

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF BACHELOR OF SCIENCE IN
AGRICULTURE AND AGRICULTURAL EDUCATION

AGRI 361: PERENNIAL CROPS

STREAMS: BSC AGRI & AGED

TIME: 2 HOURS

DAY/DATE: FRIDAY 12/4/2024

8.30 A.M. –10.30 A.M.

INSTRUCTIONS: Answer All questions in Section A and any Two questions in Section B**SECTION A: (30 MARKS)****QUESTION ONE**

- (a) Describe a ratoon crop and its advantages and disadvantages in sugarcane production. (5 marks)
- (b) List five circumstances when you can advise the farmer to plough out a sugarcane ratoon crop. (5 marks)

QUESTION TWO

Calculate the supplemental irrigation need (in mm/month and mm/day), for coffee given the following details. (8 marks)

Month	Jan	Feb	March	April	May	June
ET _{crop} (mm/month)	100	69	123	180	234	180
P(mm/month)	75	20	38	40	80	18

QUESTION THREE

Explain the recommended procedure for grafting cashew nuts. (6 marks)

QUESTION FOUR

Describe factors that affect the pyrethrin content in a pyrethrum plant. (6 marks)

SECTION B (40 MARKS)

QUESTION FIVE

- (a) Describe ten main features that contrast the tall and dwarf coconut varieties. (10 marks)
- (b) Outline the important observations farmers should consider when pruning coffee under the free growth (uncapped) system. (6 marks)
- (c) Schedule a four year pruning cycle in a 10 ha field of tea starting July 2024. (4 marks)

QUESTION SIX

- (a) Explain five best management practices farmers should observe when harvesting sugarcane. (5 marks)
- (b) Outline the procedure for coffee propagation by use of seed. (10 marks)
- (c) Explain the formative pruning method of bringing young tea into bearing. (5 marks)

QUESTION SEVEN

- (a) Describe the steps in tea manufacturing process (9 marks)
 - (b) Explain seven unique selling propositions of pyrethrum-based insecticides that make them superior to their synthetic competitors. (7 marks)
 - (c) Define out-turn in tea processing and explain the three main green leaf tea qualities acceptable for processing. (4 marks)
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