



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2008/2009
INSTITUTE OF OPEN LEARNING (IOL)
EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE AND
BACHELOR OF EDUCATION

SZL 303: ESSENTIALS OF MOLECULAR BIOLOGY

DATE: Wednesday 17th February 2010

TIME: 11.00a.m – 1.00p.m

INSTRUCTIONS

Answer **ALL** questions from Section A and **ONE** Question from section B. Within a section, **ALL** questions carry equal marks. Illustrate your answers with diagrams and give examples whenever appropriate.

SECTION A

Answer **All** questions

1. Explain the concept of a protein domain.
2. Describe the major ethical considerations in gene therapy.
3. Outline the mechanism of semi-conservative replication.
4. Describe the science of genomics.
5. Explain genetic recombination in eukaryotes.
6. Distinguish between harmful and beneficial mutation.
7. Outline the procedure in making a transgenic mouse with embryonic stem cells.
8. Describe transcriptional regulation through repression.

SECTION B

Answer **One** question

9. Discuss the Southern hybridization analysis and its applications.
10. Write an essay on the application of biotechnology in human health care.