JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATIONS 2012/2013
2ND YEAR 2ND SEMESTER EXAMINATIONS FOR THE DEGREE OF BSC. PUBLIC HEALTH
(KISII LEARNING CENTRE)

COURSE CODE: HPD 3221

COURSE TITLE: PRINCIPLES OF EPIDEMIOLOGY

DATE: 15/4/2013 **TIME: 9.00-11.00AM**

DURATION: 1.5 HOURS

INSTRUCTIONS

1. **This paper contains TWO sections.**
2. **Answer ALL questions in section A (Compulsory) and ANY other Two questions in section B.**
3. **Write all answers in the booklet provided**

Q1 a) Define as to elaborate the meaning of any five of the following terminologies as applied within the definition of epidemiology.10mks

i. Study
ii. Distribution
iii. Determinants
iv. Health-related states and events
v. Specified populations
vi. Application to prevention and control

b) Outline the four levels of chronic disease prevention that correspond to different phases in the development of disease. 20mks

Q2 The purpose of investigating a communicable disease epidemic is to identify its cause and the best means to control it. Briefly describe the steps involved in the investigation and control of epidemics. (20mks)

Q3 i) In an outbreak of gastroenteritis among attendees of a corporate picnic, 99 persons ate potato salad, 30 of whom developed gastroenteritis. Calculate the risk of illness among persons who ate potato salad. (4mks)

ii) Consider an outbreak of shigellosis in which 18 persons in 18 different households all became ill. If the population of the community was 1,000, then the overall attack rate was 18 / 1,000 x 100% = 1.8%. One incubation period later, 17 persons in the same households as these “primary” cases developed shigellosis. If the 18 households included 86 persons, calculate the secondary attack rate. (4mks)

iii) In 2003, 44,232 new cases of acquired immunodeficiency syndrome (AIDS) were reported in the United States. The estimated mid-year population of the U.S. in 2003 was approximately 290,809,777. Calculate the incidence rate of AIDS in 2003 per 100,000 population. 4mks

iv) In an outbreak of varicella (chickenpox) in Oregon in 2002, varicella was diagnosed in 18 of 152 vaccinated children compared with 3 of 7 unvaccinated children. Calculate the risk ratio and appropriately interpret the results. (8mks)

Q4 Describe the following epidemiological studies 20mks

Q5 discuss the Components of the infectious disease process that constitute the chain of disease transmission. (20mks)