1st SEMESTER 2018/2019

UNIVERSITY OF ESWATINI

FINAL EXAMINATION PAPER

PROGRAMME:	**BACHELOR OF SCIENCE IN HORTICULTURE**
	YEAR IV
COURSE CODE:	**HRT 405**
TITLE OF PAPER:	**GREENHOUSE MANAGEMENT**
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

INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS.

Question 1

(a) What is a greenhouse? [5 Marks]

(b) What are the challenges of greenhouse production in horticultural enterprise? [10Marks]

(c) List the uses of greenhouse in horticultural enterprise? [10 Marks]

[25 marks]

Question 2

What factors will guide your choice of an area for a greenhouse enterprise in the kingdom of Eswatini?

[25 marks]

Question 3

(a) What is Benching Efficiency of a greenhouse? [5 Marks]

(b) Calculate the number of lamps required to light up a greenhouse growing area of 28 by 30 m during the winter period in Swaziland if the plant light requirement is 660 ft-candles. [Given 1ft-c =10.8 lumens]. The 400W metal halide lamp output is $36x10^3$ lumens. Show all your calculations. [10 Marks]

(c) What criteria will you consider when choosing a covering for a greenhouse in your locality? [10 Marks]

[25 marks]

Question 4

Discuss the operations and management of an Environmental Computer Controlled (ECC) greenhouse

[25 marks]

Question 5

You have a 1:225 injector in a greenhouse and want to use potassium nitrate (13%N-0%P_2O_5-44%K_2O) and calcium nitrate (15.5%N-0%P_2O_5-0%K_2O) to supply 250 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_2O and P_2O_5 respectively, and **10** as the conversion constant C).

[25 marks]