



2ND SEM. 2012/2013

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

**PROGRAMME: BACHELOR OF SCIENCE IN HORTICULTURE
YEAR 4**

COURSE CODE: HORT 406

TITLE OF PAPER: SEED SCIENCE AND TECHNOLOGY

TIME ALLOWED: TWO (2) HOURS

INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS

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BY THE CHIEF INVIGILATOR**

INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS

Question 1

- a) Describe the **two (2)** types of fertilization found in crop plants [10 marks]
b) Discuss **three (3)** types of emasculation used in breeding of crops [15 marks]

[25 marks]

Question 2

- a) Draw and label the structures of:
(i) *Zea mays* seed [8 marks]
(ii) *Beta vulgaris* seed [6 marks]
b) Describe small scale seed production in Swaziland [11 marks]

[25 marks]

Question 3

- a) Illustrate production of a double cross hybrid in *Zea mays* [10 marks]
b) Describe how relative humidity (RH) and temperature affect storage and shelf life of seeds

[15 marks].

[25 marks]

Question 4

Describe the following pertaining to the germination test:

- (i) objectives [5 marks]
(ii) procedure [15 marks]
(iii) calculation and expression of results [5 marks]

[25 marks]

Question 5

Discuss the technical agreements on harmonization of seed regulations in the SADC region

[25 marks]