

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN  
HORTICULTURE, AGRICULTURE AND AGRICULTURAL EDUCATION**

**HORT 341: FRUIT PRODUCTION**

**STREAMS: BSC HORT, AGRIC & AGED Y3S2**

**TIME: 2 HOURS**

**DAY/DATE: MONDAY 08/04/2024**

**2.30 P.M – 4.30 P.M.**

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**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 =70**

**SECTION A (TOTAL MARKS 30) ANSWER ALL QUESTIONS**

- (a) Describe the challenges that hamper production of temperature fruits in Kenya. (4 marks)
  - (b) Differentiate between tropical and temperate fruits. (4 marks)
- (a) Explain the factors that promote fruit production in Kenya. (6 marks)
  - (b) Describe briefly the formative and structural pruning of fruit trees. (4 marks)
- (a) Explain the reasons for fruit thinning as one of the most important orchard operations. (3 marks)
  - (b) Explain why producers, consumers and traders prefer Hass avodaco compared to other cultivars. (3 marks)
- (a) Dividing fruits into color categories corresponding to health benefits. Each color has a different type of phytochemical that helps the immune system function properly. Give examples of fruits with red and green pigments, stating their health components. (4 marks)

- (b) Avocado has a unique flower behaviour and cultivars are classified into A and B types. Describe the Type A and B flowering habits of avocado. (2 marks)

**SECTION B: TOTAL MARKS 40 ANSWER ALL QUESTIONS**

5. (a) Growth regulators play a significant role in propagation, development and reproduction of plants. Discuss the role of growth regulators in fruit crops. (10 marks)
- (b) Describe propagation, planting, harvesting and grading of pineapples. (10 marks)
6. Discuss impacts of climate change and suggest adaptation and mitigation strategies to deal with negative climate change on fruits crops in Kenya. (20 marks)
7. (a) Low productivity of fruits is not only a Kenyan problem but a global challenge. Discuss its causes and mitigation strategies. (10 marks)
- (b) Tissue culture is continuously being used by researchers to successfully multiply fruit tree seedlings in the world. In view of the aforementioned explain the significance and challenges of using tissue culture as a multiplication method for bananas in Kenya. (10 marks)
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