AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF COMMUNITY HEALTH
MASTER OF PUBLIC HEALTH
END OF SEMESTER EXAMINATION DECEMBER 2023

UNIT CODE: MPH 718

UNIT NAME: PUBLIC HEALTH SURVEILLANCE.

DATE: 13th December 2023.

TIME: Three Hours   **Start:**   **Finish:**

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 (70 Marks)
3. The question on Section A is compulsory and Answer any THREE questions in Section B
4. This online exam shall take 3 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 Learning Management 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 +254721440462 or Head of Department on Tel +254720573449
12. For adverse incidences please write an email to: amiu.examinations@amref.ac.ke

SECTION A: Compulsory Question

QUESTION ONE

a) Describe with relevant examples the different levels of disease prevention in public health **(5Marks)**

b) Describe the types/approaches of public health disease surveillance **(5 Marks)**

c) Differentiate between the following terms used in to describe the frequency of disease in public health surveillance:
   i. Endemic, epidemic and Pandemic **(3 Marks)**
   ii. Prevalence and incidence rates **(3 Marks)**
   iii. Relative risk and attack rate **(2 Marks)**
   iv. Elimination and eradication **(2 Marks)**

d) Describe **Five** key elements of an ideal public health surveillance system **(5 Marks)**

SECTION B: ANSWER ANY THREE (3) QUESTIONS

QUESTION TWO

In 1998, the World Health Organization (WHO) Regional Office for Africa (AFRO), together with its technical partners, adopted a strategy for developing and implementing comprehensive public health surveillance and response systems in African countries named Integrated Disease Surveillance and Response (IDSR). Overtime, the guidelines have widely been adopted by Member States. Despite the availability of the IDSR technical guidelines, the Region continues to face challenges in public health surveillance systems, which hinder its capacity to prevent, detect and respond to public health threats.

i. Illustrate the core functions of Integrated Disease surveillance and response (IDSR)
   i. **(10 Marks)**

ii. Discuss the challenges for implementation of Integrated Disease surveillance and response (IDSR) in Africa **(15 marks).**

QUESTION THREE

i. Illustrate **five** trigger events/alerts and warning signals for an outbreak **(5 Marks).**

ii. Discuss the **ten** steps followed in outbreak investigation using cholera outbreak as a case study **(20 Marks).**

QUESTION FOUR

Indicator-based surveillance is the systematic (regular) identification, collection, monitoring, analysis and interpretation of structured data, such as indicators produced by well-identified, mostly health-based formal sources.

    i.   Differentiate between Indicator-Based Surveillance (IBS) and Event-Based Surveillance (EBS) **(5 Marks).**
   ii.   Discuss with relevant examples, the common methods of indicator-based surveillance **(20 Marks)**.

QUESTION FIVE

Discuss **ten** key attributes considered while evaluating the public health surveillance and response systems **(25 marks)**.

QUESTION SIX

   i.   Demonstrate **five** major sources of data for public health surveillance **(10 Marks)**
   ii.   Discuss the process of setting up a public health surveillance system in your country **(15 marks).**