



# **MASENO UNIVERSITY**

## **UNIVERSITY EXAMINATIONS 2016/2017**

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

### **HOMABAY CAMPUS**

#### **PHE 822: DISEASE SURVEILLANCE AND INVESTIGATIONS**

Date: 2<sup>nd</sup> July, 2017

Time: 2.00 - 5.00pm

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#### **INSTRUCTIONS:**

- Answer ALL Questions in section A and any other THREE in section B.
- Read very carefully the additional instructions preceding each section



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**SECTION A (40 MARKS)**

**Instructions:**

1. *This section has EIGHT (8) questions*

2. *Answer all the EIGHT (8) questions*

1. Outline how the following personalities contributed to the development of public health surveillance **(5 marks)**

- I. John Graunt
- II. Samuel Pepys
- III. Sir Edwin Chadwick
- IV. William Farr
- V. Lemuel Shattuck

2. Below are some the major epidemics that were documented to have taken place in human history. For each of the health outcome, provide the risk factor associated with its outbreak and the intervention used to stem the epidemic **(5 marks)**

S/No	Health outcome	Risk Factor	Intervention
1	Plague		
2	Small pox		
3	Relapsing fever		
4	Cholera		
5	Influeza		

- 3. Definition of surveillance consists of five components, itemize them **(5 marks)**
- 4. Highlight the criteria for selecting and prioritizing health problems for surveillance **(5 marks)**
- 5. By using a well labeled diagram, explain the surveillance cycle **(5 marks)**
- 6. Monitoring in public health surveillance is critical, what does it serve? **(5 marks)**
- 7. Outline the basis for evaluation of surveillance and response systems. **(5 marks)**
- 8. Enumerate five support functions of surveillance system **(5 marks)**

**SECTION B: LONG ESSAY QUESTIONS (LEQ'S) (60 MARKS)**

**Instructions:**

*1. This Section has Five (5) Questions*

*2. Answer any Three (3) Questions from this section.*

*Each Questions in this section has been allocated (20 marks)*

9. Indicators are variables that can be measured repeatedly (directly or indirectly) over time and provide measures of change in a system. They provide useful information on the status of the system and flag areas that need improvement.
  - a. Describe the various classification of surveillance indicators (10 marks)
  - b. Discuss other considerations that are useful in selection of indicators (10 marks)
10. Population surveys gather information that is not routinely collected by the existing information systems. Systematically describe how you would conduct a population survey (20 marks)
11. Describe the Core functions of surveillance systems (20 marks)
12. Discuss the attributes that define the quality of a surveillance system (20 marks)
13. Community-based Surveillance (CBS) is an active process of community participation in detecting, reporting, responding to and monitoring health events in the community.
  - a. Describe the Key elements for community-based surveillance (10 marks)
  - b. Discuss sources of information for community-based surveillance (10 marks)