



**1<sup>ST</sup> SEM. 2008/2009**

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**UNIVERSITY OF SWAZILAND**

**FINAL EXAMINATION PAPER**

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

**COURSE CODE: HORT 401**

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

**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

Explain in detail the factors that will affect your decision when locating a greenhouse for vegetable production in your locality.

[25 marks]

### Question 2

Describe in brief how you will 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

You have a 1:150 injector in a greenhouse and want to use potassium nitrate (13%N-0%P<sub>2</sub>O<sub>5</sub>-44%K<sub>2</sub>O) and calcium nitrate (15.5%N-0%P<sub>2</sub>O<sub>5</sub>-0%K<sub>2</sub>O) to supply 200 ppm of N and K with each watering. How many **grams** of each fertilizer would you weigh out to make **5- litre** of concentrate? (Given %K and %P equals 1.2 and 2.3 of K<sub>2</sub>O and P<sub>2</sub>O<sub>5</sub> respectively, and 10 as the conversion constant C).

[25 marks]

### Question 4

- (a) How will you identify the nutritional problems associated with greenhouse crops? [10 marks]
- (b) Describe briefly the nutritional deficiency symptoms associated with **any 2 each** of macro-, secondary-and micro-nutrients. [15 marks]
- [25 marks]

### Question 5

Discuss the operations of an Environment Controlled Computers (ECC) greenhouse.

[25 marks]