



KCSE ACHIEVERS PREDICTION



Kenya Certificate of Secondary Education (KCSE)

(443/1) AGRICULTURE PAPER 1

(THEORY) TIME:2 Hours

NAME.....ADM NO./INDEX NO.....

Date.....SIGN.....

Instructions to candidates

- Write your name and Admission or index no. on the spaces provided at the top of this page.
- This paper consists of three sections A, B and C.
- Answer all 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 10 Printed pages.

For Examiner's Use Only

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-14	30	
B	15-18	20	
C	19	20	
	20	20	
	21	20	



SECTION A (30 Marks)

Answer ALL questions in the spaces provided

1. State four branches of horticultural farming. (2mks)

2. List four methods commonly used for applying nitrogenous fertilizers. (2mks)

3. Name four factors influencing soil formation.(2mks)

4. Mention four cultural methods of weed control used in crop production. (2mks)

5. State four ways of overcoming extremes of temperature in crop production. (2mks)



6. Mention four practices carried out to maintain grass pastures. (2mks)
7. List the four types of land reform programmes. (2mks)
8. Mention four cultural methods of weed control used in crop production. (2mks)
9. State four ways of overcoming extremes of temperature in crop production. (2mks)
10. List five precautions observed in harvesting tea to ensure high quality produce. (2½mks)



11. List three ways in which primary cultivation can be achieved. (1½mks)
12. List five precautions observed in harvesting tea to ensure high quality produce. (2½mks)
13. List three ways in which primary cultivation can be achieved. (1½mks)
14. State four advantages of using farm yard manure. (2mks)
15. State four merits of minimum tillage in crop production. (2mks)
16. An agriculture student was advised to apply complete fertilizer 40:30:10 in a (20mx10m) plot and at the rate of 400kg per hectare.
- (i) Calculate the percentage of P_2O_5 in the complete fertilizer. (2mks)



(ii) Calculate the amount of fertilizer the student would require for the plot.

(2mks)

17.State four branches of horticultural farming. (2mks)

18.List four methods commonly used for applying nitrogenous fertilizers. (2mks)

19.Name four factors influencing soil formation.(2mks)

20.A farmer owns one hectare on which he can grow maize whose yield is 15 bags/hectare but has chosen to grow sorghum whose yield is 20 bags/hectare. If maize is sold at Shs. 1200 per bag while sorghum is sold at Shs. 700 per bag. Calculate the opportunity cost.
(2mks)



- 21.State four characteristics of plants used for preparation of green manure.
(2mks)

SECTION B (20Marks)

- 22.Students in an agriculture class set out to investigate the constituents of soil sample from school. They carried out a series of tests on various portions of the sample. They then prepared a table as shown below:

Description	Quantity
Mass of an empty evaporating disk	10g
Fresh soil on evaporating disk	35g
Mass of dried soil at 105oC on evaporating disk	28g
Vol. of water in the tin	250cm ³
Vol. of water and soil after stirring	410cm ³
Mass of empty silica disk	15g
Mass of silica disk and soil after ignition	45g
Mass of silica disk and dried soil before ignition	65g
Volume of water and soil before stirring	500cm ³

- a) i)Calculate the percentage of soil water in the sample. (1mk)

- ii) Why was the soil heated at 105⁰C? (1mk)

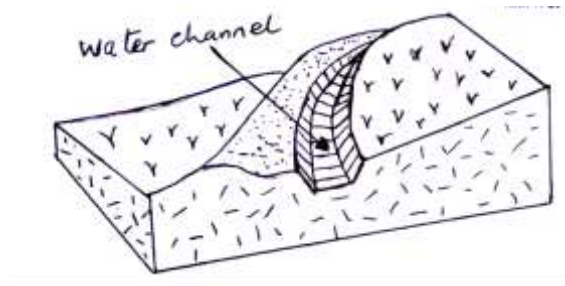
- b) Calculate the percentage of soil air in the sample? (1mk)



c) Calculate the percentage of soil organic matter in the sample.(1mk)

d) Name one other soil constituent not tested above. (1mk)

23. i)The diagram below shows a construction on farm. Use it to answer the questions that follow



a)Identify the structure (1/2mk)

b)State four areas where water in the channel is directed to (2mks)

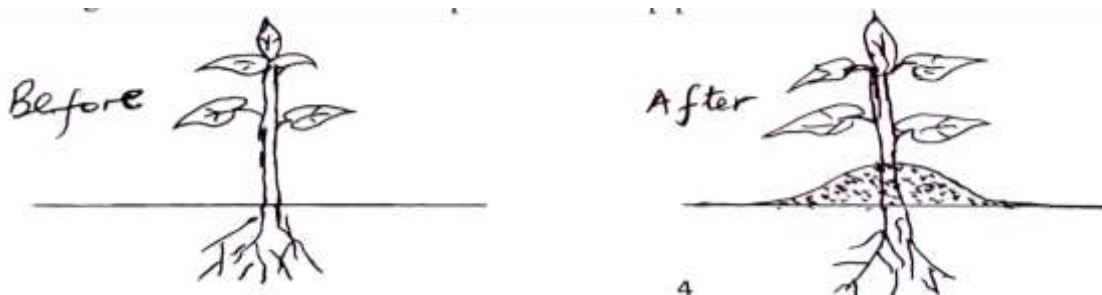


ii) The diagram below shows a field practice in crop production

a) Identify the practice.

($\frac{1}{2}$ mk)

b) State two advantages of the practice named in (a) above to Irish potatoes. (2mks)



17) Use the diagram below to answer the questions.



(a) Identify the sorghum variety shown above. (1mk)



(b) State two bird pests that commonly attack the crop.(2mks)

(c) Name two other varieties commonly grown by farmers.(2mks)

18. Study the illustration below of a tomato fruit and answer the questions that follow



Z

- (a) Name the pest labelled **Z**. (1mk)
- (b) State **two** characteristics symptoms of attack by the pest named in (a) above. (1mk)
- (c) State **two** cultural control measures of the pest named in (a) above. (1mk)
- (d) Apart from pest **Z** identified above name **two** insect pests of tomatoes. (2mks)

SECTION C (40 Marks)
ANSWER ANY TWO QUESTIONS

- 19.(a) Discuss six biotic factors that influence agricultural production.(6mks)
- (b) Describe four methods of breaking seed dormancy (4mks)
- (c) Describe five nursery management practices (5mks)
- (d) Explain five reasons why use of chemicals to control pests should be discouraged (5mks)
- 20.(a) Describe the harvesting of pyrethrum (5mks)
- (b) State four precautions when harvesting pyrethrum (4mks)
- (c) Explain six cultural methods of disease control (6mks)
- (d) Explain five methods of water harvesting (5mks)



- 21.(a) Describe carrot production under the following sub-headings
- (i) Field management practices (3mks)
 - (ii) Land Preparation (3mks)
- (b) Explain five factors that determine the stage in which crops are harvested (5mks)
- (c) Explain four factors determining the depth of planting (4mks)
- (d) Describe five effects of strong wind on agricultural production(5mks)

