



EMBU UNIVERSITY COLLEGE
(A CONSTITUENT COLLEGE OF THE UNIVERSITY OF NAIROBI)

TRIMESTER EXAMINATIONS 2013/2014

SECOND YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
IN HORTICULTURE

ACH 201: NURSERY MANAGEMENT

DATE: AUGUST 12, 2014

TIME: 11.00AM – 1.00PM

INSTRUCTIONS:

Answer Question ONE and ANY Other TWO Questions.

QUESTION ONE

- a) Define the following terms as used in the nursery or in a greenhouse:
- i) Forcing (2 marks)
 - ii) Pad Cooling (2 marks)
 - iii) Root zone heating (2 marks)
 - iv) Seed Dormancy (2 marks)
 - v) Fertigation (2 marks)
- b) Discuss the similarities and differences between cold frames and hot frames (4 marks)
- c) Explain the importance of soil drainage in the nursery. (1 mark)
- d) Explain why the weight of a potting media is of concern in containerized plants. (2 marks)

- e) Explain the importance of checking the soil pH before planting. (4 marks)
- f) Give reasons why sawdust is not generally recommended for inclusion in a potting media. (3 marks)
- g) Distinguish between seed scarification and seed stratification (4 marks)
- h) Name the two major types of propagation (2marks)

QUESTION TWO

- a) Outline the advantages and disadvantages of using soil as a potting media (7 marks)
- b) Describe how soil texture can be improved (3 marks)
- c) Outline ten common symptoms of graft incompatibility. (10 marks)

QUESTION THREE

As a nursery manager, you have been given an order to propagate tomato seedlings for a commercial firm:

- a) Outline the four (4) different types of soil treatment that would be applicable in such a nursery before planting (4 marks)
- b) Describe the two (2) methods you would consider for testing the seed viability (8 marks)
- c) Demonstrate the steps you would follow in determining the total porosity, aeration porosity and water holding capacity of the soil. Include appropriate formulas where necessary (8 marks)

QUESTION FOUR

- a) Outline the factors that determine the siting of a nursery (8 marks)
- b) Describe the following in relation to damping-off: (6 marks)
 - i) Symptoms
 - ii) Causal agents
 - iii) Predisposing factors
- c) Outline (6) advantages of budding as compared to grafting (6 marks)

QUESTION FIVE

- a) Give two (2) characteristics of the following substrates: (10 marks)
- i) Sand
 - ii) Peat
 - iii) Coir
 - iv) Lignite
 - v) Expanded clays
- b) Discuss with illustrations the following types of grafting (10 marks)
- i) Whip and Tongue
 - ii) Wedge Grafting
 - iii) Splice Grafting
 - iv) Side Veneer Grafting
 - v) Saddle Graft

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