



UNIVERSITY OF EMBU

2017/2018 ACADEMIC YEAR

SECOND SEMESTER EXAMINATIONS

THIRD YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
AGRICULTURE (CROP SCIENCE MAJOR)

ACS 310: VEGETABLE PRODUCTION

DATE: APRIL 6, 2018

TIME: 11:00 -1:00 PM

INSTRUCTIONS:

Answer Question ONE and ANY Other TWO Questions

QUESTION ONE (30 MARKS)

- a) Briefly explain why selection for low cucurbitacin in cucumber is important (1 mark)
 - b) Discuss the limitations of using seeds in propagation of vegetables (4 marks)
 - c) Describe the recommended method of harvesting beet root (2 marks)
 - d) Distinguish between traditional and indigenous vegetables (2 marks)
 - e) Explain why kales may flower in Limuru but not in Murang'a (2 marks)
 - f) Distinguish between quantitative and qualitative plants with respect to day length (4 marks)
 - g) Although blossom end-rot in tomatoes is associated with Calcium deficiency in the soil, the disorder may also occur in a farm that is well supplied with Calcium. Explain (2 marks)
 - h) Explain why potatoes should not be preceded by tomatoes in the same field (2 marks)
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- i) Discuss the grading standards of French beans in Kenya (4 marks)
- j) Show with figures the feasibility of earning Kshs 650,000 in an acre of hybrid bulb onions in one season (4 marks)
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- k) As a vegetable breeder, explain the guiding principle that you would apply to select for a cabbage variety with tolerance to bolting (3 marks)

QUESTION TWO (20 MARKS)

- a) Outline the advantages of using hydroponics in vegetable production (4 marks)
- b) As a production manager in a horticultural farm producing assorted vegetables, discuss the factors you would put into consideration when developing an irrigation programme (6 marks)
- c) Outline the advantages and disadvantages of tomato pruning and staking (10 marks)

QUESTION THREE (20 MARKS)

- a) Discuss the three (3) common physiological disorders in tomatoes (6 marks)
- b) Write a policy paper on constraints facing vegetable production in Kenya and recommend feasible solutions (14 marks)

QUESTION FOUR (20 MARKS)

- a) Considering that there is no marked difference in the appearance of immature and ripe watermelon fruit, explain the maturity indicators used when harvesting (4 marks)
- b) Discuss the five (5) phases of domestication of vegetables (5 marks)
- c) Describe the different stages at which tomatoes can be harvested (11 marks)

QUESTION FIVE (20 MARKS)

Assume that the School of Agriculture of the University of Embu has organized a seminar for vegetable farmers and has invited you to present a topic on factors affecting vegetable quality in Kenya. Prepare a detailed farmer friendly presentation on this topic (20 marks)

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