



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2009/2010

INSTITUTIONAL BASED EXAMINATION FOR EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE

SZL 525: BIOCHEMISTRY OF NUCLEIC ACIDS

DATE: Friday 3rd September, 2010

TIME: 9.00 a.m – 12.00 Noon

INSTRUCTIONS

Answer any **FOUR** questions.

ALL questions carry equal marks.

Illustrate your answers with diagrams and give examples where appropriate.

1. Compare and contrast spontaneous and induced mutation.
2.
 - a) Describe the organization of eukaryotic and prokaryotic genomes.
 - b) Explain the mechanisms involved in DNA rearrangements.
3. Discuss the Southern blot technique and its applications.
4. Write an essay on the control of gene expression.
5. Discuss *in vivo* and *in vitro* procedures of amplifying DNA and their applications.