

JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

UNIVERSITY EXAMINATIONS 2012/2013
FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE DEGREE OF
MASTER OF PUBLIC HEALTH

KISII LEARNING CENTRE

COURSE CODE: **HCD 3221**

TITLE: **PRINCIPLES OF EPIDEMIOLOGY**

DATE:

TIME:

DURATION: 3 HOURS

INSTRUCTIONS

1. THIS PAPER CONTAINS **FIVE** QUESTIONS.
2. ANSWER QUESTION **ONE (COMPULSORY)** AND ANY **TWO** QUESTIONS.

- Q1.(a) Discuss the objectives of epidemiology citing relevant examples from Programmes or Literature **(20 marks)**
(b) State **four** sources of morbidity statistics in Kenya. **(4 marks)**
(c) Outline the applications of morbidity statistics in public health. **(6 marks)**
- Q2. (a) Give **reasons** why descriptive epidemiology is normally undertaken in disease categorization. **(5 marks)**
(b) Describe using a specific disease as a model, how environmental conditions, agent properties and the human protective mechanism interact in causing the disease **(15 mark)**
- Q3. (a) Differentiate between the following terms;
(i) Acute and chronic disease **(2 mark)**
(ii) Infectivity, pathogenicity and virulence. **(3 marks)**
(iii) Natural History and spectrum of a disease **(2 marks)**
(b) Discuss the natural history of a disease such as Hepatitis A that has low pathogenicity and low virulence. **(13 marks)**
- Q4. (a) Describe the criteria for screening programmes in Kenya. **(8 marks)**
(b) Explain the significance of false positive and false negative screening and diagnostic test results in public health. **(6 marks)**
(c) Role of prevalence estimates in epidemiology **(6 marks)**
- Q. (a) Using suitable examples, discuss the dynamics of horizontal disease transmission In Human communities. **(16 marks)**
(b) State the conditions necessary for herd immunity to occur in human populations **(4 marks)**