



MACHAKOS UNIVERSITY

University Examinations for 2017/2018 Academic Year

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

THIRD YEAR SECOND SEMESTER EXAMINATION FOR DIPLOMA IN
AGRICULTURAL EDUCATION AND EXTENSION

HOR 0325: INTRODUCTION TO GREENHOUSE MANAGEMENT

DATE: 1/8/2017

TIME: 8:30 – 10:30 AM

INSTRUCTIONS

Answer ALL the questions in SECTION A and ANY TWO (2) questions in section B

SECTION A: ANSWER ALL QUESTIONS (30 MARKS)

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Define the following terms as used in greenhouse crop production
 - i) Greenhouse (1 mark)
 - ii) Greenhouse technology (1 mark)
 - iii) Greenhouse effect (1 mark)
- b) Explain two (2) uses of a greenhouse in horticultural enterprise (2 marks)
- c) Explain three (3) legal factors to consider when siting a greenhouse (3 marks)
- d) Describe and depict three (3) types of greenhouse structures used by Kenyan farmers (6 marks)
- e)
 - i) Explain three (3) ways of controlling greenhouse crop environment. (3 marks)
 - ii) Distinguish between soil sterilization and soil pasteurization. (2 marks)
 - iii) Explain three (3) physical properties of greenhouse growing media. (3 marks)

- f) Explain three (3) methods of irrigating greenhouse crops in Machakos County. (3 marks)
- g) Explain three (3) ways of diagnosing the fertility of greenhouse crops. (3 marks)
- h) Explain two (2) methods of monitoring diseases and pests in a greenhouse crop environment (2 marks)

SECTION B: ANSWER ANY TWO (2) QUESTIONS (40 MARKS)

QUESTION TWO (20 MARKS)

Environmental control is of paramount importance in greenhouse management. Discuss five (5) importance of lighting in the green house (20 marks)

QUESTION (20 MARKS)

Describe five (5) characteristics of the following greenhouse covering materials.

- i) Glass (10 marks)
- ii) Polythene film plastic (10 marks)

QUESTION FOUR (20 MARKS)

Explain five (5) factors that a greenhouse farmer must take into considerations before selecting a fertigation system (20 marks)

QUESTION FIVE (20 MARKS)

Discuss three (3) methods of greenhouse bench arrangements and two (2) types of benches used in a greenhouse (20 marks)