



WI-2-60-1-6

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY  
UNIVERSITY EXAMINATIONS 2024/2025

KEMRI GRADUATE SCHOOL  
2024/2025 ACADEMIC YEAR SEMESTER II MAIN EXAMINATIONS  
PEH 3106: APPLIED EPIDEMIOLOGY

**DATE: DECEMBER 2024**

**TIME: 3 HOURS**

**INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS**

**Question 1**

- 1a) Analyze the key principles of public health surveillance (15 marks)
- 1b) How do the principles surveillance contribute to decision-making and development of intervention strategies in public health. (10 marks)
  
- 2a) Discuss the stages of epidemiological transition. (15 marks)
- 2b) Consider how shifts from infectious to chronic diseases impact health systems, particularly in low- and middle-income countries. (10 marks)
  
- 3a) Distinguish between an epidemic, an outbreak and a cluster (5 marks)
- 3b) Discuss five reasons for conducting an outbreak investigation (20 marks)
  
- 4a) Explain why early detection and management are important in lowering the burden of Non-Communicable Diseases (NCDs). (12 marks)
- 4b) Critically analyze the challenges associated with implementing screening and early detection programs for NCDs, especially in resource-limited settings. (13 marks)
  
- 5a) Discuss the importance of protecting privacy and maintaining data confidentiality in epidemiological research? (15 marks)
- 5b) How can public health professionals balance data accessibility with privacy concerns? (10 marks)
  
- 6a) Explain the importance of hazard identification in the risk assessment process. (10 marks)
- 6b) How can the failure to accurately identify hazards impact public health interventions? (15 marks)