

UNIVERSITY OF SWAZILAND
MAIN EXAMINATION PAPER 2008/2009

TITLE OF PAPER: EVOLUTION

COURSE CODE: B403

TIME ALLOWED: THREE (3) HOURS

- INSTRUCTIONS:**
1. ANSWER ANY FOUR QUESTIONS.
 2. EACH QUESTION CARRIES TWENTY FIVE (25) MARKS.
 3. ILLUSTRATE YOUR ANSWERS WITH LARGE AND CLEARLY LABELED DIAGRAMS WHERE APPROPRIATE.

SPECIAL REQUIREMENTS:

NONE

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

ANSWER ANY FOUR (4) OUT OF THE SIX (6) QUESTIONS

QUESTION 1

“Molecular data are not important in phylogenetic analysis”. Critically discuss this statement, providing examples to illustrate your answer.

[25 marks]

QUESTION 2

Discuss the role of pre- and post-mating isolating mechanisms in the maintenance of species' boundaries. Provide real-life examples to illustrate your argument.

[25 marks]

QUESTION 3

Write an essay entitled “Mass Extinctions: a modern perspective”. Illustrate your answer with facts and figures, especially from the fossil record.

[25 marks]

QUESTION 4

Describe in detail the process of natural selection? Include in your discussion the various modes of selection.

[25 marks]

QUESTION 5

Why is genetic variation important for evolution? And how is this variation created?

[25 marks]

QUESTION 6

What are adaptations? And what methods can we employ to recognize them?

[25 marks]