



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE & APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR:

**BACHELOR OF TECHNOLOGY IN INDUSTRIAL MICROBIOLOGY AND
BIOTECHNOLOGY**

AAB 4301: RESEARCH METHODOLOGY

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2016

TIME: 2 HOURS

DATE: Pick Date Select Month 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of Choose No questions. Attempt Choose instruction.

Do not write on the question paper.

Question ONE

- Contrast qualitative and quantitative research (6mks)
- Name any 4 reference management softwares (4mks)
- State the disadvantages of randomized complete block designs (3mks)
- Define the following terms
 - Abstract (2mks)
 - Plagiarism (2mks)
 - Sampling (2mks)
- Why is statement of the problem important in research (3mks)
- Name any three avenues for publishing scientific research findings (3mks)
- What does the acronym SMART mean in formulating research objectives? (5mks)

Question TWO

- Describe the key sections in a questionnaire (10mks)
- Explain the relevance of background information in research (10mks)

Question THREE

Describe the following types of experimental research design

- a) Latin Square Design (3mks)
- b) Randomized complete block design (10mks)
- c) Completely Randomized Design (7mks)

Question FOUR

Using examples in each case discuss the following types of research

- a) Basic research (10mks)
- b) Applied research (10mks)

Question FIVE

Using appropriate examples, outline the key components of an effective questionnaire (20mks)