

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF INDUSTRIAL TECHNOLOGY

DEPARTMENT OF TECHNICAL TEACHER EDUCATION

Programme: BACHELOR OF EDUCATION HONOURS DEGREE

GENERAL EXAMINATION

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|-------------------|---------|--------------|
| Course: | Ecology | TTE 1138 |
| Part/year: | I | January 2011 |
| Time: | 3 hours | 100 marks |

Instructions

1. Answer any **FOUR [4]** questions.
 2. Questions maybe answered in any order
 3. All questions carry [**25 marks**] each
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QUESTION 1

- (a) Describe the meaning of density dependent and density independent factors. (8marks)
- (b) Discuss the importance of these factors in population regulation. (17marks)

QUESTION 2

Define and describe each of the following terms as they are used in community ecology.

- (a) Niche (5marks)
- (b) Patch dynamics (8marks)
- (c) Habitat fragmentation (12marks)

QUESTION 3

- (a) Describe the mechanisms of successional change (10 marks)
- (b) Discuss the theory of island biogeography. (15 marks)

QUESTION 4

Discuss the geographical patterns of species diversity.

(25 marks)

QUESTION 5

Using your knowledge of the evolutionary process, discuss the effect of introducing genetically modified species into ecosystems.

(25 marks)

QUESTION 6

“Rescued small populations in protected areas are the most likely to go extinct” Discuss this statement.

(25 marks)

End of Question paper