



1st SEM 2015/2016

PAGE 1 OF 3

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN HORTICULTURE YEAR IV

COURSE CODE: HORT 404

TITLE OF PAPER: TEMPERATE FRUIT AND NUT PRODUCTION

TIME ALLOWED: TWO [2] HOURS

INSTRUCTIONS: ANSWER FOUR (4) QUESTIONS.

DO NOT OPEN UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

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PAGE 2 OF 3

QUESTION 1

(a) Discuss the importance of sufficient chilling accumulation in temperate fruit crop production. (7 marks)

(b) Discuss the physiological symptoms associated with insufficient chilling as follows:

- i) delayed foliation (5 marks)
- ii) reduced fruit set and increased buttoning (7 marks)
- iii) reduced fruit quality (6 marks)

[25 MARKS]

QUESTION 2

(a) What are the objectives of pruning fruit trees? (8 marks)

(b) Describe the following fruit tree training methods:

- i. Central leader (6 marks)
- ii. Open centre (11 marks)

[25 MARKS]

QUESTION 3

Discuss the production of brambles (*Rubus* spp) using the following guidelines:

- (a) Climatic requirements (16 marks)
- (b) Soils (5 marks)
- (c) Spacing (4 marks)

[25 MARKS]

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

PAGE 3 OF 3

QUESTION 4

Discuss the production of macadamia nuts (*Macadamia integrifolia* L.) using the following guidelines:

- (a) Climatic requirements (11 marks)
- (b) Spacing (14 marks)

[25 MARKS]

QUESTION 5

Discuss the production of nectarines (*Prunus persica* L.) using the following guidelines:

- (a) Fertilizer application (17 marks)
- (b) Irrigation (8 marks)

[25 MARKS]