UNIVERSITY OF ESWATINI

FINAL EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN HORTICULTURE

YEAR IV

COURSE CODE: HRT405

TITLE OF PAPER: GREENHOUSE MANAGEMENT

TIME ALLOWED: TWO (2) HOURS

INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS

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Question 1

(a) Descibe the different ways of disease control in a greenhouse crop environment.
    [5 Marks]

(b) Distinguish between soil sterilization and pasteurization.　　[5Marks]

(c) Descibe the different methods of irrigating greenhouse crops.　　[5Marks]

(d) How would you monitor the fertility of greenhouse crops?　　[5Marks]

(e) What are the factors affecting fertiliser application to greenhouse crops? [5 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 this factor for a greenhouse whose dimension is 15 by 50 m whose

height is 3.5 m having 24 two-tier roller benches each having a dimension of 3

x 4 m and a height of 3 m.　　[10 Marks]

(c) What criteria would 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 1:325 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 225 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]