

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER DECEMBER 2006

TITLE OF PAPER: APPLIED BIOLOGY

COURSE CODE: B405

TIME ALLOWED: THREE HOURS

INSTRUCTIONS:

1. ANSWER TWO (2) QUESTIONS FROM EACH SECTION.
2. USE ONE (1) ANSWER BOOKLET FOR EACH SECTION.
3. EACH QUESTION CARRIES TWENTY FIVE (25) MARKS.
4. WHEREVER POSSIBLE ILLUSTRATE YOUR ANSWERS WITH LARGE CLEARLY LABELLED DIAGRAMS.

SPECIAL REQUIREMENTS:

USE TWO (2) EXAMINATION ANSWER FOLDERS, ONE FOR EACH SECTION [A, B]. FOLDERS SHOULD BE PROMINENTLY MARKED TO INDICATE THE SECTION.

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS
BEEN GRANTED BY THE INVIGILATORS

SECTION A

QUESTION 1

Discuss disease expression in plants.

[25 MARKS]

QUESTION 2

Discuss methods of pathogen invasion in plants.

[25 MARKS]

QUESTION 3

Discuss principles of disease control practiced in Swaziland in a specific economic crop.

[25 MARKS]

SECTION B

QUESTION 4

- (a) Distinguish between natural and cultural eutrophication. (7 marks)
- (b) Discuss the importance of the creation of the Maguga reservoir and the establishment of an aquaculture facility in Swaziland. (18 marks)

[25 MARKS]

QUESTION 5

- (a) Identify four water-borne parasitic diseases associated with man in Swaziland and include their intermediate hosts and symptoms. (12 marks)
- (b) Malaria may become a major water-borne parasitic disease affecting the population of the low veld in Swaziland. Discuss. (13 marks)

[25 MARKS]

QUESTION 6

- (a) What are pollutants? (5 marks)
- (b) Write an essay on the consequences of chemical and biological pollutants on coastal aquatic ecosystems. (20 marks)

[25 MARKS]