



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF COMMUNITY HEALTH
MASTER OF PUBLIC HEALTH
END OF SEMESTER EXAMINATION AUGUST 2022

UNIT CODE: MPH 713

UNIT NAME: Principles of Epidemiology Epidemiology 713

DATE: XX11th August, 20232

TIME: Three Hours **Start:** 1600 Hours **Finish** 1900 Hours

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INSTRUCTIONS

1. This exam is marked out of 100 marks
2. This Examination comprises TWO Sections
Section A: Compulsory Question (25 marks)
Section B: Long Answer Questions (75 marks)

SECTION A: COMPULSORY (25 Marks)

Short Answer Questions

1. List 5 ways in which epidemiology as a discipline can be used to evaluate the effectiveness of health programs and services in improving population health (5 Marks)
2. What are the interrelationship between Agent, Host and Environment? (5 Marks)
3. Define One Health approach to health as used in epidemiology (5 Marks)
4. Describe the following terms as used in epidemiology (5 Marks)
 - i. epidemic or outbreak
 - ii. cluster
 - iii. endemic
 - iv. pandemic
5. Briefly describe the difference between descriptive and analytic Epidemiology (5 Marks)

Commented [MO1]: At this level, listing is very basic. The minimum should be explain with examples Please revise

Commented [MO2]: Definition only can not be 5 Marks. Please revise this

Commented [MO3]: Is this describe or highlight. I propose you choose two and let the student describe

SECTION B (Set 5 Questions)

ANSWER ANY THREE (3) QUESTIONS (75 Marks)

Long Answer Questions

6. An epidemiologist is doing a study on the sleep patterns of college students but does not provide any intervention.
 - i. What type of study would you recommend? (5 marks)
 - ii. Provide 5 reasons why you would recommend that study design (15 marks)
 - iii. What type of a study would you recommend to describe the eating habits of adolescents aged 13–18 years in Community X (5 marks)
7. List down 5 steps involved in outbreak investigations (25 marks)
8. Within 10 days after attending a June wedding, an outbreak of cyclosporiasis occurred among attendees. Of the 83 guests and wedding party members, 79 were interviewed; 54 of the 79 met the case definition.
 - i. Construct a two-by-two table showing consumption of wedding cake (that had raspberry filling) and illness status. (5 marks)
 - ii. Calculate the attack rate (5 marks)
 - iii. Calculate the relative risk (5 marks)
 - iv. Calculate attributable risk proportion for wedding cake (5 marks)
 - v. To study the causes of an outbreak of aflatoxin poisoning in Africa, investigators conducted a case-control study with 40 case-patients and 80 controls. Among the 40 poisoning victims, 32 reported storing their maize inside rather than outside. Among the 80 controls, 20 stored their maize inside. The resulting odds ratio for the association between inside storage of maize and illness is? (5Marks)
9. In Conducting a case-control study, discuss the following (25Marks)
 - a. Selection of cases and control
 - b. Matching
 - c. Measurement of exposure
 - d. Analysis and interpretation
 - e. List down 2 disadvantages and 3 advantages of Case-Control Studies
10. i. Identify 5 criteria in case definitions using malaria as Example (10Marks)
ii. describe 5 reasons why integrated Disease Surveillance and Response is important in Public health (15 marks)
11. a.) Define Bias as used in epidemiological studies and describe how you would control for the following types of biases (10 marks)
 - i. Selection Bias
 - ii. Loss to Follow Up Bias
 - iii. Control Section Bias
 - iv. Recall Bias
 - v. Information biasb.) Describe 5 differences between randomized control studies, cohort studies and cross sectional studies (15Marks)

Commented [MO4]: Just recommending a study should not be 5 Marks

Commented [MO5]: You mean each reason is 3 Marks??

Commented [MO6]: Just recommending a study should not be 5 Marks

Commented [MO7]: Consider using another Blooms taxonomy

Commented [MO8]: Consider using another Blooms taxonomy

Commented [MO9]: Just identifying this should not be 10 Marks

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