



W1-2-60-1-6

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND
TECHNOLOGY**

UNIVERSITY EXAMINATIONS 2023/2024

SPECIAL/SUPPLEMENTARY

PEH 3106: APPLIED EPIDEMIOLOGY

DATE: MAY/JUNE 2024

TIME: 3 HOURS

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

QUESTION 1

- a) Briefly discuss limitations faced by epidemiologists in studying relationships between exposure and disease outcomes in relation to community environmental pollution (15 marks)
- b) Briefly discuss the strengths and weaknesses of ecological studies (10 marks)

QUESTION 2

- a) As a student of epidemiology, identify a specific public health problem of your choice, design a plan for conducting surveillance of the problem (15 marks)
- b) Discuss the tasks of a surveillance system at the peripheral and intermediate levels (10 marks)

QUESTION 3

- a) Explain the key concepts and theoretical frameworks that underpin outbreak investigation. How do these concepts guide the process of identifying and controlling outbreaks? (15 marks)
- b) Discuss how exposure misclassification can be minimized in assessing environmental and occupational exposures in epidemiological studies (10 marks)

QUESTION 4

- a) Explain the role of health promotion and education campaigns in preventing non-communicable diseases (NCDs) and how effective health communication strategies can be designed to promote health behaviours? (15 marks)
- b) Analyze the challenges and strategies involved in using epidemiology to evaluate health policies during public health crises e.g., pandemics (15 marks)