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University Examinations 2013/2014

SECOND YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE OF

BACHELOR OF SCIENCE IN HORTICULTURE

AHS 2205 – PRINCIPLES OF HORTICULTURE

DATE: DECEMBER 2013

TIME: 2HOURS

INSTRUCTIONS: *Answer question **one** and any other **two** questions*

QUESTION ONE – 30 MARKS

- (a) What key characteristics distinguish horticultural crops from field crops? (4Marks)
- (b) Why is it necessary to know methods of regulating the growth of seedlings in nursery?(2Marks)
- (c) How can soil water status be determined? (4Marks)
- (d) Briefly discuss the key strategies you would use in management of insect pests and diseases in horticultural crops. (4Marks)
- (e) Cold chain is key to Postharvest handling of horticultural crops. Explain. (4Marks)
- (f) What do you understand by the term vernalization and how does it influence seed production in Kenya? (3Marks)
- (g) How can long day horticultural crops be produced in Kenya? (2Marks)
- (h) Describe the use of interplant competition to regulate plant growth in horticultural crops. (4Marks)
- (i) Outline the importance of regulating plant movement from one country to another. (3Marks)

QUESTION TWO – 20 MARKS

Water supply during horticultural crops production contributes greatly to production costs.

- (i) What strategies would you use to keep the water costs low? (12Marks)
- (ii) Outline the key mechanisms of drought tolerance among crops. (8Marks)

QUESTION THREE – MARKS

- (a) What impact will global warming have on horticultural crops? (8Marks)
- (b) How does light intensity influence horticultural production. (6Marks)
- (c) Explain the following terms:
(i) Phototropism (ii) Chilling injury (6Marks)

QUESTION FOUR – 20MARKS

- (a) Discuss ways in which plant growth is regulated during horticultural crops production. (14Marks)
- (b) Outline three key challenges facing horticulture in Kenya and suggest solutions. (6Marks)

QUESTION FIVE – 20MARKS

- (a) Regulating plant movement is necessary to protect the horticultural industry. Discuss. (12Marks)
- (b) What role does horticulture play in human nutrition? (8Marks)