

25



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

(MAIN CAMPUS)

**UNIVERSITY EXAMINATIONS (MAIN PAPER)
2023/2024 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER
EXAMINATIONS
FOR THE DEGREE
OF**

**MASTER OF SCIENCE IN MEDICAL LABORATORY
SCIENCES/BIOMEDICAL SCIENCES/ DOCTOR OF
PHILOSOPHY**

COURSE CODE: BML 817/ BMB 914

**COURSE TITLE: CURRENT ADVANCES AND EMERGING ISSUES
IN BIOMEDICAL SCIENCES / LABORATORY
MEDICINE**

DATE: 6TH DECEMBER 2023

TIME: 8:00-11:00 AM

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE AND ANY THREE. **DO NOT WRITE ON THE QUESTION PAPER**

TIME: 3 Hours

MMUST observes ZERO tolerance to examination
cheating

QUESTION ONE:

Develop the cascading biochemical events that take place during visual photo transduction

(25 Marks)

QUESTION TWO:

Describe the current state of medical 3D printing, Google brain silico clinical trials

(25 Marks)

QUESTION THREE:

Delineate mechanisms involved in central cardiovascular system control

(25 Marks)

QUESTION FOUR:

Discuss TNT technology in cell programming and RNA switching in gene activation

(25 Marks)

QUESTION FIVE:

Discuss current trends in optogenetics

(25 Marks)