



MACHAKOS UNIVERSITY

University Examinations for 2024/2025 Academic Year

SCHOOL OF AGRICULTURE, ENVIRONMENT AND HEALTH SCIENCES

DEPARTMENT OF AGRICULTURAL SCIENCES

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF SCIENCE

IN AGRICULTURAL EDUCATION AND EXTENSION

BACHELOR OF EDUCATION (SCIENCE)

BACHELOR OF EDUCATION (SPECIAL NEEDS)

HOR 442: FRUIT CROP PRODUCTION

DATE:

TIME:

INSTRUCTIONS:

Answer Question ONE and any other two

QUESTION ONE (30 MARKS)

- a) Explain two ways in which fruit production aids in ecological balance (2 marks)
- b) Explain four strategies for improving unsuitable sites for fruit production (4 marks)
- c) Explain two conditions required for the establishment of a high density orchard (4 marks)
- d) Describe steps in establishing grass cultivation as a method of weed control in an orchard (4 marks)
- e) Explain four ways of reducing labour costs in fruit production (4 marks)
- f) Explain four strategies of bud breaking in fruit production (4 marks)
- g) Explain four advantages of chemical fruit thinning (4 marks)
- h) Describe the modified leader system of pruning fruit trees (4 marks)

QUESTION TWO (20 MARKS)

- a) Describe the following practices in production of guava fruit:
 - i. Propagation by seed (5 marks)
 - ii. Pruning (5 marks)
- b) Discuss production of banana under the following headings:
 - i. Ecological requirements (5 marks)
 - ii. Crop establishment (5 marks)

QUESTION THREE (20 MARKS)

- a) Describe the process of growing strawberries in containers (10 marks)
- b) Discuss production of apples under the following headings:
 - i. Fertilization (5 marks)
 - ii. Pruning (5 marks)

QUESTION FOUR (20 MARKS)

- a) With the aid of a well labelled diagram, describe whip grafting in mango production (10 marks)
- b) Discuss production of avocado under the following headings:
 - i. Management of fruit fly (5 marks)
 - ii. Quality specifications for exports (5 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss five ways of classifying grapes based on use (10 marks)
- b) Describe production of pineapple under the following headings:
 - i. Forcing (5 marks)
 - ii. Stripping for ratoon cropping (5 marks)