



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN COMMUNITY HEALTH

BSCH/15S/YEAR 3/ SEMESTER 1

ACM 4301: RESEARCH METHODOLOGY

SPECIAL/ SUPPLEMENTARY EXAMINATIONS

SERIES: SEPTEMBER 2018

TIME: 2 HOURS

Instructions to Candidates

This paper consists of FIVE questions

Answer question ONE (COMPULSORY) and any other TWO questions.

This paper consists of two printed pages.

Mobile phones are NOT allowed in the examination room

QUESTION ONE (30 MARKS)

- a) State the difference between probability and non-probability sampling methods? (2 marks)
- b) Briefly explain the characteristics of research (4 marks)
- c) Describe conditions that determine whether a problem requires research (3 marks)
- d) What is the difference between reliability and validity? Which is more important (4 marks)
- e) A researcher wants to sample from the population such that gender and age groups are represented in proportion to their numbers within the population. Explain the most appropriate sampling method that the researcher should use (3 marks)
- f) State 10 sources of information for literature review when preparing either a research proposal or report (5 marks)
- g) List the essentials for an informed consent (6 marks)
- h) Experimental study designs are preferred over observational study designs because of the quality evidence that they provide. Discuss three uses of experimental studies (3 marks)

QUESTION TWO (20 MARKS)

The housefly feeds on typhoid bacilli-infected excreta in the latrines/toilets and is able to carry such excreta from sick to the healthy. In a city with stable population; the latrines were open and accessible to the housefly. In a period of a few months toward the end of the year, the latrines

were all made fly proof. The number of cases listed in the table below of typhoid fever occurred in the city the year before and the year after the latrines were made fly proof, by month

Month	Typhoid cases occurring before fly proofing	Typhoid cases occurring after fly proofing
January	8	9
February	0	5
March	4	7
April	6	4
May	41	11
June	41	18
July	109	10
August	82	5
September	14	7
October	15	8
November	7	2
December	2	4
Total	329	90

- Which study design was applied in the study above (4 marks)
- What are your reasons for the study design in (a) above (4 marks)
- What inferences would you derive from these data (6 marks)
- Are there any additional data that you would like to have before deriving any inferences? If so, list the kind of data (6 marks)

QUESTION THREE (20 MARKS)

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

QUESTION FOUR (20 MARKS)

Bias in information collection is a distortion in the collected data so that it does not represent reality. Discuss four possible sources of bias during data collection and ways through which they can be prevented (20 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)