



MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (AGRICULTURAL EDUCATION AND EXTENSION)

HOR 442: FRUIT CROPS PRODUCTION

DATE: 13/8/2021

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 (30 MARKS)

- Define the term “fruit” from botany and pomology point of view (2 marks)
- Describe the FOUR steps in establishment of a clonal orchard (4 marks)
- Explain FOUR factors that are considered when selecting the fruit variety to grow in an orchard (4 marks)
- Describe the modified leader system in fruit tree pruning (4 marks)
- Explain FOUR benefits in the management of smaller sized fruit trees (4 marks)
- Describe TWO in which pollination in a fruit orchard is boosted (4 marks)
- Explain the scientific argument behind flower treatment in fruit trees production (4 marks)
- Explain FOUR benefits of permanent grass culture in weed management (4 marks)

SECTION B: Answer any TWO Questions (40 Marks)

QUESTION TWO (20 MARKS)

- Describe the process of passion fruits propagation using seeds (10 marks)
- Describe the symptoms and control of two diseases infecting banana plants (10 marks)

QUESTION THREE (20 MARKS)

- a) With the aid of a well labelled diagram, describe whip grafting in “Haas” avocado tree production (10 marks)
- b) Describe the ecological requirements in production of pineapples (10 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss the nutritional requirements in management of strawberry crop (10 marks)
- b) With an aid of a well labelled diagram, describe the kniffin system in training of grape vines (10 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss crop establishment in production of apple in the field (10 marks)
- b) Describe top-working method in mango production (10 marks)