



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

UNIVERSITY EXAMINATION FOR:

MASTER OF PUBLIC HEALTH

APH 5114: EPIDEMIOLOGY IN PRACTICE

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 3 HOURS

DATE: 19 Mar 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **SIX** Question(s). Attempt **Choose** instruction.

Do not write on the question paper.

QUESTION ONE (COMPULSORY), ANSWER ANY OTHER FOUR QUESTIONS

Question ONE

- A. Influenza is a major cause of illness, disruption to daily life and work absenteeism among healthy working adults aged between 18 and 64 years. Out of a population of 3200 adults, 1600 were voluntarily vaccinated against influenza. Both the vaccinated and non vaccinated were followed for one year. Among the vaccinated, only 120 suffered from influenza like symptoms while 1100 non-vaccinated had these symptoms. With reference to this statement
- i. tabulate this information [2 marks]
 - ii. Calculate the relative risk [3 marks]
 - iii. Calculate the attributed risk [3 marks]
 - iv. Calculate the attributed risk percent [3 marks]
 - v. Interpret the results in (ii) and (iii) [2 marks]

- B. Describe four risk factors for Ebola. [4 marks]
- C. Briefly describe why biological agents are attractive instruments of terror [4 marks]
- D. Explain any four sponsor's responsibilities in a study. [4 marks]
- E. Why pharmacovigilance is an important phase of a clinical trial. [5 marks]

Question TWO

Emerging and re-emerging diseases are a major threat to human as well as veterinary public health. With new cases occurring approximately one each year, the majority are viruses originating vectors.

- i. Citing relevant examples describe five vector-borne re-emerging diseases. [10 marks]
- ii. Human factors that influence the epidemiology of emerging and re-emerging diseases. [20 marks]

Question THREE

Discuss the basic principles that must be observed in order to satisfy the moral, ethical and legal concepts in epidemiological research as prescribed in The Nuremberg Code (1947). [30 marks]

Question FOUR

Discuss the following study designs

- a) Cross section studies [10 marks].
- b) Case-control studies [10 marks]
- c) Retrospective cohort studies. [10 marks]

Question FIVE

Using appropriate examples, discuss categories of persons consider as vulnerable to coercion or undue influence in a research setting. [30 marks]

Question SIX

Global concerns about the pandemic threats have escalated in the last one decade. These global risks threaten to rapidly unravel progress toward poverty elimination and boosting of shared prosperity.

- a) Discuss levels of health alerts [12 marks]
- b) Good outbreak control relies on applying a package of interventions. Using appropriate examples describe some of this interventions [18 marks]