

Name _____ Index No. _____ / _____

2425/201

**CROP PRODUCTION II, SOIL FERTILITY
AND PLANT NUTRITION**

Oct/Nov. 2012

Time: 3 hours

Candidate's Signature _____

Date _____

**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
A			
Total 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.**

SECTION A: CROP PRODUCTION II

Answer any **THREE** questions from this section.

1. Explain 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 potato crop. (10 marks)
 - (b) Describe the establishment of a tea crop. (10 marks)
3. Describe the causal agent, symptoms and control of:
 - (a) Loose smut of sugar-cane; (8 marks)
 - (b) American bollworm in cotton. (12 marks)
4. Describe 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 NUTRITION

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; (8 marks)
 - (ii) Mineralization (6 marks)
7. (a) Following soil analysis, a maize farmer was advised to apply liming to the soil before planting.
 - (i) Name any **two** liming materials the farmer could use. (2 marks)
 - (ii) State the factors that determine soil liming. (4 marks)

