



MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

THIRD YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (AGRICULTURAL EDUCATION AND EXTENSION)

HOR 441: VEGETABLE PRODUCTION

DATE: 9/12/2021

TIME: 8.30-10.30 AM

INSTRUCTION TO CANDIDATES: Answer ALL questions from Section A and any other TWO from Section B:

SECTION A: COMPULSORY:

QUESTION ONE (30 MARKS)

- a) Citing one example in each case, describe the following;
 - i) Hardy vegetables (1 mark)
 - ii) Half-hardy vegetables (1 mark)
- b) Explain FOUR pre-harvest factors that affect the quality of vegetables (4 marks)
- c) Explain FOUR methods of direct sowing of vegetables (4 marks)
- d) Describe the procedure of constructing hot beds (4 marks)
- e) Describe FOUR physiological changes that occur in a seedling during hardening off (4 marks)
- f) Explain FOUR reasons why African indigenous vegetables have become popular in recent years (4 marks)
- g) Distinguish between market gardening and commercial vegetable production. (4 marks)
- h) Explain FOUR quality aspects of vegetables. (4 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO (20 MARKS)

- a) Describe the ecological requirements in production of lettuce. (10 marks)
- b) Describe the symptoms and control measures of TWO diseases infecting onions (10 marks)

QUESTION THREE (20 MARKS)

- a) Describe the fertilization regime in production of cabbage (10 marks)
- b) Explain FIVE maturity indices of watermelon. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Describe land preparation in greenhouse pepper production. (10 marks)
- b) Explain FIVE criteria used in categorising potato varieties. (10 marks)

QUESTION FIVE (20 MARKS)

- a) Describe crop establishment in production of tomato (10 marks)
- b) Explain FIVE ways in which amaranth can be utilised (10 marks)