

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN
HORTICULTURE

HORT 222: PLANT PROPAGATION

STREAMS: BSC HORT

TIME: 2 HOURS

DAY/DATE: MONDAY 29/03/2021
P.M.

2.30 P.M. – 4.30

INSTRUCTIONS:

- This paper has two sections A and B.
- Section A accounts for 30 marks while section B accounts for 40 marks.
- Section A is compulsory
- Answer any two questions in section B.

SECTION A (30 MARKS) (ANSWER ALL QUESTIONS)

1. (a) Briefly explain
(i) Sexual propagation (4 marks)
(ii) Asexual propagation (4 marks)
2. (a) Define the term dormancy (2 marks)
(b) Explain five (5) ways of breaking seed dormancy. (5 marks)
3. Describe the major possible horticultural application of polyembryony. (5 marks)
4. (a) Explain briefly the role of growth regulators in plant propagation. (6 marks)

- (b) Explain the term micro-propagation. (4 marks)

SECTION B (40 MARKS) (ANSWER TWO QUESTIONS)

5. (a) Discuss layering under the following sub-headings
- (i) Advantages (4 marks)
 - (ii) Disadvantages (4 marks)
 - (iii) Types of layering (4 marks)
6. Discuss the following plant propagation structures:
- (i) Greenhouses (8 marks)
 - (ii) Hot frames (6 marks)
 - (iii) Lath houses (6 marks)
7. (a) Discuss the following culture techniques:
- (i) Meristem culture (4 marks)
 - (ii) Somatic embryogenesis (4 marks)
 - (b) Explain the term apomixis (4 marks)
 - (c) Discuss different types of apomixis (8 marks)
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