



2<sup>ND</sup> SEM. 2009/2010

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**UNIVERSITY OF SWAZILAND**

**FINAL EXAMINATION PAPER**

**PROGRAMME: BACHELOR OF SCIENCE IN HORTICULTURE  
YEAR 4**

**COURSE CODE: HORT 409**

**TITLE OF PAPER: POST-HARVEST PHYSIOLOGY OF  
HORTICULTURAL CROPS**

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

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

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BY THE CHIEF INVIGILATOR**

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

**QUESTION 1**

- a) Describe the advantages and disadvantages of hand harvesting of horticultural crops [9 marks]
  - b) Discuss with the aid of examples eight maturity indices used to harvest horticultural crops [16 marks]
- [25 marks]**

**QUESTION 2**

- a) Discuss five pre-cooling methods used to cool harvested crops. [15marks]
  - b) Discuss the use of controlled atmosphere (CA) storage to prolong shelf life of apples [10 marks]
- [25 marks]**

**QUESTION 3**

- a) Outline the ethylene (C<sub>2</sub>H<sub>4</sub>) biosynthetic pathway [10 marks]
  - b) Discuss how you can manipulate this pathway to achieve desirable effects and to prevent undesirable effects of C<sub>2</sub>H<sub>4</sub> [15 marks]
- [25 marks]**

**QUESTION 4**

Discuss five environmental factors that influence deterioration of harvested horticultural crops

**[25 marks]**

**QUESTION 5**

Describe three methods of processing harvested horticultural crops

**[25 marks]**