



2<sup>nd</sup> SEMESTER 2018/2019

PAGE 1 OF 3

UNIVERSITY OF ESWATINI

FINAL 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****PAGE 2 OF 3****Question 1**

(a) Define greenhouse.

[5 Marks]

(b) Discuss the uses of greenhouse in horticultural enterprise?

[20 Marks]

**[25 marks]****Question 2**

What factors would you consider before choosing an area for a greenhouse enterprise?

**[25 marks]****Question 3**

(a) What criteria will you consider when choosing a covering for a greenhouse in your locality?

[10 Marks]

(b) What do you understand by the term benching efficiency?

[5 Marks]

(c) Calculate benching efficiency for a greenhouse of dimension 18.5m by 30m whose height is 6.0m to the ridge with 28 iron benches having a dimension of 2m X 3.5m and a height of 1.2m.

[10 Marks]

**[25 marks]**

**Question 4**

- (a) Describe 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 5**

You have a 1:242 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 185 ppm of N and K with each watering. How many **grams** of each fertilizer would you weigh out to make **1-liter** 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]**