



# 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

SPECIAL/SUPPLEMENTARY EXAMINATION

**SERIES: SEPTEMBER 2018**

**TIME: 2 HOURS**

**DATE: Sep 2018**

## **PAPER 2**

### **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) List 3 importance of literature survey (3 marks)
- b) Explain the advantages of factorial design in experiment (4 marks)
- c) Highlight the following:
  - i) the components of a research problem (5 marks)
  - ii) Highlight five factors that lead to systematic bias during sampling (5 marks)
  - iii) Highlight the key elements that should be included in an abstract (5 marks)
- d) State any 3 avenues for disseminating research findings (3 marks)
- e) Define the following
  - i) Plagiarism (2 marks)
  - ii) Sampling (2 marks)

### **Question TWO**

Explain the Latin squares experimental design

(20 marks)

**Question THREE**

a) Describe the general outline of a technical report

(10 marks)

b) Explain the merit of direct personal interview

(10 marks)

**Question FOUR**

Giving relevant examples describe the difference between dependent and independent variables (10 mks)

**Question FIVE**

a) Discuss unique characteristics of research

(10 mks)

b) Highlight the advantages of cluster sampling

(10 mks)