



**2<sup>ND</sup> SEM. 2011/2012**

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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 types of inflorescence found in crop plants [10 marks]
- b) Discuss mechanical, chemical and genetic emasculation used in breeding of horticultural crops [15 marks]
- [25 marks]**

**QUESTION 2**

- a) Draw and label the structures of:
- (i) *Allium* sp. seed [4 marks]
- (ii) *Beta vulgaris* seed [6 marks]
- (iii) *Phaseolus vulgaris* seed [4 marks]
- b) Describe small scale seed production 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 purity test:

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

**QUESTION 5**

- a) Discuss Harrington's rule of thumb for storage of seed [15 marks]
- b) Describe the principle underlying biochemical tests for seed viability [10 marks]
- [25 marks]