



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

FIRST YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

AGR 201: PRINCIPLES OF CROP PRODUCTION

DATE: 8/12/2020

TIME: 2.00-4.00 PM

INSTRUCTIONS:

Answer *ALL* questions from Section A and any other *TWO* from Section B:

SECTION A: COMPULSORY: (30 MARKS)

QUESTION ONE (30 MARKS)

- a) Describe THREE key principles in a farming system (3 marks)
- b) Explain FOUR benefits of blanching vegetables (4 marks)
- c) Describe FOUR benefits of vegetative propagation (4 marks)
- d) Explain FOUR benefits of “zero tillage” (4 marks)
- e) Explain FOUR ways in which temperature affect crop production (4 marks)
- f) Explain THREE reasons why weed seeds are difficult to manage (3 marks)
- g) Describe the features of “zone III” agroecological zone according to FAO classification (4 marks)
- h) Explain FOUR functions of abscissic acid (4 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO (20 MARKS)

Explain the following farming systems giving constraints for each one of them

- a) The coffee-based system (5 marks)
- b) Livestock-cereal system (5 marks)
- c) The group-ranching system (5 marks)
- d) The wheat dairy system (5 marks)

QUESTION THREE (20 MARKS)

Citing relevant examples, describe the following methods of plant propagation

- a) Whip grafting (5 marks)
- b) Cleft grafting (5 marks)
- c) Chip-budding (5 marks)
- d) T- budding (5 marks)

QUESTION FOUR (20 MARKS)

Discuss the following methods of weed control

- a) Biological weed control (10 marks)
- b) Cultural weed control (10 marks)

QUESTION FIVE (20 MARKS)

Discuss the advantages and limitation of genetic method of pest and disease control