

UNIVERSITY OF FORT HARE

**AGH 422
SUBTROPICAL FRUITS**

DEGREE EXAMINATIONS

NOVEMBER

2018

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Time: 3 Hours
Subject: AGH 422
Marks: 100

This paper consists of 2 pages including the cover page

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INSTRUCTIONS

1. Answer any five (5) questions.

Question 1 (20 Marks)

- (a) In the tropics, what factors keep (i) the maximum temperatures high but not too hot, (ii) the difference between daily minimum and maximum temperatures low, and (iii) the seasonal temperature difference small? [12]
- (b) What is the origin of climate? Describe thermal and geographic equators. [8]

Question 2 (20 Marks)

- a) Write brief notes on banana ripening (highlight both natural and artificial ripening) [10]
- b) Compare and contrast the Dwarf Cavendish and Williams banana cultivars. [10]

Question 3 (20 Marks)

- (a) Highlight the importance of planting pineapples on ridges. [4]
- (b) In what ways does high relative humidity helps pineapple plants to reduce water stress? [4]
- (c) Discuss the purposes, application methods and time of application of (i) forced (artificial) flower induction, (ii) artificial fruit sizing (enlarging) and (iii) fruit colour enhancing in the pineapple crop. [12]

Question 4 (20 Marks)

- (a) Justify that mango fruit load in tropical climate is not as high as in subtropical climate. [4]
- (b) Discuss flower-thinning practice in mango production. [4]
- (c) Define topworking and its contribution in mango trees, and make schematic drawings to describe onto old branches and onto new (water) shoot grafting techniques. [12]

Question 5 (20 Marks)

- (a) There are three (3) pruning techniques usually employed in a guava orchard. Deduce why these techniques are sometimes combined to give a desired tree form. [12]
- (b) Guava wilting disease is a major disease in guava production areas. How can this disease be identified and how can it be prevented from spreading? [5]
- (c) Elucidate the farmer's problem about maggots in his ripe guavas. [3]

Question 6 (20 Marks)

- (a) A dietitian encourages people to eat some avocados. What might be a rationale behind that? [4]
- (b) What is the significance of interplanting of pollinators in avocados? Briefly explain it. [8]
- (c) Give details on the procedure used in avocado to determine picking maturity. [8]

Question 7 (20 Marks)

- (a) Outline the wet processing method to clean coffee beans. [10]
- (b) Briefly discuss the sun and mechanical drying of coffee beans. [10]