

1405/311
CROP PRODUCTION
Oct./Nov. 2022
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL
CRAFT CERTIFICATE IN GENERAL AGRICULTURE

CROP PRODUCTION

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Answer booklet;

Non-programmable scientific calculator.

*This paper consists of **SIXTEEN** questions in **TWO** sections; **A** and **B**.*

*Answer **ALL** questions in section **A** and any **FOUR** questions from section **B** in the answer booklet provided.*

*Each question in section **A** carries **4** marks while each question in section **B** carries **15** marks.*

*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 (40 marks)

Answer ALL questions in this section.

1. State **four** basic requirements for starting sericulture enterprise. (4 marks)
2. State **four** roles of soil air in crop production. (4 marks)
3. Highlight **four** ways of minimizing adverse effects of climate on crop production. (4 marks)
4. Give **four** advantages of organic farming. (4 marks)
5. State **four** benefits of zero-tillage. (4 marks)
6. A farmer was advised to top dress maize crop in a farm at the rate of 200 kg of ammonium sulphate (20% N) per hectare. Calculate the amount of nitrogen applied in one acre of land. (4 marks)
7. Maize is planted using the spacing of 75 cm by 30 cm. Given that 100 maize seeds weigh 37.5 g on average, determine the seed rate in kilogrammes per hectare. (4 marks)
8. State the principles of integrated pest management (IPM). (4 marks)
9. Give **four** advantages of sun-drying grains. (4 marks)
10. State **four** limitations of using splits in establishing napier grass. (4 marks)

75cm by 30cm

$$\frac{75}{100} \times \frac{30}{100} =$$

Answer =

10,000

If 100 = 37.5g

77

=

SECTION B (60 marks)

Answer any FOUR questions from this section.

- ~~11.~~ (a) Describe pricking out practice in nursery management. (7 marks)
- (b) Explain **four** methods of harvesting agro-forestry tree species. (8 marks)
- ~~12.~~ (a) Highlight **seven** factors that determine selection of stem cuttings for propagation. (7 marks)
- (b) Explain **four** sources of variation in plant breeding. (8 marks)
- ~~13.~~ (a) Describe leaf priming in tobacco production. (5 marks)
- (b) (i) Highlight the mandate of Kenya Plant Health Inspectorate Service (KEPHIS).
(ii) Give **five** benefits of certified seeds. (10 marks)
- ~~14.~~ (a) Describe anthracnose disease in beans under the following:
(i) cause;
(ii) symptoms;
(iii) control. (6 marks) 15
- (b) Describe harvesting in maize. (9 marks)
15. (a) Describe cutting back practice in pyrethrum. (7 marks)
- (b) Outline the steps involved in single stem pruning system in coffee. (8 marks)
16. (a) Highlight **five** factors that influence the choice of rootstock in citrus. (5 marks)
- (b) Describe the management of the following physiological disorders:
(i) whip tail in cauliflower;
(ii) blossom end rot in tomatoes. (5 marks)
- (c) Explain **five** pre-treatment practices of cut-roses during packhouse operation. (5 marks)

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