



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF HEALTH SYSTEMS MANAGEMENT AND DEVELOPMENT
BACHELOR OF SCIENCE IN HEALTH SYSTEMS MANAGEMENT AND
DEVELOPMENT
END OF SEMESTER EXAMINATION MAY-AUGUST 2026
HMD 329/CHP 231 INTEGRATED DISEASE SURVEILLANCE AND RESPONSE
MAIN EXAM

TIME: Two Hours

Date : 7th AUGUST 2026

TIME : Two (2) Hours Start--5:30 PM ---End... 7:30 PM.....

INSTRUCTIONS TO CANDIDATES

- 1) This exam is out of 70 marks
- 2) Section-A is compulsory with a Total of 30 Marks
- 3) Answer any TWO (2) questions in Section B

Read carefully the additional instructions preceding each section.

SECTION A: ANSWER ALL QUESTIONS (30 MARKS)

1. Explain the difference between disease prevention, disease control, and disease surveillance, using appropriate public health examples. (5 Marks)
2. Discuss five principles that guide an effective disease surveillance system. (5 Marks)
3. Describe the importance of surveillance data in public health decision-making and disease control programs. (5 Marks)
4. Outline five major sources of disease surveillance data and explain the contribution of each source to disease monitoring. (5 Marks)
5. Explain the role of case definitions in disease surveillance and describe the different categories of case definitions used in surveillance. (5 Marks)

6. Discuss five characteristics of an effective disease reporting system. (5 Marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

Question 7

Following reports of increasing cases of acute watery diarrhoea in several villages, the County Health Department has initiated enhanced surveillance activities.

- a) Explain the key steps involved in disease surveillance. (8 Marks)
- b) Discuss four types of disease surveillance systems that may be used to monitor the outbreak and indicate the strengths of each system. (6 Marks)
- c) Explain how surveillance findings can be analyzed and interpreted to support disease prevention and control interventions. (6 Marks)

Question 8

A county government intends to strengthen surveillance for notifiable diseases following concerns about delayed outbreak detection.

- a) Discuss the core functions of a disease surveillance system. (8 Marks)
- b) Explain the role of surveillance reporting systems in improving disease detection and response. (6 Marks).
- c) Discuss disease frequency measures that can be used to assess disease trends and guide public health action. (6 Marks)

Question 9

A sub-county has experienced recurrent outbreaks of zoonotic diseases affecting both humans and livestock.

- a) Discuss the concept and importance of zoonotic disease surveillance within the One Health framework. (8 Marks)
- b) Explain how disease modelling can be used to predict disease occurrence and support outbreak preparedness. (6 Marks)

c) Describe the importance of collaboration among human, animal, and environmental health sectors in disease surveillance and control. (6 Marks)

AMU