



**TECHNICAL UNIVERSITY OF MOMBASA**  
**FACULTY OF APPLIED AND HEALTH SCIENCES**  
**DEPARTMENT OF PURE & APPLIED SCIENCES**

**UNIVERSITY EXAMINATION FOR:**

BTAC

**AAB 4301: RESEARCH METHODOLOGY**

**END OF SEMESTER EXAMINATION**

**SERIES: APRIL 2016**

**TIME: 2 HOURS**

**DATE:**

**Instructions to Candidates**

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of 5 questions. Attempt question ONE compulsory and any other two questions.

**Do not write on the question paper.**

**Question ONE**

a) Define the following terms as used in research

- |                         |          |
|-------------------------|----------|
| (i) Variable            | (1mark)  |
| (ii) Experimental group | (1mark)  |
| (iii) Control group     | (1 mark) |
| (iv) Research design    | (1 mark) |
| (v) Sampling            | (1 mark) |

b) State **Three** objectives of research (3 marks)

c) Highlight **Three** characteristics of a good research hypothesis (3marks)

d) Distinguish the following terms

- |   |           |
|---|-----------|
| (i) Theory and Hypothesis                   | (2marks)  |
| (ii) Descriptive and inferential statistics | (2 marks) |

e) Describe the techniques of defining a research problem (5marks)

f) Explain the measurement errors in research (4marks)

g) Describe **Three** strategies used in quantitative research (3marks)

h) Explain the main ethical principles that need to be considered in research (3 marks)

### **Question TWO**

a) Discuss the methods used in data collection in research (12 marks)

b) Describe measures of relationships often used in the context of research (8marks)

### **Question THREE**

a) Describe the steps involved in data processing (8 marks)

b) Compare Quantitative and qualitative research (12marks)

### **Question FOUR**

a) Describe the probability sampling methods, citing the advantages and disadvantages of each method (8 marks)

b) Discuss the problems facing empirical scientific researchers in Kenya (12marks)

### **Question FIVE**

(i) Explain the measures of dispersion in the context of research (10 marks)

(ii) Describe the methods used in data presentation in research (10 marks)