

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER : DECEMBER 2008

TITLE OF PAPER: ECOLOGY

COURSE CODE: B304

TIME ALLOWED: THREE HOURS

INSTRUCTIONS:

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

SPECIAL REQUIREMENTS:

NONE

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

QUESTION 1

- a) Describe the pelagic region of the marine environment noting the different biozones of this region including the factors used in determining their limits. (12 marks)
- b) Using suitable examples discuss in detail the neuston and the benthic communities of the lentic systems in the tropics. (13 marks)

[TOTAL MARKS = 25]

QUESTION 2

Write a concise essay on the climatic conditions, the flora and fauna of the tropical savannas with notes on fire as a significant ecological factor in these habitats.

[TOTAL MARKS = 25]

QUESTION 3

- a) Describe the exponential and logistic growth curves of populations. (10 marks)
- b) Explain your understanding of the "Competitive Exclusion Principle" and niche differentiation in the interaction of organisms in an ecosystem. (15 marks)

[TOTAL MARKS = 25]

QUESTION 4

- a) Distinguish between examples of grazing food chains and detritus food chains in any habitat. (10 marks)
- b) Write concise notes on producers, trophic levels and ecological pyramids in natural ecosystems. (15 marks)

[TOTAL MARKS = 25]

QUESTION 5

- a) Distinguish between allogenic and autogenic succession in ecological studies. (10 marks)
- b) Briefly discuss the effects sewage and run-off from an agricultural land will have on the water quality, flora and fauna of a slow-moving fresh-water body. (15 marks)

[TOTAL MARKS = 25]

QUESTION 6

Write concise essays on **TWO** of the following:

- a) Wetlands (12½ marks)
- b) Estuaries (12½ marks)
- c) Coral reefs (12½ marks)

[TOTAL MARKS = 25]