



SUPPLEMENTARY 2008/2009

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UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

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

COURSE CODE: HORT 403

TITLE OF PAPER: PLANT BIOTECHNOLOGY

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

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THE CHIEF INVIGILATOR**

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

Question 1

- a) What do you understand by an Aseptic condition? [5 marks]
- b) Why do you sterilise seeds before planting them in the MS medium. [5 marks]
- c) List the gelling materials used in MS media preparation. [5 marks]
- d) Briefly describe the process of seed sterilization [10 marks]
[25 marks]

Question 2

- (a) What is plant biotechnology? [5 marks]
- (b) What are the potential benefits of plant biotechnology to Agricultural production? [20 marks]
[25 marks]

Question 3

- (a) Discuss briefly the Restriction Fragment Length Polymorphism (RFLP) analysis. [15 marks]
- (b) What are the problems associated with this method. [10marks]
[25 marks]

Question 4

What are the steps involved in the selection and regeneration of transformed plant cells. [25 marks]

Question 5

Discuss the regulatory process for transgenic crops according to

- a) Institutional Bio safety Committee (IBC). [12 marks]
- b) Environmental Protection Agency (EPA) [13 marks]
[25 marks]