

TECHNICAL UNIVERSITY OF MOMBASA  
FACULTY OF APPLIED AND HEALTH SCIENCES  
DEPARTMENT OF ENVIRONMENT AND HEALTH SCIENCES

University examination for bachelors' degree in community health

Code: APH 4300-Research methods

Question one

- a) Define the following terms as used in research (3 marks)
  - i. Hypothesis
  - ii. Variable
  - iii. Background variables
- b) What is the difference between reliability and validity? Which is more important (4 marks)
- c) In research, the choice of methods of data collection is based on: (4 marks)
- d) Discuss why interviewing as form of questionnaire administration is preferred over self-administered method (3marks)
- 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 (2 marks)
- f) Briefly describe the key requirements for interpretation of case-series data (6 marks)
- g) Explain three types of variations that are likely to contribute to poor reliability (6 marks)
- h) What is random error and how can be reduced? (2 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 data quality checks that are employed during data collection interviews (8 marks)

Question three

- a) Discuss the main types of systematic error in epidemiological studies
- b) Describe five pieces of information that are required before sample size calculation commences (5 marks)

Question four

- a) Discuss five probability sampling methods (10 marks)
- b) Discuss the essentials for an informed consent (10 marks)

Question five

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).