Name	Index No/
2425/201	Candidate's Signature
CROP PRODUCTION II, SOIL FERTIL	
AND PLANT NUTRITION Oct/Nov. 2012	Date
Time: 3 hours	

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN AGRICULTURE MODULE II

CROP PRODUCTION II, SOIL FERTILITY
AND PLANT NUTRITION

3 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.

You should have a non programmable calculator for this examination.

This paper consists of TWO sections; A and B.

Answer any THREE questions from section A and any TWO questions from section B in the spaces provided.

All questions carry equal marks.

Maximum marks for each part of a question are as shown.

For Examiner's Use Only

Sections	Questions	Maximum Score	Candidate's Score
7.55			
A			
	Total 5	Score	

This paper consists of 12 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

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Turn over

SECTION A: CROP PRODUCTION II

Answer any THREE questions from this section.

L	Expl	lain the advantages of the following practices in cereal crop production.			
	(a)	Breeding for pest resistance;			
	(b)	Biology control of pests.	(20 marks)		
2.	(a)	Explain how chitting of potato tubers improves the performance of the	e potato crop. (10 marks)		
	(b)	Describe the establishment of a tea crop.	(10 marks)		
3.	Desc	ribe the causal agent, symptoms and control of:			
	(a)	Loose smut of sugar-cane;	(8 marks)		
	(b)	American bollworm in cotton.	(12 marks)		
4.	Desc	ribe the following:			
	(a)	Wet processing of coffee;	(10 marks)		
	(b)	Control of striga weed in cereals;	(6 marks)		
	(c)	Utilization of simsim.	(4 marks)		
5.	(a)	Explain the processes in flue-curing of tobacco.	(15 marks)		
	(b)	Explain the effect of temperature on sunflower production.	(5 marks)		
		SECTION B: SOIL FERTILITY AND PLANT NUTRITIO	ON		
		Answer any TWO questions from this section.			
6.	(a)	Explain the advantages of urea as a fertilizer.	(6 marks)		
	(b)	Explain the following processes in the nitrogen cycle:			
		(i) Immobilization; (ii) Mineralization	(8 marks) (6 marks)		
7.	(a)	Following soil analysis, a maize farmer was advised to apply liming to before planting.	o the soil		
2425	5/201	(i) Name any two liming materials the farmer could use. (ii) State the factors that determine soil liming.	(2 marks) (4 marks)		

E. V. V. Tarabara

(b)	Given the following fertilizer materials; muriate of potash 60% (K ₂ C) superphosphate (20% P ₂ O ₃) and ammonium nitrate (33% N); Calcula amount of each fertilizer material that may be used to prepare 100 kg 17-10-17 NPK.	ate the
(c)	Explain how organic fertilizer materials influence soil properties.	(8 marks)
8. (a)	Explain:	20000000
A-20. (1.7)	(i) Factors affecting K-fixation;	(5 marks)
	(ii) Benefits of applying fertilizer in drip irrigation;	(5 marks)
(b)	Describe deficiency symptoms of nitrogen in plants.	(5 marks)
(c)	Explain how soil pH influence availability of plant nutrient.	(5 marks)
		Samonomia
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