



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 – Meru-Kenya.

Tel: 020-2069349, 061-2309217. 064-30320 Cell phone: +254 712524293, +254 789151411

Fax: 064-30321

Website: www.must.ac.ke Email: info@must.ac.ke

University Examinations 2015/2016

SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR IN HORTICULTURE

AAA 3202: ANNUAL CROPS AND PERENNIAL CROPS

DATE: NOVEMBER 2015

TIME: 2 HOURS

INSTRUCTIONS: *Answer question one and any other two questions*

QUESTION ONE (30 MARKS)

- a) Outline any four methods used by sugarcane farmers to reduce soil solidity and acidity (4 Marks)
- i.State any three symptoms of soil solidity and salinity in sugar cane (3 Marks)
- ii.Explain the problems associated with the production of ratoon crop (3 Marks)
- b) i. Maize is a dioecious plant. Explain (1 Marks)
- ii. Outline any six effects of drought on maize during flowering (3 Marks)
- c) Assuming you have been recruited as a KTDA field extension officer. Explain to new tea farmers the procedure of undertaking formative pruning stating the advantages and disadvantages. (5 Marks)
- d) Coffee berry disease is the major challenge to coffee farmers. Explain this stating the symptoms, areas of attack and methods of control. (8 Marks)

- e) Outline the various agro-ecological requirements of common beans (3 Marks)

QUESTION TWO (20 MARKS)

- a) The county government has recruited a group of young agricultural graduates to help in improving coffee production. Explain to the farmers the procedure of land preparation under the following headings. (10Marks)

- i. Clearing
- ii. Ploughing
- iii. Harrowing
- iv. Spacing
- v. Planting holes preparation
- vi. Refilling of the planting holes

- b) Give the botanical names of the two types of cassava commonly produced in Kenya. (2 Marks)

- i. Name the toxic substance in cassava (1 Marks)
- ii. State any three methods of reducing the compound (3 Marks)

- c) Explain the procedure of preparing cassava cuttings in readiness for planting (4 Marks)

QUESTION THREE (20 MARKS)

- a) State the four growth phases of sugar cane (4 Marks)
 - b) Outline the effects of excessive rainfall to sugar cane production. (3 Marks)
 - c) Sugarcane seed needs treatment before planting. Explain (3 Marks)
 - d) Differentiate detraging from propping practices as carried out in sugar cane production (2 Marks)
- iii. Explain the process of manufacturing black tea leaves (8 Marks)

QUESTION FOUR (20 MARKS)

- a) Maintenance pruning is recommended in old mature to bushes (2 Marks)
- i. What is maintenance pruning (2 Marks)
 - ii. State any three objectives of the practice (3 Marks)
- b) Outline various ways farmers control weeds in sugar cane farms (3 Marks)
- ii. What are the factors which affects the quality of sugarcane juice (3 Marks)
- c) Tea farmers are advised to avoid old cattle boma sites when planting tea bushes
- i. Give reason (1 Marks)
 - ii. State any two methods of controlling that problem (1 Marks)
- d) Maize stem borers are a serious problem in maize plant farms
- i. Give two signs of this problem (1 Marks)
 - ii. Explain any three non-chemical methods of controlling it (3 Marks)
- e) PPD is a serious threat to exporting of cassava produces in Kenya.
- i. What is PPD (1 Marks)
 - ii. Explain the cause of PPD (2 Marks)