



AMREF INTERNATIONAL UNIVERSITY

SCHOOL OF PUBLIC HEALTH

DEPARTMENT OF HEALTH SYSTEMS MANAGEMENT AND DEVELOPMENT

BACHELOR OF SCIENCE IN HEALTH SYSTEMS MANAGEMENT AND DEVELOPMENT

END OF FIRST SEMESTER EXAMINATION MAY-AUGUST 2025

HMD 221 INTRODUCTION TO RESEARCH METHODS

TIME: Two Hours

Date : 15 AUGUST 2025

TIME : Two (2) Hours Start: 4:30 PM End: 6:30 PM

INSTRUCTIONS TO CANDIDATES

1. This exam is marked out of 70 marks.
2. This examination comprises TWO sections:
Section A: Compulsory Questions (30 marks)
Section B: Long Answer Questions (40 marks)
3. Answer ALL questions in Section A.
4. For Section B, answer any two (2) questions of your choice.
5. Use the university examination booklets provided.
6. Write your student registration number on all your answer sheets.

SECTION A: COMPULSORY (30 Marks)

Short Answer Questions

1. State the importance of “research problem” in research formulation. (2 marks)
2. Differentiate between a hypothesis and an objective. (3 marks)
3. Identify three ethical principles in research involving human participants. (3 marks)
4. Outline three practical challenges that a student researcher might face when conducting field-based data collection in a rural setting. (3 marks)
5. Highlight four characteristics of a good research question. (4 marks)
6. A study is being conducted on adolescent substance use in urban informal settlements. List four appropriate sampling techniques that could be considered. (4 marks)
7. List three limitations of using self-administered questionnaires for data collection in undergraduate research. (6 marks)
8. Identify three types of validity in quantitative research (3 marks)
9. Differentiate between inductive and deductive reasoning, in the context of health behaviour research. (2 marks)

SECTION B: Long Answer Questions (40 Marks)

Answer any two (2) questions in this section.

QUESTION 10

You are designing a study to understand the influence of social media on dietary choices among university students in Kenya.

- a) Formulate two research questions for the study. (4 marks)
- b) Describe the most suitable study design for this research (4 marks)
- c) Outline the data collection tools you would use. (4 marks)
- d) Discuss four ethical considerations relevant to this study. (4 marks)
- e) Describe four appropriate data analysis approaches you would use for the data collected. (4 marks)

QUESTION 11

A researcher is planning to investigate the effects of peer education on contraceptive uptake among adolescent girls aged 15–19 years in Nairobi County

- a) Identify the main variables in this study. (4 marks)
- b) Describe how the researcher could operationalize the main variables. (4 marks)
- c) Explain how the researcher can ensure reliability of the data collection instruments. (6 marks)
- d) Describe three types of biases that could arise in this study (6 marks)

QUESTION 12

You have been tasked with supporting diploma-level students in formulating their research proposals

- a) Describe five components that must be included in the methodology section of a standard undergraduate proposal. (10 marks)
- b) Using a practical example, explain the key differences between cross-sectional and randomized controlled trial designs. (6 marks)
- c) Describe four common mistakes made by beginner researchers when writing literature reviews. (4 marks)