

Name _____

Index No. _____

2525/103

Candidate's Signature _____

2921/103

CROP ENTERPRISE MANAGEMENT I

Date _____

Oct./Nov. 2013

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

**DIPLOMA IN ENTREPRENEURIAL AGRICULTURE
MODULE I**

CROP ENTERPRISE MANAGEMENT I

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 calculator for this examination.

Answer FIVE of the EIGHT questions in the spaces provided in this question paper.

All questions carry equal marks.

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

Do NOT remove any pages from this booklet.

Candidates should answer the questions in English.

For Examiner's Use Only

Question	1	2	3	4	5	6	7	8	TOTAL
Marks									

This paper consists of 16 printed pages.

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

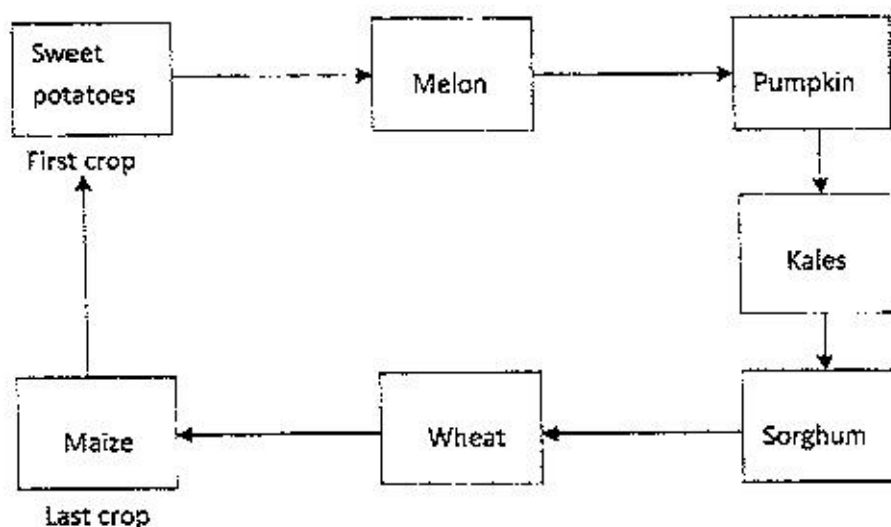
1. (a) Highlight the characteristics of market gardening. (10 marks)
- (b) A farmer had a list of crops from which he designed a rotation programme as shown below. Study the program and explain the mistakes in it.

LIST OF CROPS

Sweet potatoes
Melon
Maize
Wheat
Pumpkin

Beans
Kales
Green grams
Oats

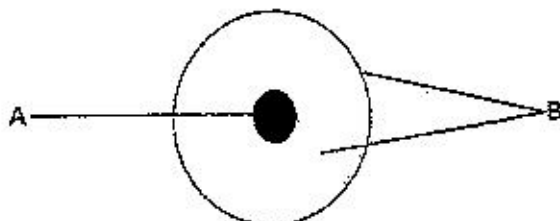
Designed rotation programme



(10 marks)

2. (a) Differentiate between exogenous and endogenous seed dormancy. (4 marks)
- (b) The following is a cross section drawing indicating parts of a seed responsible for exogenous and endogenous dormancy. Study it and answer the questions that follow.

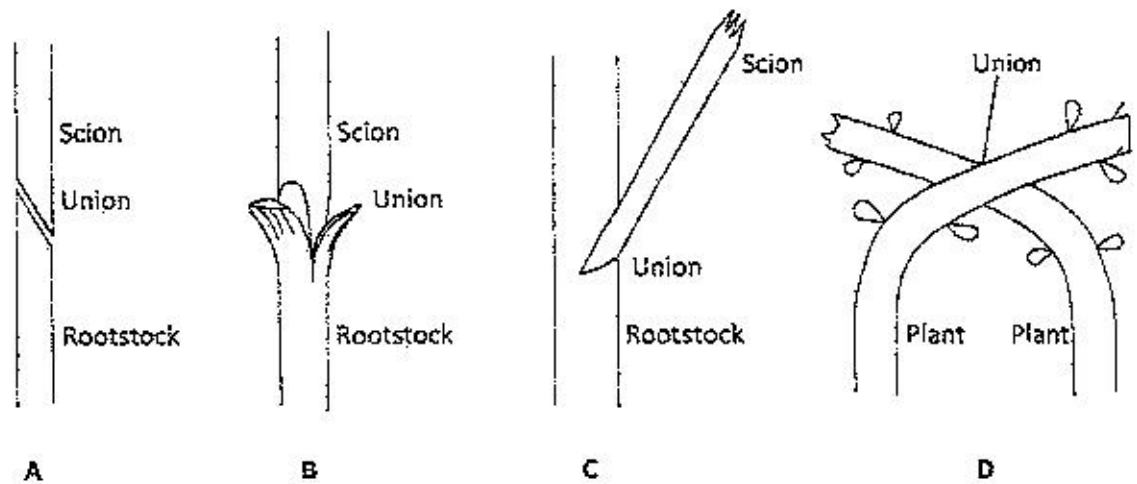
Cross section drawing of a seed



Identify:

- (i) parts responsible and endogenous seed dormancy respectively; (2 marks)
- (ii) explain three types of exogenous dormancy; (6 marks)
- (iii) state three ways of breaking dormancy associated with the labelled part A. (3 marks)

- (c) Highlight the advantages of early land preparation. (5 marks)
3. A farmer plants maize at a spacing of 75cm x 25cm using compound fertilizer 20 : 20: 5 at a rate of 200 kg/ha of fertilizer.
- (a) Calculate the amount of Nitrogen applied per plant. (6 marks)
- (b) (i) Define integrated pest management.
(ii) Outline the steps followed in integrated pest management. (10 marks)
- (c) State the limitations of biological pest management. (4 marks)
4. (a) Define genetic engineering. (2 marks)
- (b) Describe the steps in recombinant DNA technique. (8 marks)
- (c) Highlight the application of biotechnology in crop production. (10 marks)
5. (a) Describe the term 'seed certification'. (4 marks)
- (b) Explain the causes of genetic purity deterioration in seed production process indicating remedies. (16 marks)
6. (a) The following diagrams illustrate different grafting methods. Study the diagrams and identify the propagation methods A, B, C and D. (4 marks)



- (b) (i) Define the term TOP working. (2 marks)
- (ii) With the aid of diagrams describe TOP working procedure (14 marks)

