

2425/201
CROP PRODUCTION II, SOIL FERTILITY
AND PLANT NUTRITION
Oct./Nov. 2022
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

*This paper consists of EIGHT questions in TWO sections; A and B.
Answer any THREE questions from section A and any TWO questions from section B in
the answer booklet provided.
All questions carry equal marks.
Maximum marks for each part of a question are indicated.
Candidates should answer the questions in English.*

This paper consists of 3 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 (60 marks)

Answer any THREE questions from this section.

1. (a) Highlight **five** effects of weeds in coffee production. (5 marks)
- (b) State **five** reasons for vegetative propagation in tea. (5 marks)
- (c) Explain nursery establishment in tea with respect to:
- (i) selection of nursery site;
 - (ii) selection of soil for the nursery.
- (10 marks)
2. (a) Describe bean fly pest under the following:
- (i) symptoms;
 - (ii) control.
- (6 marks)
- (b) Explain **seven** post-harvest management practices carried out in sugar cane ratoon crop. (14 marks)
3. (a) Describe cassava mosaic disease under the following:
- (i) symptoms;
 - (ii) control.
- (7 marks)
- (b) Describe crop establishment in cassava with respect to:
- (i) quality of planting materials;
 - (ii) orientation of planting;
 - (iii) planting depth;
 - (iv) spacing.
- (13 marks)
4. (a) Describe harvesting in cotton. (10 marks)
- (b) Explain cutting back in pyrethrum production under the following:
- (i) meaning;
 - (ii) purpose;
 - (iii) method.
- (10 marks)

5. (a) Explain wheat production under the following:
- (i) management of acidic soil condition;
 - (ii) preventive weed control.
- (10 marks)
- (b) Explain the benefits of each of the following:
- (i) early planting in maize;
 - (ii) ratooning in sorghum.
- (10 marks)

SECTION B: SOIL FERTILITY AND PLANT NUTRITION (40 marks)

Answer any TWO questions from this section.

6. (a) Describe the effects of aluminium toxicity on plants. (5 marks)
- (b) With the aid of chemical equations, outline the manufacture process of calcium ammonium nitrate (C.A.N) fertilizer. (15 marks)
7. (a) Highlight six benefits of proper use of liming materials. (6 marks)
- (b) Explain seven negative effects of inorganic fertilizers on the environment. (14 marks)
8. (a) Explain liming with respect to:
- (i) types of liming materials;
 - (ii) lime fineness.
- (8 marks)
- (b) Explain six factors that influence organic matter content in the soil. (12 marks)

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