

# TECHNICAL UNIVERSITY OF MOMBASA

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Faculty of applied and health sciences

DEPARTMENT OF PURE AND APPLIED SCIENCES

## UNIVERSITY EXAMINATION FOR:

DIPLOMA IN ANALYTICAL CHEMISTRY (DAC14S)

AAB 2204 RESEARCH METHODS

END OF SEMESTER EXAMINATION

**SERIES: April 2016** PAPER-A

**TIME: 2 HOURS**

**DATE: MAY 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.**

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### Question ONE

- a) State the importance of conducting a pilot study. 4 marks
- b) Describe FOUR qualities of standard research proposal 4 marks
- c) Name FOUR criteria used to classify a true experimental design 4 marks
- d) Explain the meaning of probability sampling 4 marks
- e) State the advantages of Quasi-experimental design 4 marks
- f) State FOUR advantages of randomized control trials 4 marks
- g) Explain the selection of sample size 4 marks
- h) State sources of primary data 2 marks

### Question TWO

- (a) Outline the disadvantages of true experimental design 7 marks
- (b) Explain the stages of conducting an experiment 8 marks

### Question THREE

- (a) Explain the sampling methods of the following:
- (i) cluster random sampling 7 marks

(ii)systematic random sampling

8 marks

**Question FOUR**

(a)Explain the qualities of a good objective

7 marks

(b)Describe situation in which Non-probability sampling is applicable

8 marks

**Question FIVE**

(a)Describe steps in recruiting the appropriate research sample

8 marks

(b)Outline the disadvantages of research questionnaires

7 marks