



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF PURE AND APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF
TECHNOLOGY IN INDUSTRIAL MICROBIOLOGY AND BIOTECHNOLOGY
BTMBT 11M

ABT 4406 : RECENT ADVANCES IN INDUSTRIAL BIOTECHNOLOGY

SEMESTER EXAMINATION

DECEMBER 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) Write down the tag terms for the following:
 - (i) Investigator **(1mark)**
 - (ii) Title **(1mark)**
 - (iii) First author **(1mark)**
- b) List **FOUR** destinations where Pub Med search results may be sent to **(4marks)**
- c) Provide common and botanical names of the plant engineered to detect land mines **(4marks)**
- d) Give the chemical name for Auxin **(1mark)**
- e) Name **THREE** literature search techniques **(3marks)**
- f) Indicate the reasons fetal calf serum is the most preferred serum – supplement for the *invitro* cell culture of eukaryotic cells **(3marks)**

- g) List THREE synonyms of *in vitro* meat (3marks)
- h) Highlight TWO reasons that have traditionally hampered commercial production of cellulosic bio fuel (4marks)
- i) List FIVE components of a citation (5marks)

QUESTION TWO

- a) Discuss EnviroPig. (15marks)
- b) Explain the genetic engineering mechanisms employed to enhance tomato shelf life (5marks)

QUESTION THREE

- a) Discuss authorship (8marks)
- b) Discuss the concept of biodetection (12marks)

QUESTION FOUR

- a) Discuss the AuxIn project (12marks)
- b) Describe functions of Boolean operators (8marks)

QUESTION FIVE

- a) Discuss literature search techniques (9marks)
- b) Explain the science behind the first *in vitro* beef burger (11marks)