



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF COMMUNITY HEALTH
HIGHER DIPLOMA IN COMMUNITY HEALTH PRACTICE
END OF SEMESTER EXAMINATION JAN/APRIL 2024

UNIT CODE: HDCH 014

UNIT NAME: EPIDEMIOLOGY

Date: 9th April 2024

Time: 2 hours 4.30 PM ----- 6.30 PM

INSTRUCTIONS

1. This exam is marked out of 60 marks
2. This Examination comprises TWO Sections
Section A: Compulsory Question (20 Marks)
Section B: Long Answer Questions (40 Marks)
3. All questions in Section A are compulsory and Answer any TWO questions in Section B
4. This online exam shall take 2 Hours
5. Late submission of the answers will not be accepted
6. Ensure your web-camera is on at all times during the examination period
7. No movement is allowed during the examination
8. Idling of your machine for 5 min or more will lead to lock out from the exam
9. The Virtual Assessment System (LMS) has inbuilt integrity checks to detect cheating
10. Any aspect of cheating detected during and or after the exam administration will lead to nullification of your exam
11. In case you have any questions call the Invigilator on Tel +254720573449
12. For adverse incidences please write an email to: amiu.examinations@amref.ac.ke

SECTION A: ATTEMPT ALL QUESTIONS (20 MARKS)

1. Define with examples the following epidemiological measures of disease frequency.
 - a) Prevalence of disease (2 Marks)
 - b) Incidence of disease (2 Marks)
2. Differentiate between epidemic and endemic. (4marks)
3. Mention three sources of epidemiological data. (3 Marks)
4. Outline with examples three characteristics of disease distribution in a community. (6marks)
5. Highlight three determinants of diseases. (3marks)

SECTION B: ATTEMPT ANY TWO QUESTIONS (40 MARKS)

6. There were five vendors (A, B, C, D, E) supplying milk to a nursery school with 200 children on a daily basis and one of them, vendor D, was suspected to have supplied contaminated milk which caused *cholera* outbreak among some of the children. Parents and teachers were eager to understand which vendor's milk caused *cholera*. As a public health officer with knowledge in Epidemiology, you are required to address this problem.

Table 1.0 below gives us the distribution of children by the milk they drank and whether or not they had *Cholera* in the last 2 days.

Table 1.0: Distribution of children by the milk they drank and whether or not they had diarrhoea

	Have <i>Cholera</i> +ve	No <i>Cholera</i> -ve	Total
Drank Vendor D's Milk	10	12	22
Did not drink Vendor D's Milk	0	58	58
Total	10	70	80

- a. Design an epidemiological study that you will perform in order conclude as table 1.0 above? [10marks]
- b. Discuss steps you will carry to investigate this outbreak of Cholera among children. [10marks]

7. Malaria is an endemic disease in Malindi district. Malindi district is characterised by heavy rainfall throughout the year. This has led to most of the areas to have swamps and bushes, which are good breeds for mosquitos. You are tasked to lead your Council Health Management Team (CHMT) to develop a guide to prevent Malaria in Malindi district.

- a. Describe the different levels of diseases prevention with reference to Malaria. [9 marks]
- b. Discuss how you will prevent Malaria in Malindi district. [11marks]

8. In March 2021, four cases of Covid-19 were reported in Kisumu county. The individuals in question were admitted in Kisumu hospital. Unverified information is that two of these patients arrived from a neighbouring country 5 days ago. As an epidemiologist, you are tasked to conduct surveillance for the mentioned patients.

- a. Explain the steps you will use to conduct Covid-19 diseases surveillance. [10marks]
- b. Discuss why it is important to carry out surveillance of Covid-19 disease. [10 marks]