



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE

SZH 106: FUNDAMENTALS OF ECOLOGY

DATE: Tuesday, 27th March, 2012

TIME: 8.00 a.m. – 10.00 a.m.

INSTRUCTIONS:

Answer **ALL** questions in Section A and any **ONE** question in Section B. In each Section, all questions carry equal marks. Illustrate your answers with well-labeled diagrams wherever appropriate and give relevant examples.

SECTION A: Answer **ALL** questions (40 marks)

1. Define the following terms:
 - a) Autotroph
 - b) Detritivore
 - c) Commensalism
 - d) Aestivation
 - e) Habitat
2. Outline the constituents of the biotic component of ecosystems.
3. State the main raw materials for primary production and write the equation summarizing the process of photosynthesis.

4. Explain why the stocking rate is an important consideration for the advance planning of rangeland management before drought..
5. Distinguish between grasslands and savannas.
6. Explain denitrification.
7. Explain the causes of eutrophication.
8. Describe the two modes of population growth.

SECTION B:

Answer any **ONE** question (30 marks)

9. Discuss the density dependent and density independent factors regulating population growth.
10. Discuss the future of wildlife on Kenya's rangelands.
11. Discuss the main livestock production systems in Kenya's and the principle agroclimatic zones.