

2425/301  
CROP PRODUCTION III  
Oct./Nov. 2022  
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN AGRICULTURE

MODULE III

CROP PRODUCTION III

3 hours

easyvet.com

**INSTRUCTIONS TO CANDIDATES**

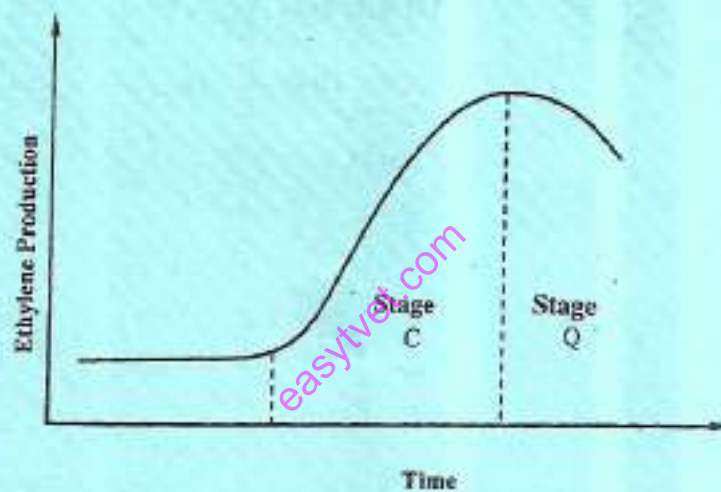
*This paper consists of EIGHT questions.  
Answer any FIVE questions in the answer booklet provided.  
All questions carry equal marks.  
Maximum marks for each part of a question are indicated.  
Candidates should answer the questions in English.*

**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.**

1. (a) Differentiate between quantitative loss and qualitative loss with respect to food deterioration. (4 marks)
- (b) Describe pre-cooling of harvested fresh produce under the following:
- meaning;
  - objectives;
  - methods.
- (12 marks)
- (c) Describe the symptoms of diamondback moth (*Plutella maculipennis*) infestation in kales and cabbages. (4 marks)

2. (a) The following illustration shows physiological changes in the development of a fruit.



- Identify developmental stages labelled C and Q.
  - State the changes in a fruit that characterise stage C.
- (8 marks)
- (b) Outline six objectives of preserving fresh produce. (6 marks)
- (c) Highlight six ways of minimising transplanting shock in vegetable production. (6 marks)
3. (a) Describe courgette production under the following:
- land preparation;
  - planting for export.
- (9 marks)

- (b) Highlight four pruning practices carried out in banana production. (4 marks)
- (c) State seven symptoms of greening disease in citrus production. (7 marks)
4. (a) Highlight five characteristics of yellow passion fruit variety (flavicarpa) that differentiates it from the purple variety. (5 marks)
- (b) Describe how slow freezing leads to textural damage in fruits. (5 marks)
- (c) Describe each of the following methods of refining oil:
- (i) water refining;
- (ii) bleaching. (10 marks)
5. (a) Outline the post-harvest practices for baby corn intended for export. (14 marks)
- (b) Describe cold chain as used in handling of fresh produce under the following:
- (i) meaning;
- (ii) practices. (6 marks)
6. (a) Describe the germ recovery stage in corn wet milling process. (10 marks)
- (b) Describe the influence of altitude on the quality of pineapples. (10 marks)
7. (a) Explain seven causes of quality deterioration in post harvest stage of cut-flower production. (14 marks)
- (b) Highlight six ways of ensuring food safety during harvesting of fresh produce. (6 marks)
8. (a) Define the term 'cut-flower'. (2 marks)
- (b) Explain six commercial uses of cut-flowers. (12 marks)
- (c) Describe knocking in carnation production. (6 marks)

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