



MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

FIRST YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (AGRICULTURAL EDUCATION AND EXTENSION)

BACHELOR OF EDUCATION (SPECIAL NEED EDUCATION)

BACHELOR OF EDUCATION SCIENCE

AGR 201: PRINCIPLES OF CROP PRODUCTION

DATE: 18/6/2021

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

- a) Explain FOUR benefits of “minimum tillage” (2 marks)
- b) Explain FOUR advantages of using resistant varieties in crop protection (4 marks)
- c) Describe FOUR ways in which light affects crop production (4 marks)
- d) Describe FOUR poor watering practices in a nursery (4 marks)
- e) Explain FOUR functions of ethylene (4 marks)
- f) Explain FOUR advantages of integrated farming system (4 marks)
- g) Explain FOUR challenges in management of weed seeds (4 marks)
- h) Describe FOUR features of “zone II” agroecological zone according to FAO classification (4 marks)

SECTION B: Answer any TWO Questions (40 Marks)

QUESTION TWO (20 MARKS)

Describe the structural features of following storage structures giving two limitations for each one of them

- a) Traditional crib (5 marks)
- b) Barn (5 marks)
- c) Cold rooms (5 marks)
- d) Evaporative coolant system (5 marks)

QUESTION THREE (20 MARKS)

With the aid of a well labelled diagram in each case, describe the following methods of layering as used in plant propagation

- a) Tip layering (5 marks)
- b) Compound layering (5 marks)
- c) Mould layering (5 marks)
- d) Air layering (5 marks)

QUESTION FOUR (20 MARKS)

Discuss FIVE strategies used in biological control of pests and diseases

QUESTION FIVE (20 MARKS)

Discuss FIVE mechanical methods of weed management