



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 **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question ONE

- a. Define the following terms (6 marks)
- i) Pseudogene
 - ii) Centromere
 - iii) Cancer
- b. List four factors affecting PCR (4 marks)
- c. Differentiate between the following
- i) Domain and motif (5 marks)
 - ii) Mini and microsatellite (5 marks)
- d. Outline the stages of cancer (5 marks)
- f. Outline the causes and effects of Aneuploidy in man (5 marks)

Question TWO

Describe the structure of the following

- a. Retroviruses (10 marks)
- b. LINEs transposable elements (10 marks)

Question THREE

- a) Explain replication in mitochondrial genome (10 marks)
- b) Describe the four stage of the cell cycle (10 marks)

Question FOUR

- a) Explain the causes and symptoms of Downs syndromes (10 marks)
- b) Describe gastrulation process in a human embryo using illustration (10 marks)

Question FIVE

Describe plasmid vectors using illustration (20 marks)