MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 – Meru-Kenya.
Tel: +254 (0)799529958, +254 (0)799529959, +254 (0)712524293
Website: www.must.ac.ke Email: info@must.ac.ke

University Examinations 2024/2025

FIRST YEAR, FIRST SEMESTER EXAMINATION FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN EPIDEMIOLOGY

HPE 8114: PUBLIC HEALTH SURVEILLANCE

DATE: JANUARY 2025   **TIME: 3 HOURS**

INSTRUCTIONS:
Answer Question one and any other three Questions

QUESTION ONE (40 MARKS)

a) Briefly discuss the role community engagement in the successful implementation of public health surveillance   (5 Marks)

b) Outline the metrics and indicators that can be used to evaluate the effectiveness of a public health surveillance system   (5 Marks)

c) Outline strategies engaged in for data collection and response strategies based on evaluation findings   (5 Marks)

d) Outline how Public Health agencies use feedback from healthcare providers and community members to improve the surveillance system   (5 Marks)

e) Evaluation findings are used to ensure surveillance systems remain relevant in an evolving public health landscape, such as during outbreaks of new diseases. Discuss briefly (5 Marks)

QUESTION TWO (10 MARKS)

a) Discuss ethical and legal considerations that you would consider in public health surveillance when dealing with sensitive health data   (10 Marks)

b) For effective delivery of Public Health surveillance, outline the strategies that public health agencies should employ to maintain or build trust within the target communities   (10 Marks)

QUESTION THREE (10 MARKS)

a) You have been hired as a consultant by an NGO to develop strategic plan for a rural community to investigate suspected cases of health threat or disease. Discuss the key factors that you will consider when choosing the type of surveillance system. that you will use for the particular disease. (10 Marks)

b) Discuss the role of social and political factors towards effective delivery of Public Health Surveillance in low- and middle-income countries (10 Marks)

QUESTION FOUR (10 MARKS)

a) Discuss how an Epidemiologist would effectively integrated Public Health Surveillance systems with healthcare provider networks to ensure timely and accurate data collection
(10 Marks)

b) Discuss the main logistical challenges in deploying surveillance technologies (like GIS or mobile health apps) in remote or underserved areas and how they can these challenges can be overcome (10 Marks)

QUESTION FIVE (10 MARKS)

a) Discuss the strategies that public health agencies can employ to assess the cost effectiveness of a surveillance strategy, especially when considering advanced technologies like Al and big data analytics (10 Marks)

b) Discuss how Public Health agencies would capitalize on feedback from healthcare providers and community members to improve the surveillance system (10 Marks)