



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2010/2011

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE

SZH 207: ANIMAL POPULATION GENETICS

DATE: FRIDAY 26TH NOVEMBER 2010

TIME: 11.00 A.M. - 1.00 P.M.

Instructions

Answer all questions in section A and any one question from section B. Within each section all questions carry equal marks

Illustrate your answers with diagrams and give examples where appropriate

SECTION A (40 marks)

Answer ALL questions in this section

1. Define the term “allele” and explain the variation that arise when two alleles combine in diploid cells
2. Define the following types of variation
Allopatric
Parapatric
Polytypic
3. Distinguish between gene (allelic) and genotype frequencies.
4. Explain briefly “balanced polymorphism”.
5. Explain what is meant by the term “effective population size”
6. Why is variation a fundamental requirement for evolution to occur?
7. Explain the difference between a gene pool and a deme.
8. Outline how mating systems may affect gene frequency in a population

SECTION B (30 marks)

Answer ONE question

9. Discuss Hardy-Weinberg Law.
10. Write an essay on speciation.
11. Write an essay on inbreeding.