



MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

**FIRST YEAR SECOND SEMESTER EXAMINATIONS
FOR THE DEGREE OF MASTER OF PUBLIC HEALTH
IN EPIDEMIOLOGY AND POPULATION HEALTH**

CITY AND HOMABAY CAMPUSES

PHE 823: EPIDEMIOLOGICAL STUDIES

Date: 3rd July, 2017

Time: 9.00 - 12.00pm

INSTRUCTIONS:

- Answer ALL Questions in section A and Question ONE and any other TWO in section B.
- Do not write your name on any papers you use
- Read very carefully the additional instructions preceding each section
- Observe carefully further instructions on the cover of answer booklets

SECTION A: SHORT ANSWER QUESTIONS (SAQs) (90 Minutes)

INSTRUCTIONS:

- 1) **Answer All the Eight (8) Questions in this section**
 1. Define Relative risk and **THREE (3)** possible outcomes of relative risk in cohort studies. **(5marks)**
 2. Describe the design of a case control study and list **FOUR (4)** potential biases in this study design **(5marks)**
 3. List **FIVE (5)** factors that determine the choice of a study design **(5marks)**
 4. Define confounding and list **FOUR (4)** measures undertaken to control the effect of confounding in epidemiological study designs **(5marks)**
 5. Compare Case Control studies and Cohort studies **(5marks)**
 6. Define selection bias and list **FOUR (4)** circumstances related to ways in which individuals are ascertained and selected for a study **(5marks)**
 7. State **FIVE (5)** outcome measures recorded in community trials **(5marks)**
 8. List **FIVE (5)** uses of life tables in Epidemiologic studies **(5marks)**

**SECTION B:
LONG ESSAY QUESTIONS (LEQs) (90 Minutes)**

INSTRUCTIONS:

1. There are **FOUR (4)** Questions in this Section
2. Answer **Question 1 COMPULSORY** and Any other **two (2)** question

LEQ 1.

As a Public health consultant, you have been appointed by the Ministry Of Health to lead a team to initiate a community trial to test the efficacy of a new brand of insecticide treated mosquito net for control of malaria in a malaria endemic region in Southern Sudan. **Discuss the important issues you would consider when planning for this community trial study (30marks)**

LEQ 2.

A total of 2, 123, 323 deaths were recorded in the United States in 1987. The mid-year population was estimated to be 243,401,000. HIV related mortality and population data by age for all residents and for black males are shown in table 1 below. Use information in this table to calculate:

- a. Grude mortality rate **(2marks)**
- b. HIV-(cause)- specific rate for the entire population **(3marks)**
- c. HIV specific mortality among 35 to 44 year olds **(5marks)**
- d. HIV specific mortality among 35 to 44 year old black males **(5marks)**

Table 1: HIV Mortality and estimated population by age group overall and for black males, United States, 1987				
Group (Years)	All Races, All ages		Black Males	
	HIV Deaths	Population (X1,000)	HIV Deaths	Population(X1,000)
0-4	191	18,252	47	1,393
5-14	97	34,146	7	1,697
15-24	492	38,252	145	2,740
25-34	5,026	43,315	1,326	2,549
35-44	4,794	34,305	1,212	1,663
45-54	1,838	23,276	395	1,117
≥55	1,077	51,855	168	1,945
Unknown	3	1	...
Total

LEQ 3.

Discuss the process of critical appraisal of published papers **(15marks)**

LEQ 4.

Discuss design features that can minimize or control potential biases in Epidemiological study designs **(15marks)**