TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIROMENT & HEALTH SCIENCES

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN COMMUNITY HEALTH (BSCH16J)

APH 4206: **PRINCIPLES OF EPIDEMIOLOGY**

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 2 HOURS

DATE: Pick Date Apr 2016

Question ONE

i. Out of the 30,000 people living on Migingo Island 25,000 had suffered from typhoid in the last 10 years (2001-2011). During the same period 9, 000 deaths were reported as a result of typhoid. In 2011 alone, 10,000 people suffered from typhoid out of which 3,000 succumbed (died of) to typhoid. Calculate

   a) The incidence of typhoid on the island in 2011. [3 marks]

   b) The mortality rate of typhoid. [3 marks]

   c) The prevalence rate of typhoid. [3 marks]

d) The case fatality rate of typhoid in 2011. [3 marks]

  ii.   Outline any three types of outbreaks. [3 marks]

  iii.   Describe 3 agent characteristics that determine disease outbreaks. [3 marks]

  iv.   Describe any 4 vectors of public interest in the food industry. [4 marks]

  v.   Briefly describe 4 types of causal relationships. [4 marks]

  vi.   Explain the contribution of the following people to public health. [4 marks]

        a) William Farr

        b) John Snow

        c) James Lind

        d) Louis Pasteur

Question TWO

Discuss any 10 host characteristics that may be associated with increased risk of human diseases. [20 marks]

Question THREE

During the last beach party organized by public health students, 22 students suffered from gastroenteritis. The total population of public health students is 350 but only 120 attended the party. You have been asked to assess this outbreak.

a) Calculate the attack rate of gastroenteritis. [4 marks]

b) Describe any 8 factors that influence incidence rates. [16 marks]

Question FOUR

Discuss the used guidelines for judging whether this association is causal. [20 marks]

Question FIVE

a) Citing relevant examples discuss the objectives of epidemiology. [12 marks]

b) Discuss briefly the descriptive epidemiology of yellow fever. [8marks]