



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE & APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN MEDICAL SCIENCES

BACHELOR OF SCIENCE IN FORENSIC AND MOLECULAR

BIOLOGY

BACHELOR OF SCIENCE IN MARINE RESOURCE

MANAGEMENT

BACHELOR IN INDUSTRIAL MICROBIOLOGY AND

BIOTECHNOLOGY

AAB 4103 : CELL BIOLOGY

END OF SEMESTER EXAMINATION

SERIES: APRIL 2017

TIME: 2 HOURS

DATE: Pick Date Sep 2017

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) State the significance of mitosis (4 marks)

- b) State FOUR functions of microtubules (4 marks)
- c) State FOUR functions of the cilia (4 marks)
- d) Explain any SIX differences between plant and animal cells (6 marks)
- e) Identify any SIX characteristics of a prokaryotic cell (6 marks)
- f) Describe the contribution of the following scientist towards the development of cytology;
 - i) Robert Hooke (2 marks)
 - ii) Antony van Leeuwenhoek (2 marks)
 - iii) Mathius Scheiden and Theodor Schwann (2 marks)

Question TWO

Using illustrations describe the processes involved in meiotic cell division (20 marks)

Question THREE

With the help of a diagram, describe the ultrastructure of an animal cell (20 marks)

Question FOUR

Discuss the surface modifications of the plasma membranes (20 marks)

Question FIVE

Discuss the composition of the human blood (20 marks)