



SUPPLEMENTARY 2016/2017

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UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR III
AND BACHELOR OF SCIENCE IN HORTICULTURE
YEAR III

COURSE CODE: HORT 304

TITLE OF PAPER: TROPICAL & SUBTROPICAL FRUIT PRODUCTION

TIME ALLOWED: TWO [2] HOURS

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

**DO NOT OPEN UNTIL PERMISSION HAS BEEN GRANTED BY THE
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INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS**QUESTION 1**

Discuss the production of dragon fruit or pitaya (*Hylocereusun datus*) using the following guidelines

- a) Climatic requirements (10 marks)
- b) Propagation (15 marks)

[25 MARKS]**QUESTION 2**

Describe the production of Sugar Apple (*Annona squamosal* L.) using the following guidelines:

- a) Cultivars (10 marks)
- b) Climate and soil (15 marks)

[25 MARKS]**QUESTION 3**

Describe the production of Atemoya (*Annona squamosa* × *Annona cherimola*) under Swaziland conditions using the following guidelines:

- a) Climatic requirements (5 marks)
- b) Varieties (5 marks)
- c) Propagation and culture (15 marks)

[25 MARKS]**QUESTION 4**

Describe the following types of citrus

- a) Yuzu tree, (6 marks)
- b) Ugli fruit, (6 marks)
- c) Tangelo, (7 marks)
- d) Calamondin, (6 marks)

[25 marks]

QUESTION 5

- a) Describe objectives of pruning a fruit tree
- b) List the factors that determine the timing of pruning a tree
- c) Describe winter pruning of fruit trees

(12 marks)

(5 marks)

(8 marks)

[25 MARKS]



2nd SEMESTER 2016/2017

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME:

**BACHELOR OF SCIENCE IN HORTICULTURE
YEAR III**

COURSE CODE:

HORT 305

TITLE OF PAPER:

HORTICULTURAL EXPERIMENTATION

TIME ALLOWED:

TWO (2) HOURS

INSTRUCTION:

ANSWER ANY FOUR (4) QUESTIONS

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ANSWER ANY FOUR (4) QUESTIONS

Question 1

(a) Describe the objectives of a research. [13 Marks]

(b) What would you consider as the characteristics of a good research? [12 Marks]
[25 marks]

Question 2

Write a concise outline of research proposal for your final year research project. [25 marks]

Question 3

Describe the general steps involved in field research experimentation. [25 marks]

Question 4

(a) Explain how experimental error can be minimised in an experiment? [15 Marks]
(b) What pitfalls must be avoided during literature review process? [10 Marks]

[25 marks]

Question 5

In a field experiment conducted to compare the growth of three lettuce varieties in a randomized complete block design replicated four times. The following yield results were obtained (kg/plot)

| Cultivar | Rep 1 | Rep 2 | Rep 3 | Rep 4 |
|----------|-------|-------|-------|-------|
| AWDOZ | 12 | 13 | 14 | 15 |
| ELHUB | 13 | 15 | 16 | 10 |
| ELHAMA | 12 | 11 | 14 | 13 |

(a) Sketch the **complete ANOVA table** for this experiment [20 marks]
(b) Show the plot layout of the experiment [5 Marks]
[25 marks]



1st SEM 2016/17

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME:

**BACHELOR OF SCIENCE IN ABE YEAR III, AEE
YEAR III AND AEM YEAR III**

COURSE CODE:

HORT 306

TITLE OF PAPER:

FRUIT AND VEGETABLE PRODUCTION

TIME ALLOWED:

TWO [2] HOURS

INSTRUCTIONS:

ANSWER FOUR (4) QUESTIONS

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INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS**PAGE 2 OF 2****QUESTION 1**

Discuss the production of carrot (*Daucus carota* L.) following these guidelines:

- (i) Soils and rotations (8 marks)
- (ii) Fertilization (12 marks)
- (iii) Spacing (5 marks)

[25 marks]**QUESTION 2**

Discuss the production culture of onion (*Allium cepa* L.) following these guidelines:

- i) Soil requirements (8 marks)
- ii) Fertilization (12 marks)
- iii) planting spacing (5 marks)

[25 marks]**QUESTION 3**

Discuss the production of banana (*Musa acuminata* L.) under the following:

- a) Planting material (5 marks)
- b) Spacing (11 marks)
- c) Fertiliser application (9) marks)

[25 marks]**QUESTION 4**

Discuss the production of cabbage (*Brassica oleracea* L) following these guidelines:

- a) Seedling production (13 marks)
- b) Field spacing (6 marks)
- c) Fertiliser requirements (6 marks)

[25 marks]**QUESTION 5**

Soil moisture management is important in vegetable production:

- a) List the factors that influence the amount of water to apply and the irrigation frequency (8 marks)
- b) List the advantages and disadvantages of mulching (17 marks)

[25 marks]



SUPPLEMENTARY 2016/17

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PROGRAMME: **BACHELOR OF SCIENCE IN ABE YEAR III, AEE
YEAR III AND AEM YEAR III**

COURSE CODE: **HORT 306**

TITLE OF PAPER: **FRUIT AND VEGETABLE PRODUCTION**

TIME ALLOWED: **TWO [2] HOURS**

INSTRUCTIONS: **ANSWER FOUR (4) QUESTIONS.**

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INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

QUESTION 1

- a) Describe the primary and secondary objectives of orchard floor management. (1 mark)
 b) List four (4) advantages and four (4) disadvantages associated with each orchard floor management tool in completing the table below: (24 marks)

| Advantages and Disadvantages of Orchard floor Management Strategies. | | |
|---|--|---|
| Tool | Advantages (any 4 in each category) | Disadvantages (any 4 in each category) |
| Cultivation | | |
| Mulching | | |
| Chemical (Herbicides) | | |

[25 MARKS]

QUESTION 2

Discuss the production of the lychee (*Litchi chinensis* Sonn.) using the following guidelines:

- a) Soils (6 marks)
 b) Spacing (5 marks)
 c) Fertilization (14 marks)

[25 MARKS]

QUESTION 3

Discuss the factors to be considered in the site selection for the establishment of fruit or vegetable enterprise.

[25 MARKS]

QUESTION 4

- a) Discuss the methods of proper handling of fruits and vegetables after harvest (12marks)
 b) Outline the factors influencing post-harvest changes in fruit and vegetables (8 marks)
 c) Describe the factors influencing water loss in postharvest handling of fruits and vegetables (5 marks)

[25 MARKS]

QUESTION 5

Discuss the general guidelines for the safe use of crop protection chemicals.

[25 MARKS]