



**SUPPLEMENTARY 2013/2014**

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**UNIVERSITY OF SWAZILAND**

**SUPPLEMENTARY EXAMINATION PAPER**

**PROGRAMME: BACHELOR OF SCIENCE IN HORTICULTURE**

**YEAR III**

**COURSE CODE: HORT 302**

**TITLE OF PAPER: GREENHOUSE MANAGEMENT AND  
UTILIZATION**

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

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

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED  
BY THE CHIEF INVIGILATOR**

**ANSWER ANY FOUR (4) QUESTIONS**

**Question 1**

- (a) What is a greenhouse? [5 marks]
- (b) What is the purpose of establishing a greenhouse in a horticultural enterprise? [8 marks]
- (c) Describe the uses of a greenhouse in a horticultural enterprise? [12 marks]
- [25 marks]**

**Question 2**

Describe how to control or manage the following factors in a greenhouse environment:

- (a) Temperature [8 marks]
- (b) Light [9 marks]
- (c) Relative humidity [8 marks]
- [25 marks]**

**Question 3**

- (a) List the different ways of disease control in a greenhouse crop environment [5 marks]
- (b) Distinguish between soil sterilization and soil pasteurization [5 marks]
- (c) Describe the different methods of irrigating greenhouse crops [5 marks]
- (d) How would you monitor the fertility of greenhouse crops? [5 marks]
- (e) What are the factors affecting fertilizer application to greenhouse crops? [5 marks]
- [25 marks]**

**Question 4**

- (a) Describe the ventilation and cooling systems of a typical greenhouse [10 marks]
- (b) What criteria will you consider when choosing a covering material for a greenhouse in your locality? [8 marks]
- (c) What do you understand by the term benching efficiency? [2 marks]
- (d) Calculate benching efficiency for a greenhouse of dimension 8.5 m x 30 m whose height is 6.0 m with 18 benches having a dimension of 2 m x 3.5 m and a height of 1.2 m. [5 marks]
- [25 marks]**

**Question 5**

- (a) Describe how to identify the nutritional problems associated with greenhouse crops [10 marks]
- (b) Describe **any two** nutritional deficiency symptoms associated with:
- (i) Macro-nutrients [5 marks]
  - (ii) Secondary-nutrients [5 marks]
  - (iii) Micro-nutrients. [5 marks]
- [25 marks]