



[University of Choice]  
MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY  
(MMUST)

[Main CAMPUS]

UNIVERSITY EXAMINATIONS  
2023/2024 ACADEMIC YEAR

SECOND YEAR FIRST SEMESTER EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF SCIENCE IN EPIDEMIOLOGY AND  
BIOSTATISTICS

COURSE CODE: HEM 218

COURSE TITLE: EPIDEMIOLOGY OF NON COMMUNICABLE DISEASES

DATE 6/12/2023

TIME: 2.00-4.00PM

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INSTRUCTIONS:

1. This paper consists of two sections (Section A and Section B)
2. Answer ALL the questions in section A and any TWO questions in section B

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 3 Printed Pages. Please Turn Over

## SECTION A: SHORT ANSWER QUESTIONS (40 Marks)

### Instructions

- The section has a total of ten (10) short answer questions (SAQs), carrying a maximum of forty (40) marks total.
- Answer all the questions
- Write your answers on the provided university examination booklet
  1. Define the following as used in Non-communicable disease Epidemiology and control

[4 Marks]

- i. Non communicable disease
  - ii. Nutritional disease
  - iii. Predisposing factor
  - iv. Cancer staging
2. Differentiate between the Sarcoma and chronic disease [4 Marks]
  3. Highlight the impact of non-communicable disease to the society [4 Marks]
  4. Describe how one would control mental disorder [4 marks]
  5. Identify four risk factors associated with cardiovascular diseases [4 marks]
  6. Identify complications that arise as a result of injuries [4 marks]
  7. State any four the signs and symptoms diabetes [4 marks]
  8. Highlight the applicable designs used to study non communicable diseases [4 marks]
  9. Illustrate the four levels of disease prevention [4 marks]
  10. Identify ways in which inequalities in healthy can be measured [4 marks]

## SECTION B: LONG ANSWER QUESTIONS (40 Marks)

Instructions: This section has THREE (3) long answer questions (LAQs), ATTEMPT ANY TWO QUESTIONS

1. The 2 x 2 table below shows the results of the evaluation of a screening test for breast cancer among 64,810 subjects. 15 marks

	Diseased	Not Diseased	Total
Test Positive	132	983	1,115
Test Negative	45	63,650	63,695
Column Totals	177	64,633	64,810

Determine

- i. Specificity
  - ii. Sensitivity
  - iii. Predictive positive test
  - iv. Predictive negative Test
  - v. Proportions correctly classified
  - vi. false negative
  - vii. false positive
  - viii. Prevalence of breast cancer (15 Marks)
2. Discuss with Illustrations the life course determinants of health and disease(15 marks)
3. Discuss hypertension under the following
- i. risk factors
  - ii. diagnosis
  - iii. treatment
  - iv. control and prevention (15 Marks)

