



**1<sup>ST</sup> SESTER 2007/2008**

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**UNIVERSITY OF SWAZILAND**

**SUPPLEMENTARY EXAMINATION**

**PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR 3  
HORTICULTURE YEAR 3**

**COURSE CODE: CP 301**

**TITLE OF PAPER: CROP BREEDING**

**TIME ALLOWED: TWO (2) HOURS**

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

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THE CHIEF INVIGILATOR**

**QUESTION 1**

Explain fully, the following terms and their importance in crop breeding:

- a) Synthetic Varieties [5 Marks]
- b) Genetic Advance [5 Marks]
- c) ICRISAT [5 Marks]
- d) Cleistogamy [5 Marks]
- e) Environmental Index [5 Marks]

**[25 Marks]**

**QUESTION 2**

Discuss in details, the patterns of evolution of cultivated crop species.

**[25 Marks]**

**QUESTION 3**

In making hybrids, the breeder creates populations in which selection is most likely to be profitable. Discuss in details, the consequences of hybridization in a crop breeding program.

**[25 Marks]**

**QUESTION 4**

Differentiate between the two types of hybrids and give examples under each type. Your examples should fully explain the type of crosses and the genetic composition of the parents involved.

**[25 Marks]**

**QUESTION 5**

After a crop variety has been developed, it has to be tested, registered and seed made available to growers. Describe in details the steps involved from new variety testing to final deployment in farmers' fields

**[25 Marks]**