



# **TECHNICAL UNIVERSITY OF MOMBASA**

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**FACULTY OF APPLIED AND HEALTH SCIENCES**

**DEPARTMENT OF ENVIROMENT & HEALTH SCIENCES**

**UNIVERSITY EXAMINATION FOR:**

**BACHELOR OF SCIENCE IN COMMUNITY HEALTH**

**BSCH 14S/YEAR 3/ SEMESTER 1**

**ACM 4301: RESEARCH METHODS**

**END OF SEMESTER EXAMINATION**

**SERIES: DECEMBER 2016**

**TIME: 2 HOURS**

**INSTRUCTIONS TO CANDIDATES:**

- This paper consists of FIVE questions
- Answer question ONE (Compulsory) and any other THREE questions on the answer booklets provided.
- Do not write on this question paper.

**Question one**

- a) What is random error and how can be reduced? (2 marks)
- b) In research, the choice of methods of data collection is based on: (4 marks)
- c) Describe three applications of case-controls studies (3 marks)
- d) State 10 sources of information for literature review when preparing either a research proposal or report (5 marks)
- e) In a school there are about 1800 students and the investigator wants to determine the prevalence of malaria by testing for malaria parasites in 450 students. The following table gives the distribution of students by class and number of streams.

| Class | No. of students | No. of streams |
|-------|-----------------|----------------|
| 5     | 600             | 8              |
| 6     | 500             | 7              |
| 7     | 400             | 6              |
| 8     | 300             | 5              |
| Total | 1800            | 26             |

- i. What type of sampling technique do you use? Why? (2 marks)
  - ii. How do you select the subjects who will be included in your sample? (4 marks)
- f) Describe data quality checks that are employed during data collection interviews (4 marks)
- g) List the essentials for an informed consent (6 marks)

### **Question two**

- a) If you are involved in malaria therapeutics study at your place of work, explain how you ensure confidentiality and privacy are observed in the study (12 marks)
- b) Describe the information that should appear in the fieldwork manuals for data collectors (8 marks)

### **Question three**

Discuss the main types of systematic error in epidemiological studies

### **Question four**

- a) Dr Mohamed who is in-charge of health research in Mombasa County has secured funding for research on one priority health problem in the County. Discuss the guidelines that he should use to arrive at the priority health problem (14 marks)

- a) Discuss three main reasons why pretest or piloting is very important in research (6 marks)

**Question five (20 marks)**

After all procedures required for a successful research study are carried, the researcher is expected to write a research report. Briefly describe the components of a research report (20 marks).