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(University of Choice)

MASINDE MULIRO UNIVERSITY OF

SCIENCE AND TECHNOLOGY

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

MAIN EXAMINATION

2022/2023 ACADEMIC YEAR

FIRST YEAR SECOND SEMESTER

EXAMINATIONS FOR THE BACHELOR OF SCIENCE IN HEALTH PROMOTION AND Sports science

COURSE CODE: HSS 109

COURSE TITLE: EPIDEMIOLOGY OF COMMUNICABLE AND NON-COMMUNICABLE DISEASES

DATE: THURSDAY 13TH,APRIL, 2023   **TIME:** 8.00-10.00 A.M

INSTRUCTIONS TO CANDIDATES:
ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS.

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

1. a) Describe the following concepts in epidemiology

   i) Carrier (**2mks**)
   ii) Case definition (**2mks**)
   iii) Determinant (**2mks**)
   iv) Specificity (**2mks**)
   v) Sensitivity (**2mks**)

b) Describe the concept of herd immunity (**4mks**)

c) Explain eight steps taken in the investigation of a disease outbreak (**16mks**)

Q2. a) Describe the contribution of the following scientists to modern day epidemiology;

i) Hippocrates (**4mks**)

ii) John Snow (**6mks**)

b) Illustrate the epidemiologic triad of disease (**10mks**)

Q3.

a) On January 5th, 300 people were invited to a wedding reception. All of them ate the food that was served for dinner. The next day (January 6th) 110 of the 300 people who ate that food developed cholera. Calculate The attack rate and interpret your findings (**6mks**)

b) The following information was collected about Malava Sub-County for the year 2019:

-Total average population= 90,000

-New cases of tuberculosis= 150

- All cases of tuberculosis= 400

- Deaths from tuberculosis= 70

Calculate;

i) Incidence rate of tuberculosis (**3mks**)

ii) Period prevalence of tuberculosis (**3mks**)

iii) Case fatality rate of tuberculosis (**3mks**)

iv) Interpret your findings in (i-iii) above (**5mks**)

Q4. Discuss the following epidemiological studies;

i) Cross-sectional studies (**4mks**)

ii) Cohort studies (**4mks**)

iii) Case control studies (**4mks**)

iv) Quasi-experimental studies (**4mks**)

   vi) Randomised Controlled Trial (**4mks**)

5) Explain the significance of epidemiology to return to play protocol in sports during the covid-19 pandemic (20mks)