



# MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRIBUSINESS MANAGEMENT AND TRADE

SECOND YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

AGR 201: PRINCIPLES OF CROP PRODUCTION

DATE: 22/7/2019

TIME: 2.00-4.00 PM

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## INSTRUCTIONS:

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

**SECTION A: COMPULSORY: (30 MARKS)**

### QUESTION ONE

- a) Explain FOUR physiological disorders brought about by uneven watering (4 marks)
- b) Explain FOUR reasons for raising seedlings in a nursery (4 marks)
- c) Explain FOUR requirements for a successful grafting (4 marks)
- d) Describe any FOUR methods of classifying weeds based on habitat where it is found (4 marks)
- e) Describe FOUR instances when hardening-off is done (4 marks)
- f) Explain FIVE factors affecting deterioration of agricultural produce during storage (5 marks)
- g) Explain FIVE advantages of using resistant varieties as a method of pest and disease control (5 marks)

**SECTION B: Answer any TWO Questions (40 Marks)**

### QUESTION TWO

Describe the following farming systems giving their constraints

- a) Livestock cereal system (5 marks)

- b) Coffee based system (5 marks)
- c) Cashewnut coconut system (5 marks)
- d) Wheat dairy system (5 marks)

**QUESTION THREE (20 MARKS)**

Discuss the following methods of tillage stating their advantages and shortcomings

- a) Convection tillage practice (10 marks)
- b) Zero tillage practice (10 marks)

**QUESTION FOUR (20 MARKS)**

Discuss FIVE cultural methods of pest and disease management in crops

**QUESTION FIVE (20 MARKS)**

Explain the role, and deficiency symptoms of the following plant nutrients

- a) Phosphorus (5 marks)
- b) Sulphur (5 marks)
- c) Boron (5 marks)
- d) Copper (5 marks)