



**1<sup>st</sup> SEMESTER 2012/2013**

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**UNIVERSITY OF SWAZILAND**

**FINAL EXAMINATION PAPER**

**PROGRAMME: BACHELOR OF SCIENCE IN HORTICULTURE  
YEAR IV AND BACHELOR OF SCIENCE IN  
AGRONOMY YEAR IV**

**COURSE CODE: HORT 403**

**TITLE OF PAPER: PLANT BIOTECHNOLOGY**

**TIME ALLOWED: TWO (2) HOURS**

**INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS**

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CHIEF INVIGILATOR**

**INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS**

**QUESTION 1**

- a) Define the following:
- i) Disbudding (1 mark)
  - ii) Pollarding (1 mark)
  - iii) Pinching (1 mark)
  - iv) Root pruning (1 mark)
- b) Describe the purposes of heading back and thinning out cuts (7 marks)
- c) Provide the objectives and effects of pruning any tree (14 marks)

[25 marks]

**QUESTION 2**

Provide guideline for the production of peaches (*Prunus persica* L) under the following:

- e) Soil and site requirements (6 marks)
- f) Land preparation and planting (10 marks)
- g) Irrigation (5 marks)
- h) Weed control (4 marks)

[25 marks]

**QUESTION 3**

Describe the following methods of determining the chilling requirements of various temperate fruits:

- a) Utah chill method (9 marks)
- b) Daily positive Utah chill unit model (PCU) (4 marks)
- c) Dynamic model (12 marks)

[25 marks]