



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

FIRST SEMESTER EXAMINATIONS 2014/2015

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

ACH 301: VEGETABLE PRODUCTION 1: TEMPERATE VEGETABLES

DATE: DECEMBER 15, 2014

TIME: 13:30 – 15:30

INSTRUCTIONS:

Answer Question ONE and ANY Other TWO Questions.

QUESTION ONE

- a) Define the following terms
- i) Bolting (1 mark)
 - ii) Bulbing of onions (1 mark)
 - iii) Underutilized vegetables (1 mark)
- b) Distinguish between indigenous and traditional vegetables (4 marks)
- c) Outline five (5) advantages of mulching in a vegetable garden (5 marks)
- d) State with examples four (4) physiological disorders caused by Boron deficiency in vegetables (4 marks)
- e) Outline the four (4) pre-harvest factors that affect vegetable quality (4 marks)

- f) State five (5) symptoms of black rot of cabbage (*Xanthomonas campestris*) (5 marks)
- g) Outline the two (2) major groups of bean (*P. vulgaris*) cultivars (2 marks)
- f) Explain why a constant supply of moisture is a critical factor in the production of French beans (3 marks)

QUESTION TWO

- a) Discuss the nutritional value of vegetables (6 marks)
- b) Discuss the harvesting, grading and post-harvest handling of French beans (14 marks)

QUESTION THREE

- a) Describe the four anti-nutritional components of vegetables (8 marks)
- b) Outline the three different stages at which sweet corn can be harvested (3 marks)
- c) Explain why temperature and photoperiod are important in the production of *Allium cepa* (9 marks)

QUESTION FOUR

- a) Citing relevant examples, describe the six ways through which vegetables can be utilized (6 marks)
- b) Outline six (6) strategies you would put in place to ensure the quality of sweet corn for processed as well as fresh local and export markets (6 marks)
- c) Discuss four major diseases of Irish potato (*Solanum tuberosum*) (8 marks)

QUESTION FIVE

After graduating from Embu University with BSc (Horticulture), you are offered a job by the same institution to manage the University Horticultural farm. You are then directed to develop five hectare farm of tomatoes for use in the university cafeteria, for processing and for sale in local and distant markets.

- a) Explain how you would go about choosing the right cultivars (8 marks)
- b) Describe the different harvesting stages you would consider (12 marks)

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