



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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University Examinations 2024/2025

FIRST YEAR, FIRST SEMESTER EXAMINATION FOR DOCTOR OF PHILOSOPHY IN
PUBLIC HEALTH AND DOCTOR OF PHILOSOPHY IN EPIDEMIOLOGY

HPE/HPP 8111: RESEARCH METHODS

DATE: DECEMBER 2024

TIME: 2 HOURS

INSTRUCTIONS:

Answer Question one and any other two Questions

QUESTION ONE (30 MARKS)

- What is research methodology and why is it critical in public health/Epidemiological research? (5marks)
- Giving relevant examples, compare and contrast qualitative and quantitative research designs applied in Public health and Epidemiological research? (5marks)
- Describe the concept of "negative findings" in research and why are they important, and how should researchers report them? (5marks)
- Describe the concepts of validity and reliability in the context of public health and Epidemiological measurement tools? (5marks)

QUESTION TWO (20 MARKS)

- Identify and discuss the main types of common public health and epidemiological study designs., discussing their strengths and weaknesses? (10marks)
- Discuss how various sampling techniques used in public health research and epidemiology studies influence the reliability and validity of study findings? (10marks)

QUESTION THREE (20 MARKS)

- Compare and contrast qualitative and quantitative research methodologies in public health/Epidemiology and show how each approach contributes to evidence-based practice. (10marks)



- b) Giving examples of research questions, develop the best suited for qualitative methods versus quantitative methods, discussing the importance of mixed-methods approaches in addressing complex public health issues? (10marks)

QUESTION FOUR (20 MARKS)

- a) Discuss and Propose a hypothetical Epidemiological or Public health study addressing a current health issue, detailing your chosen methodology, study design, and data collection strategies? (20marks)

