



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.

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)