

**JARAMOGI OGIGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF HEALTH SCIENCES
MPH. EXAMINATION**

KISII

**END SEMESTER EXAMINATION
HMP 5126: EPIDEMIOLOGIC METHODS**

APRIL 2014

TIME ALLOWED: 2 HRS

Note: Answer question one and any other three questions

QUESTION 1 (COMPULSORY)

- a) Define causality as used in epidemiology (2 Marks)
- b) Name two advantages of prospective studies (2 Marks)
- c) Distinguish between (6 Marks)
 - i. Observational and experimental studies
 - ii. Confidentiality and informed consent
 - iii. Principle of respect of person and justice as basic principles relevant to the ethics of research involving human subjects
- d) List three (3) measures a researcher should put in place to ensure confidentiality is maintained on the information/data obtained from participants (3 Marks)
- e) List two (2) main characteristics of a confounder variable (2 Marks)

QUESTION 2

- a) Define written informed consent (2 Marks)
- b) Name two (2) types of observational studies (2 Mark)
- c) Differentiate between clinical and prophylactic trials (2 Marks)
- d) Briefly outline three (3) types of clinical trial (9 Marks)

QUESTION 3

- a) Define hypothesis **(2 Marks)**
- b) Name three (3) approaches in generating hypothesis **(3 Marks)**
- c) Differentiate between confounder and effect modifier variable giving an example in each case **(4 Marks)**
- d) Briefly outline how confounder variable can be controlled at the design stage of research **(6 Marks)**

QUESTION 4

- a) List three (3) types of controlled clinical trials **(3 Marks)**
- b) Briefly outline three (3) approaches used to eliminate assessment bias **(6 Marks)**
- c) Briefly outline steps in:
 - i. Carrying out prospective studies **(6 Marks)**
 - ii. Discovering of associations between the outcome and explanatory variables **(6 Marks)**

QUESTION 5

- a) What is Bias in research **(2 Marks)**
- b) List six (6) steps in evaluating association between outcome and explanatory variable **(3 Marks)**
- c) Briefly discuss sources of Bias and how any of the two can be eliminated **(10 Marks)**

QUESTION 6

- a) Why do we need ethical approval on research involving human beings **(2 Marks)**
- b) What is the main objective of the Belmont report **(3 Marks)**
- a) Briefly write short notes on:
 - i. Ethical approval process **(5 Marks)**
 - ii. Retrospective studies **(5 Marks)**