JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

UNIVERSITY EXAMINATIONS 2012/2013

SECOND YEAR SECOND SEMESTER EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE (PUBLIC HEALTH)

KISII LEARNING CENTRE

COURSE CODE: **HCD 3223**
TITLE: **DISEASE SURVEILLANCE AND OUTBREAK INVESTIGATION**

DATE: TIME: DURATION: **3 HOURS**

INSTRUCTIONS
This Paper Contains Five Questions. Answer Question 1 Compulsory) And Any Other Two Questions.

Q1. (a) Write short notes about;
(i) Herd Immunity. **(5 marks)**
(ii) Incubation period. **(5 marks)**
(iii) Passive surveillance **(5 marks)**
(b)You are a county disease surveillance officer, describe the steps you would undertake in investigating the outbreak of an infectious disease that has just occurred in your county. **(15 marks)**

Q2. (a) Describe the criteria for good disease surveillance according to Centers for Disease control (CDC). **(6marks)**
(b) Discuss the role of Disease surveillance systems in developing Countries. **(14 marks)**

Q3. (a) What do you understand by the following terms? **(2 marks)**
(i) Endemic disease.
(ii) Holoendemic disease.
(b) Discuss the different types of epidemic outbreaks that are common in human Populations. **(8 marks)**
(c) Explain the major factors that contribute to the emergence of disease epidemics in human populations. **(10 marks)**
Q4. (a) With appropriate examples explain **fou**r surveillance indicators for

evaluating the efficiency of a typical Disease surveillance and Response System. **(8 marks)**

(b) Explain the **strengths** and **limitations** of the following sources of health data;

(i) Hospital health records. **(6marks)**

(ii)Health surveys. **(6marks)**

Q5. (a) Distinguish between a primary case and a secondary case in disease Epidemiology. **(2 marks)**

(b) The table below represents mumps experience of 390 families exposed to a primary case within a family. Study it and answer the questions that follow;

	Population		Cases	
Age in years	Total	No. susceptible before primary cases occurred	Primary	Secondary
2 - 4	300	250	100	50
5 - 9	450	420	204	87
10 - 19	152	84	25	15

(i) Calculate the secondary attack rate for 2 – 4 year old children.**(3marks)**

(ii) State **three** functions of calculating such a secondary attack rate to an Epidemiologist. **(3marks)**

(c) Describe the steps, activities and challenges encountered in the core processes of the integrated Disease surveillance and Response system in Kenya. **(12marks)**