

(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2022/2023 ACADEMIC YEAR

SECOND YEAR 2ND SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATIONS

**FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE
EDUCATION AND EXTENSION**


COURSE CODE: ACR 223
COURSE TITLE: PERENNIAL CROPS

DATE: 16TH AUGUST 2023 **TIME:** 11 – 1 PM

INSTRUCTIONS TO CANDIDATES

Answer Question ONE and any other TWO Questions.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over 

KIBU observes ZERO tolerance to examination cheating

1. (a) (i) Briefly explain why synthetic pesticides have not outcompeted pyrethrin-based products in the market. (3 marks)
(ii) Describe Formative pruning and Pegging in Tea (*Camellia sinensis*) and give two advantages in each case. (7 marks)
- (b) Explain the value of Cashew (*Anacardium occidentale*) and Coconut (*Cocos nucifera*) to a commercial producer. (10 marks)
- (c) A farmer purchased 250 kg of NPK 12:38:16 for basal application and 350 kg of CAN (26 % N) for top dressing on his 5-acre sugarcane crop in Awendo, Migori County.
 - (i) How much total Nitrogen (in kg/ha) was applied to the crop? (4 marks)
 - (ii) Work out the application rate (kg/ha) for phosphate and potash? (4 marks)
 - (iii) Explain the choice of NPK and CAN fertilizers. (2 marks)
2. Discuss the evolutionary process of agricultural crops stating the salient features in every stage. (20 marks)
3. Describe the agronomical requirements for field-grown Pyrethrum (*Chrysanthemum cineraria folium*) stating the factors that influence the pyrethrin content. (20 marks)
4. Identify and discuss the pests and diseases of economic importance in Tea (*Camellia sinensis*) and their control. (20 marks)
5. Discuss the recommended field management practices and processing of Sugarcane (*Saccharum officinarum*) in Kenya. (20 marks)