



FACULTY OF SCIENCE

DEPARTMENT OF ZOOLOGY

MODULE ZOO3A10
CAMPUS APK
EXAM JUNE 2014

DATE: 11 JUNE 2014

SESSION 8:30

ASSESSOR

PROF B VAN VUUREN

INTERNAL MODERATOR

DR F DURAND

EXTERNAL MODERATOR

PROF D DRAKE

DURATION: 1.5 HOURS

MARKS 50

NUMBER OF PAGES: 2 PAGES

INSTRUCTIONS: **ANSWER ALL THE QUESTIONS.**
 ANSWER QUESTION 5 IN A SEPARATE BOOK.

QUESTION 1

What do you understand by the term *DNA barcoding*? This is often a controversial term with mostly taxonomists arguing that barcoding is not appropriate to document biodiversity. Discuss some of the controversy and give your own opinion, supported by examples, of the usefulness of barcoding.

(15 marks)

QUESTION 2

Discuss the following statement: *Body size imposes a fundamental constraint on the evolution of organisms.*

(10 marks)

QUESTION 3

Explain what do you understand by the term *extinction vortex*?

(5 marks)

QUESTION 4

Darwin proposed a mechanism that could explain organismal diversity namely natural selection. Explain what you understand by *natural selection* and how this process drives diversity in nature. Make use of examples from your reading.

(10 marks)

QUESTION 5

Certain organisms are adapted to the extreme physical conditions found in mangrove swamps. Describe these conditions, give examples of four organisms found in these swamps, and the adaptations of these organisms to survive under these physical conditions.

(10 marks)

TOTAL MARKS (50)
