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University Examinations 2012/2013

SECOND YEAR, SECOND SEMESTER EXAMINATIONS FOR DIPLOMA IN AGRICULTURE

ACR 0223: PERENNIAL CROPS

DATE: APRIL 2013

TIME: 1½ HOURS

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

QUESTION ONE – (30 MARKS)

- a. State the optimum ecological requirements for sugar cane production. (10 Marks)
- b. Assume you have been recruited by Kenya tea development agency as a field extension officer. Explain to a new tea farmer how he can carry out the formative pruning method in order to bring his young tea into bearing. (10 Marks)
- c. Name any three coffee species of economic importance other than coffee Arabica. (3 Marks)
- d. Explain the procedure of raising coffee seedling in the nursery. (7 Marks)

QUESTION TWO – 15 MARKS

Explain the procedure of preparing a seedbed in readiness for planting tea seedlings under the following sub-headings:

- i. Land preparation (5 Marks)
- ii. Spacing (3 Marks)
- iii. Planting holes (2 Marks)
- iv. Transplanting (3 Marks)
- v. Gapping (2 Marks)

QUESTION THREE – 15 MARKS

- a. State any five factors which determine the germination ability of cane setts. (5 Marks)
- b. State four signs of the effect of soil salinity and sodicity in sugar cane. (4 Marks)
- c. Define the following terms as used in sugar cane production:
 - i. Detrashing (2 Marks)
 - ii. Propping (2 Marks)
 - iii. Juice brix (2 Marks)

QUESTION FOUR – 15 MARKS

- a. Name any two Arabia coffee varieties grown in medium to high attitude zones of good rainfall. (2 Marks)
- b. Coffee berry disease is the major coffee disease which causes huge losses to coffee in the world. Explain. (5 Marks)
- c. Single stem pruning system in one of the pruning methods commonly used in large scale farms:
 - i. Explain the procedure of developing single stem pruning system. (5 Marks)
 - ii. State any three advantages of single stem pruning system. (3 Marks)

QUESTION FIVE – 15 MARKS

- a. Explain the procedure of preparing tea stem cuttings in readiness for planting. (7 Marks)
- b. State and explain any four field practices which determine the quality of made tea. (8 Marks)