



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR
OF SCIENCE

SZH 105: INTRODUCTION TO GENETICS

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DATE: MONDAY 26TH APRIL 2012

DATE: 11.00 A.M. – 1.00 P.M.

INSTRUCTIONS

Answer ALL questions in Section A and any ONE question in Section B.

Within a section ALL questions carry equal marks. Illustrate your answers and give examples where appropriate.

SECTION A: Answer ALL questions (40 marks)

1. Explain independent assortment in genetics.
2. Explain briefly gene mutation.
3. Describe a chromosome.
4. Distinguish between a heterogametic sex and homogametic sex
5. Explain how crossing over can unlink genes
6. Explain the functions of DNA.
7. Describe codominance.
8. Explain the genetic code.

SECTION B: Answer ONE question (30 marks)

9. Discuss the processes of transcription and translation in protein synthesis in a eukaryotic cell.
10. Describe in details DNA replication. Draw diagrams to illustrate your answer.
11. Discuss Mendelian Laws of inheritance