



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF HEALTH SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
IN COMMUNITY HEALTH AND DEVELOPMENT**

2rdYEAR 2nd SEMESTER 2018/2019 ACADEMIC YEAR

KISUMU CAMPUS

COURSE CODE: HCD 3223

COURSE TITLE: DISEASE SURVEILLANCE AND OUTBREAK INVESTIGATION

EXAM VENUE: STREAM

DATE:

EXAM SESSION:

TIME:

Instructions:

- 1. Answer all questions in section A and any other 2 questions in Section B.**
- 2. Candidates are advised not to write on the question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

SECTION A - 30MARKS

Answer all questions

1. Distinguish between the following concepts: **(2marks each)**
 - a) Herd Immunity and Active immunity
 - b) Disease surveillance and Medical surveillance
 - c) Cohort study and case control study
2. For the month of June, 12 new cases of tuberculosis and 12 new cases of seasonal west Nile virus infections were reported to a county health department. You are not sure if either group of cases is a cluster or an outbreak. What additional information might be helpful in making this determination? **(4 marks)**
3. In the previous year, nine people died in Bondo from cervical cancer. List 4 reasons that might justify an investigation in Bondo. **(4 marks)**
4. What is likely to occur when health workers detect and respond to outbreaks without preparedness? **(2 marks)**
5. What is health risk communication? **(2 marks)**
6. List the key elements of disease surveillance systems **(3 marks)**
7. List steps in the investigation of an outbreak **(4 marks)**
8. Describe 2 importance of line listing **(2 marks)**
9. Describe the systems used for data transmittal **(3 marks)**

SECTION B 40MARKS

Answer any TWO questions from this section

1. a) Discuss important issues when considering sources for surveillance data **(10marks)**
b) Giving examples to illustrate your answer, explain the importance of data analysis and interpretation in disease surveillance **(10marks)**
2. You are a health officer in a camp, and there is a suspected outbreak of cholera. Discuss the procedure use to investigate the outbreak of this disease and recommended feasible intervention **(20marks)**
3. a) Nine cases of cancer in Bondo community represents a cluster- a group of cases in a given area over a period of time that seems to be unusual, although we do not actually know the size of the community, the background rate of cancer, and the number of cases that might be expected. Nonetheless, either the health department or the community or both is concerned enough to raise the issue. Under these circumstances, give reasons under which investigation may be justified. **(10marks)**
b) You are called to help investigate a cluster of 10 persons who developed brain cancer in an area over the past couple of years. Most, perhaps all, used cell phones. Which study design would you choose to investigate a possible association between cell phone use and brain cancer **(10marks)**
- 4.a) Discuss the types of disease surveillance **(15 Marks)**
b) Rumors can be a big distractor in disease surveillance. Giving examples, describe how a disease surveillance officer can address the rumours. **(5marks)**