



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF HEALTH SCIENCES
UNIVERSITY EXAMINATION FOR DEGREE OF MASTER PUBLIC HEALTH
1ST YEAR 2ND SEMESTER 2022/2023 ACADEMIC YEAR
KISUMU CAMPUS**

COURSE CODE: HMP 5133

**COURSE TITLE: EPIDEMIOLOGY AND CONTROL OF NON-COMMUNICABLE
DISEASES**

EXAM VENUE:

STREAM:

DATE:

EXAM SESSION:

TIME:

3.00 HOURS

Instructions:

1. Answer **Question ONE (compulsory)** and any other TWO questions.
2. Candidates **MUST** not to write anything on the question paper.
3. Candidates **MUST** hand in their answer booklets to the invigilator while in the examination room.

QUESTION 1

- a. What are the factors leading to the increased burden of non-communicable diseases globally? **(5 marks)**
- b. Using examples, explain the difference between modifiable and metabolic risk factor of disease. **(5 marks)**
- c. The World Health Organisation has recommended two approaches for the primary prevention of chronic diseases where the risk factors are established. Explain these two approaches. **(10 marks)**

QUESTION 2

- a. Suppose you want to determine the prevalence of hypertension among adult population in your location. Which research design would you use to determine the prevalence of hypertension in your location? Why do you think this study design is appropriate? **(10 marks)**
- b. In a study with 100 healthy persons, 20 persons were affected with liver disease after being followed for 5 years. Another 10 persons were followed for 1 year and then lost to follow-up. The remaining 70 persons were followed for 10 years and were never affected with the liver disease. Calculate the incidence rate of liver disease in this population over this period. **(10 marks)**

QUESTION 3

- a. Describe the Haddon's Matrix and using a relevant example explain how this tool is used to analyse adverse events or anticipated events in order to recommend preventive strategies to protect the population from adverse events. **(10 marks)**
- b. Haddon argued that injuries could be easily examined from an epidemiologic framework. Describe this argument using the framework of the epidemiologic triad. **(10 marks)**

QUESTION 4

- a. Explain the four factors used to evaluate a screening program for a disease. **(10 marks)**
- b. Screening is an important tool to search for unrecognised disease or defect by means of rapidly applied tests or examinations in apparently healthy individuals. Describe the different types of screenings. **(10 marks)**

QUESTION 5

- a. Explain Disability Adjusted Life Years (DALYs) as used in public health. In what ways is DALYs used in public health. **(10 marks)**
- b. Describe how DALYs are constructed in public health. In answering this question, give the components of DALYs. **(10 marks)**