



1ST SEM. 2004/2005

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRICULTURE
YEAR IV (HORTICULTURE OPTION)

COURSE CODE: HORT 401

TITLE OF PAPER: PLANT PROPAGATION

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

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THE CHIEF INVIGILATOR**

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

QUESTION 1

- (a) Discuss the significance of sanitation in plant propagation [8]
 - (b) Discuss hot beds in plant propagation [10]
 - (c) Describe how you would install and utilise a lathhouse [7]
- [25]**

QUESTION 2

- (a) Describe apomixes and its significance in plant propagation [5]
 - (b) Discuss the various methods you can use to determine seed viability [20]
- [25]**

QUESTION 3

- (a) Discuss plant propagation by use of:
 - (i) leaf cuttings [5]
 - (ii) root cuttings [5]
 - (b) Describe polarity and its significance in plant propagation [5]
 - (c) Describe the effects of the following in rooting of cuttings:
 - (i) buds [5]
 - (ii) leaves [5]
- [25]**

QUESTION 4

- (a) Describe the main reasons for grafting and budding [5]
- (b) Describe the process of bud union formation [5]
- (c) Discuss graft incompatibility in crops [10]
- (d) Describe the major effects of the rootstock on scion cultivars after grafting or budding [5]
- [25]

QUESTION 5

- (a) Describe the factors that influence regeneration of plants by layering [5]
- (b) Discuss the use of bulbs in plant propagation [8]
- (c) Discuss plant tissue culture under the following headings:
- (i) Media [4]
- (ii) Somatic embryogenesis [4]
- (iii) Protoplast culture [4]
- [25]