



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF COMMUNITY HEALTH
BACHELOR OF SCIENCE IN COMMUNITY HEALTH
END OF SEMESTER EXAMINATION NOVEMBER 2025

CHP 223: DEMOGRAPHY AND POPULATION STUDIES

HRI 101: FUNDAMENTALS OF DEMOGRAPHY

**HMD 131: EPIDEMIOLOGY AND DEMOGRAPHY FOR HEALTH SYSTEM
MANAGEMENT**

DATE: DECEMBER 2025

TIME: TWO Hours

Start:

Finish

INSTRUCTIONS

1. This exam is marked out of 70 marks
2. This Examination comprises TWO Sections
Section A: Compulsory Question (30 marks)
Section B: Long Answer Questions (40 marks)

SECTION A: COMPULSORY

30 MARKS

QUESTION 1

30 MARKS

- i) With appropriate examples describe the concept of "necessary" and "sufficient" causes in disease causation, and provide an example of each. 5 marks
- ii) Compare and contrast between Case Control and Cohort studies 5 marks
- iii) Describe how syndromic surveillance differ from traditional disease surveillance. 5 marks
- iv) Explain the demographic transition model and describe how it relates to public health 5 marks
- v) Describe CONFOUNDING and state any three (3) ways in which it can be controlled 5 marks
- vi) Outline the challenges in designing surveillance systems in resource-limited settings 5 marks

SECTION B: ANSWER ANY 2 QUESTIONS

40 MARKS

QUESTION 2 **20 MARKS**

- i) With appropriate examples, describe any FOUR (4) cohort effects that can influence epidemiological trends in disease incidence 8 marks
- ii) Explain the causes of fertility decline on population structure 6 marks
- iii) Describe the subsequent effects on health care demand 6 marks

QUESTION 3 **20 MARKS**

- i) Critically evaluate the use of any TWO (2) standardized mortality ratios (SMR) in comparing mortality between populations 5 marks
- ii) Discuss ways in which passive and active surveillance differ and provide contexts where each is appropriate 6 marks
- iii) With appropriate examples differentiate between primary, secondary, and tertiary disease prevention 9 marks

QUESTION 4 **20 MARKS**

- i) Discuss ways in which demographic shifts such as aging populations influence the epidemiology of chronic diseases. 6 marks
- ii) With appropriate illustrations, describe any TWO (2) aspects on how migration influences infectious disease epidemiology in the receiving country 8 Marks
- iii) Discuss any TWO (2) key components necessary for an effective disease surveillance system 6 Marks