

CHUKA



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**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN
HORTICULTURE**

HORT 841: FRUIT SCIENCE

STREAMS: MSC HORT Y1S2

TIME: 3 HOURS

DAY/DATE: MONDAY 08/04/2024

11.30 A.M – 2.30 P.M.

INSTRUCTIONS:

- The paper contains SECTION A and B.
- Answer ALL questions in SECTION A and any TWO from SECTION B.
- Marks for each question are indicated in parenthesis ()
- Total marks = 60

SECTION A: (20 MARKS)

QUESTION ONE

- (a) Consumer often prefer seedless fruits. Seedless fruits can be a result of parthenocarpy. With examples, explain three different forms of parthenocarpy in fruits. (6 marks)
- (b) What are the interactive effects of abscisic acid (ABA) and gibberellic acid (GA) plant hormones on the release of seeds from dormancy? (4 marks)

QUESTION TWO

Roots grow down towards the gravity stimulus, a gravitropic response considered a positive tactic response, while shoots move away from the gravity stimulus, a gravitropic response considered a negative tactic response. Briefly discuss starch-statolith hypothesis with respect to signal and cellular perception of geotropism (gravitropism) response in fruits. (10 marks)

SECTION B: (40 MARKS)

QUESTION THREE

There are different ways of classifying fruit crops that share some characteristics. None of these methods of classification satisfy completely the different groups like farmers, consumers, academics etc. As an academician broadly classify the fruit crops. (20 marks)

QUESTION FOUR

Discuss impacts of climate change and suggest adaptation and mitigation strategies to deal with negative climate change impacts on fruits crops in Kenya. (20 marks)

QUESTION FIVE

Define the term maturity as used in fruits and explain various methods that producers and handlers of fruits use to determine the maturity of fruit crops. (20 marks)
