two** questions from this section in the space provided after question 26.*

24. (a) Outline the information contained in a purchase order. (5 marks)
- (b) Describe the harvesting of tea. (6 marks)
- (c) Explain the importance of irrigation in crop production. (5 marks)
- (d) Describe the role of magnesium in crop production. (4 marks)
25. (a) Describe the effects of pests on maize in the field. (6 marks)
- (b) (i) Describe the procedure of harvesting pyrethrum. (4 marks)
- (ii) Explain the precautions that should be observed during the harvesting of pyrethrum. (3 marks)
- (c) Describe the cultural methods of controlling soil erosion. (7 marks)
26. (a) Explain **eight** cultural methods of soil and water conservation. (8 marks)
- (b) Explain **four** ways in which:
- (i) HIV/AIDS limits agricultural production. (4 marks)
- (ii) Government policy improves agricultural production. (4 marks)
- (iii) Low level of education and technology influence agriculture. (4 marks)

.....

.....

.....

.....

.....

.....

.....

.....

