



KIMATHI UNIVERSITY COLLEGE OF TECHNOLOGY
UNIVERSITY EXAMINATIONS FOR 2010/2011 ACADEMIC YEAR
FIRST YEAR FIRST SEMESTER EXAMINATION FOR DIPLOMA IN
COFFEE TECHNOLOGY AND CUPPING
TFS 019-COFFEE AGRONOMY AND QUALITY MANAGEMENT 11

DATE: JUNE 2, 2011

TIME: 11.00 AM – 1.00 PM

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INSTRUCTIONS

Answer **Question One** and any other **two questions**

Marks for each question are given in parenthesis ()

Question one-30 marks

- a) Explain briefly field preparation for establishment of young coffee (5 marks)
- b) State the importance of mulching in coffee production (5 marks)
- c) Explain factors to consider when siting a coffee nursery (5 marks)
- d) Outline the type of damage caused by pests on coffee leaves (5 marks)
- e) Briefly describe ‘*organic coffee farming*’ (5 marks)
- f) Explain vegetative propagation of coffee using cuttings (5 marks)

Question Two

Describe in details the following procedures:-

- 1. Leaf sampling (10 marks)
- 2. Soil Sampling (10 marks)

for determination of nutrient requirements in coffee farms

Question Three

Discuss coffee leaf rust (CLR) under the following headings

- i. Stages of disease development **(10 marks)**
- ii. Symptoms of disease **(5 marks)**
- iii. Disease control measures **(5 marks)**

Question Four

A farmer has 10 Ha of land ready to be established with Batian variety of coffee and he/she intends to use seeds. 1kg has 3500 seeds, spacing in seedbed is 2x2 cm, germination rate is 90% and the success rate in nursery is 90%.

From the above data:

a) Calculate the following and show your working.

- i. Amount of seeds required in kgs to be planted in the farm **(4 marks)**
- ii. Area of seedbed required **(3 marks)**
- iii. Expected number of coffee bushes in the farm **(3 marks)**

b) After laboratory analysis of soil and leaves from a 10 ha coffee farm, the following fertilizer rates were recommended per Ha: 60kg N, 30Kg P₂O₅ and 40Kg K₂O. The fertilizers available are sulphate of Ammonia (21% N), SSP (21% P₂O₅) and muriate of potash (60%). Calculate the amount (in 50kg bags) of each fertilizer needed for the 10Ha farm. **(10 marks)**

Question Five

Explain the following canopy management practices starting from year 1 of coffee establishment.

- i. Main pruning **(5 marks)**
- ii. Handling **(5 marks)**
- iii. Desuckering **(5 marks)**
- iv. Change of cycle **(5 marks)**