



**1<sup>ST</sup> SEM. 2009/2010**

**PAGE 1 OF 2**

**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 types of inflorescence found in crop plants [10 marks]
- b) Discuss three (3) types of emasculation used in breeding of horticultural crops [15marks]

**[25 marks]****Question 2**

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

**[25 marks]****Question 3**

Discuss the effects of four (4) environmental factors affecting seed production.

**[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**

- a) Describe how relative humidity (RH) and temperature affect storage and shelf life of seeds [15 marks]
- b) Describe the principle underlying biochemical tests for seed viability [10 marks]

**[25 marks]**