



***“Investing in Africa’s Future”***

**COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES**

**NSPH 545: APPLIED EPIDEMIOLOGY**

**END OF SECOND SEMESTER EXAMINATIONS (SPECIAL)**

**AUGUST/DECEMBER 2021**

**LECTURER: MS. E.M. CHADAMBUKA**

**DURATION: 5 HOURS**

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## **INSTRUCTIONS**

ANSWER **ANY ONE** QUESTION

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**PLEASE STICK TO THE STANDARD HOUSE STYLE i.e.**

- TIMES NEW ROMAN
  - FONT SIZE 12
  - DOUBLE SPACING
  - APA REFERENCING
  - SEND YOUR ANSWER AS A PDF DOCUMENT
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THE MARK ALLOCATION FOR EACH QUESTION IS INDICATED AT THE END OF THE QUESTION

## QUESTION 1

- a) The definition of Epidemiology is given as “...the study of the **distribution** and **determinants** of health-related states or events in specific populations, and the application of this study to the control of health problems” (Last 2020). Giving examples explain the term ‘**distribution**’ in this definition (30 marks)
- b) Discuss the challenges that John Snow met in the process of proving his theory that cholera was spread through the ingestion of contaminated water and identify and describe 4 situations in which today’s public health officer might meet with the same challenges as John Snow. (50 marks)
- c) Discuss the factors that influenced **prevalence** either upwards or downwards (20 marks)

## QUESTION 2

- a) Citing examples discuss the importance of a case definition and explain in detail each of the components (30 marks)
- b) Use the traditional model of the ‘Epidemiologic Triad’ to describe the role of plasmodium falciparum in Malaria and the control of the disease in a community. (40 marks)
- c) Explain the information that you would collect from participants, who attended a memorial service where lunch was served and some of the attendees developed gastroenteritis linked to the meal? Group the information into categories. (20 marks)
- d) What is a line list and what is its importance in outbreak investigation (10 marks)

## QUESTION 3

- a) In a recent survey, investigators found that the prevalence of Disease A was higher than the prevalence of Disease B. The incidence and seasonal pattern of both diseases are similar. Explain this observation (10 marks)
- b) Discuss the application of the three (3) levels of disease prevention in the prevention and control of COVID-19 (50 marks)
- c) Identify any two (4) limitations of surveillance reporting systems and suggest ways of improving them (40 marks)

**END OF PAPER**