



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2011/2012

**IBP DECEMBER 2011 SESSION EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE**

SZL 101: INTRODUCTION TO ECOLOGY AND BIOANALYSIS

DATE: WEDNESDAY 2ND MAY 2012

TIME: 2.00 P.M. – 4.00 P.M.

INSTRUCTIONS:

Answer **ALL** questions in section A and any **ONE** question in section B.

In each question, all questions carry equal marks.

Illustrate your answers with well-labelled diagrams wherever appropriate.

Section A: Answer ALL questions (40 marks)

1. Explain the meaning of the following terms:
 - (a) Ecology
 - (b) Niche
 - (c) Predation
 - (d) Parasitism
 - (e) Mutualism.
2. Outline the main functions of ecosystems.
3. Discuss briefly the concept of pyramid of biomass.
4. Outline the main pathways through which water returns to the atmosphere.
5. State the main sinks of carbon.

6. Outline the main impacts of clearing catchment vegetation.
7. Describe the methods of collecting insects from trees.
8. Distinguish between stenoecious and euryecious species.

Section B: Answer only ONE question (30 marks)

9. Discuss the following concepts:
 - (a) The law of the minimum
 - (b) Shelford's law of tolerance
 - (c) The concept of limiting factors.
10. Write an essay on the nitrogen cycle.
11.
 - (a) Outline the measures of central tendency and dispersion.
 - (b) Given the following data of weights, in kg, attach the 95% and 99% confidence limits to the mean:

7	2	12	13	0	8	10
15	3	5	14	20	1	11

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