



EMBU UNIVERSITY COLLEGE

(A Constituent College of the University of Nairobi)

2015/2016 ACADEMIC YEAR

SECOND SEMESTER EXAMINATION

**SECOND YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
(HORTICULTURE)**

ACH 202: GREENHOUSE PRODUCTION AND PROTECTED ENVIRONMENT

DATE: APRIL 11, 2016

TIME: 11:00-1:00

INSTRUCTIONS:

Answer Question ONE and ANY Other TWO Questions

QUESTION ONE

- a) You have been invited to offer consultancy services to Embu County Government. Citing relevant examples, explain to your client the importance of investing in greenhouse farming. (5 Marks)
- b) Write short notes on global warming in relation to the greenhouse effect. (5 Marks)
- c) A farmer noticed rapid wilting of tomato plants in the greenhouse. The farmer suspended a stem cutting obtained from the diseased plant in a glass of water. A white, slimy substance oozed into the water within just a few minutes. Describe ways of managing this disease. (4 Marks)
- d) List three rules of watering in the greenhouse. (3 Marks)
- e) State two deficiency symptoms of nitrogen in greenhouse plants. (2 Marks)
- f) Describe four structural parts of a truss framed greenhouse. (4 Marks)
- g) State three advantages of using film plastics as greenhouse covers. (3 Marks)

- h) Many Kenyans are adopting greenhouse farming because they are able to produce more on a small farm. However, their expectations may not be met due to some factors. Outline four factors that can derail greenhouse farming in Kenya. (4 Marks)

QUESTION TWO

- a) As an entrepreneur who wants to venture into greenhouse production, briefly explain the factors you will consider before establishing a greenhouse. (10 Marks)
- b) Discuss the options a greenhouse manager can use to reduce high energy costs. (10 Marks)

QUESTION THREE

- a) Discuss the different active summer cooling systems. (10 Marks)
- b) Discuss the advantages and disadvantages of a centralized heating system. (10 Marks)

QUESTION FOUR

With clear illustrations, describe five different types of greenhouses based on shape.

(20 Marks)

QUESTION FIVE

Write short notes on the following greenhouse pests and their management:

- a) Aphids. (5 Marks)
- b) Whiteflies. (5 Marks)
- c) Leaf miners. (5 Marks)
- d) Spider mites. (5 Marks)

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