



2nd SEMESTER 2014/2015

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

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

COURSE CODE: HORT 407

TITLE OF PAPER: HYDROPONICS

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**

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS**Question 1**

- (a) What is hydroponics? [5 marks]
- (b) Discuss the advantages and disadvantages of hydroponics. [20 marks]
- [25 marks]

Question 2

- (a) Discuss the different hydroponics systems [15 marks]
- (b) How would you maintain the hydroponics systems for effective production? [10 marks]
- [25 marks]

Question 3

- (a) What are the characteristics of a good hydroponics root environment? [10 marks]
- (b) What is the purpose of the growing medium in hydroponics? [5 marks]
- (c) What factors affect choice of growing medium in hydroponics? [10 marks]
- [25 marks]

Question 4

- (a) Discuss the role of major nutrient elements with respect to hydroponics plants. [15 marks]
- (b) Explain the importance of the following in hydroponics:
- (i) pH [5 marks]
- (ii) Total Dissolved Solids (TDS) [5 marks]
- [25 marks]

Question 5

Describe briefly the commercial hydroponics production of lettuce using the deep pool floating raft technique. [25 marks]