



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2010/2011
FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE AND BACHELOR OF EDUCATION
SZL 304: EVOLUTIONARY BIOLOGY

DATE: Thursday, 25th November, 2010

TIME: 11.00 a.m.- 1.00 p.m.

INSTRUCTIONS:

Answer **ALL** questions in Section A and any other **ONE** question in Section B. Within Section B all questions carry equal marks. Illustrate your answer with diagrams and give examples wherever appropriate.

SECTION A: (40 MARKS)

Answer **ALL** questions in this section.

1. Describe the synthetic theory of evolution.
2. Outline four conditions necessary for natural selection.
3. Outline the basic/primary characteristics of the primate order.
4. Using diagrams where appropriate, describe chromosomal mutations.
5.
 - a) Define genetic drift
 - b) Describe briefly the effect of genetic drift on gene frequencies
6. Using relevant examples, differentiate between adaptive radiation and speciation
7. Outline the events that take place during microevolution and macroevolution.
8. Describe briefly the theory of punctuated equilibrium.

SECTION B: (30 MARKS)

Answer any **ONE** question in this section.

9. Discuss the mechanisms of speciation.
10. Discuss the scientific arguments that support evolution.
11. Given an account of the Hardy-Weinberg equilibrium.