



**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 SECOND SEMESTER EXAMINATION SEPT-DEC 2025**  
**MAIN EXAM**  
**HMD 329/HRD 205 INTERGRATED DISEASE SURVEILLANCE**

**TIME:** Two Hours  
**Date :** December 2025  
**TIME :** Two (2) Hours Start-----End.....

**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(30mks)**

1. Define *disease surveillance* and explain its main purpose in public health. (5 marks)
2. Describe FIVE principles of an effective disease surveillance system. (5 marks)
3. Identify five major sources of surveillance data used in health systems. (5 marks)
4. Using appropriate examples, differentiate between active and passive disease surveillance. (5 marks)
5. Outline the steps involved in disease surveillance from case detection to feedback. (5 marks)
6. a) Explain the meaning of case definition(2 marks)
7. b) describe its role in surveillance accuracy. (3 marks)

**Section B: Answer any two questions.**

8. a) Suppose a sudden increase in diarrheal cases is reported in a county hospital. Explain five ways in which you would use the disease surveillance system to verify and confirm whether this is an outbreak. (10 marks)
- b) Discuss five ways in which you would apply surveillance data to develop appropriate disease control and prevention interventions for the affected community. (10 marks)
9. a) You have been appointed as part of a public health emergency response team to investigate a cholera outbreak. Describe how you would apply the key steps in outbreak investigation to identify the source and control its spread. (10 marks)
- b) Based on your investigation findings, outline five ways that you can consider to ensure epidemic preparedness and community response to prevent further transmission. (10 marks)
10. a) During a typhoid outbreak, your data shows higher infection rates among residents using a specific water source. Explain five ways in which you can apply analytical epidemiological methods to test this association. (10 marks)
- b) Discuss five ways in which the results from your analysis would be used to implement control measures and prevent future outbreaks. (10 marks)