



**TECHNICAL UNIVERSITY OF MOMBASA**  
**FACULTY OF APPLIED AND HEALTH SCIENCES**  
**DEPARTMENT OF PURE & APPLIED SCIENCES**  
**UNIVERSITY EXAMINATION FOR:**  
**BSPH**  
**AAB 4106 : HUMAN GENETICS**  
**END OF SEMESTER EXAMINATION**

**SERIES:** APRIL 2016

**TIME:** 2 HOURS

**DATE:** Pick Date May 2016

**Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of Choose No questions. Attempt Choose instruction.

**Do not write on the question paper.**

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**Question ONE**

- a. Define the following terms (6 marks)
- i) Telomere
  - ii) Karyotype
  - iii) Aneuploidy
- b. List four basic types of cancer (4 marks)
- c. Explain the following types of pseudogenes
- i) Non-processed (5 marks)
  - ii) Processed pseudogenes (5 marks)
- d. Explain the satellite DNA sequence (5 marks)

e. Explain the following genes oddities (5 marks)

i) Partially overlapping genes

ii) Genes within genes

**Question TWO**

a) Describe the Leber's hereditary optic neuropathy (LHON) disease (10 marks)

b) Describe the PCR cycle (10 marks)

**Question THREE**

a) Explain twinning in man (10 marks)

b) Explain five factors causing DNA damage (10 marks)

**Question FOUR**

Explain DNA repair mechanisms in human cells (20 marks)

**Question FIVE**

Describe the chain terminator nucleotides sequencing method (20 marks)