



University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

MAIN EXAM

2021/2022 ACADEMIC YEAR

SECONDARY YEAR SECOND SEMESTER EXAMINATION

FOR THE DEGREE OF BACHELOR IN ENVIRONMENTAL HEALTH

COURSE CODE: HEH 226

COURSE TITLE: PUBLIC HEALTH EPIDEMIOLOGY

DATE: 21/04/2022

TIME: 3.00-5.00 PM

INSTRUCTIONS TO CANDIDATES:

THIS PAPER CONSISTS OF TWO SECTIONS, A AND B. Answer all questions in section A and any Two in section B

Read additional instructions under each section

SECTION A: ANSWER ALL TEN QUESTIONS (40MARKS)

1. Discuss the epidemiologic Triad and the interaction (4marks)
2. State any 4 importance of epidemiology (4marks)
3. Define the following terms as per public health epidemiology:
 - i) Prevalence (1mark)
 - ii) Incidence (1mark)
 - iii) Odd Ratio (1mark)
 - iv) Relative Risk (1mark)
4. Outline factors of disease causation (4marks)
5. Discuss the following elements of epidemiology:
 - i) Distribution (1mark)
 - ii) Determinants (1mark)
 - iii) Specified populations (1mark)
 - iv) Applications (1mark)
6. State 4 principles of epidemiology in public health practice (4marks)
7. As an environmental health student what are uses of epidemiology (4marks)
8. Give formula to the following epidemiological measures:
 - i) Incidence rate (1marks)
 - ii) Odd ratio (1marks)
 - iii) Relative Risk (1marks)
 - iv) Prevalence Rate (1marks)
9. Describe retrospective study and its advantages (4marks)
10. Differentiate Randomized control trial and clinical trial as in epidemiological study methods (4marks)

SECTION B: ANSWER ANY TWO QUESTIONS (30 MARKS)

1. a) Natural history of a disease is the progression a disease process in an individual. discuss in details every stage (7marks)
b) Explain all levels of prevention that can be applied at any stage along the natural history of a disease with the goal of preventing further progression of the condition. (8marks)
2. a) Describe case control studies, advantages and disadvantages (7marks)
b) Explain the following study methods as per public health epidemiology unit course:
 - i) Cross-sectional survey
 - ii) Cohort studies

iii) Case study

iv) Longitudinal studies

(8marks)

3a) Giving examples discuss experimental studies (7 marks)

. b) Explain observational studies as per taxonomy of epidemiologic studies (8marks)

