



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF PURE AND APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF MEDICAL
LABORATORY SCIENCE
BMLS

AAB 4102: CELL BIOLOGY

SPECIAL/SUPPLEMENTARY EXAMINATION

OCTOBER 2013 SERIES

2 HOURS

Instructions to candidates:

This paper consist of **FIVE** questions

Answer question **ONE** (compulsory) and any other **TWO** questions

Question ONE

a) Define the following terminologies

- (i) Axon
- (ii) Node of Ranvier
- (iii) Metabolism
- (iv) Mitosis
- (v) Osmosis

(5marks)

b) Discuss cells as machines

(5marks)

c) Briefly discuss mitochondria as a cell organelle

(5marks)

d) Discuss how facilitated diffusion aids movement of substances across plasma membrane

- e) Briefly describe the distinguishing properties of Eukaryotic cells (5marks)
- f) Describe the role of Ribosomes in cells (5marks)

Question TWO

Discuss the structure of plasma membrane and its adaptation for regulation of entry and exit of substances across cell membrane (20marks)

Question THREE

Describe functions of the following

- a) Pore / channel proteins (10marks)
- b) Carrier proteins (10marks)

Question FOUR

Discuss meiotic cell division cycle (20marks)

Question FIVE

Discuss the following vertebrate muscle types

- a) Smooth
- b) Cardiac
- (20marks)