



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2010/2011

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE

SZL 591: POPULATION ECOLOGY

DATE: Wednesday 24th November 2010

TIME: 9.00a.m – 12.00p.m

INSTRUCTIONS:

Answer any **FOUR** questions. Illustrate your answers and give examples where appropriate.

1. Give a detailed account on calculation of Innate capacity for increase (r_m) through J-curve, S-curve, survivorship curve and Lifetables.
2. Describe in details the following:
 - a) r and k selected life history strategies.
 - b) Key factor analysis.
 - c) Genetic population bottleneck
 - d) Deterministic and Stochastic model.
 - e) Population Refugia.
3. Write an essay on mathematical logistics for interspecific competition.
4. Write an essay of Lokta-Votterra (predator-prey models).
5. Explain Metapopulation and describe in details source and sink habitats.