



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF HEALTH SCIENCES
UNIVERSITY EXAMINATION FOR MASTERS IN PUBLIC HEALTH
1st YEAR 1ST SEMESTER 2018 ACADEMIC YEAR
KISUMU CAMPUS

COURSE CODE: HMP 5112

COURSE TITLE: PRINCIPLES OF EPIDEMIOLOGY

EXAM VENUE:

DATE: TIME: 3 HOURS

Instructions:

- 1. Answer question 1(Compulsory) and any other three questions**
- 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.**

1. a) Define epidemiology (5 marks)
 - b) Describe the following terminology as they apply to epidemiology:
 - I. Epidemic (2 marks)
 - II. Endemic (2 marks)
 - III. Incubation period (2 marks)
 - IV. Attack rate (2 marks)
 - V. Zoonosis (2 marks)

2. Describe the epidemiologic triad of disease by giving examples of its importance in disease causation (15marks)

3. a) Describe routine health data (5 marks)
 - b) State sources and limitations of routine health data (10 marks)

4. a) Define and describe differences between point prevalence and period prevalence (3 marks)
 - b) Define incidence and describe how it is related to prevalence (2 marks)
 - c) The Incidence of TB in Budinga County was 20 new cases in 2014. Calculate the prevalence of TB in that year (10 marks)

- 5) A physical exam was used to screen for breast cancer in 2500 women with biopsy-proven adeno-carcinoma of the breast and in 5000 age- and race-matched control women. The results of the physical examination were positive (i.e. mass was palpable) in 1,800 cases and in 800 control women, all of whom showed no evidence of cancer at biopsy.
 - a) Calculate the sensitivity of the physical examination? (5 marks)
 - b) Calculate the specificity of the physical examination? (5 marks)
 - c) Calculate the positive predictive value of the physical examination? (5 marks)

- 6) Describe the six criteria for disease screening (10marks) and give three examples of diseases from which you think the public could benefit from screening in Kenya (5 marks)