**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**P.O. Box 972-60200 – Meru-Kenya.**

 **Tel: 020-2069349, 061-2309217. 064-30320 Cell phone: +254 712524293, +254 789151411**

**Fax: 064-30321**

**Website:** [**www.must.ac.ke**](http://www.must.ac.ke) **Email:** **info@must.ac.ke**

**University Examinations 2016/2017**

THIRD YEAR, FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF FOOD SCIENCE AND NUTRITION, BACHELOR OF HUMAN NUTRITION AND DIETETICS.

**AFN 3300: NUTRITION EPIDEMIOLOGY**

**DATE: DECEMBER, 2016 TIME: 2 HOURS**

**INSTRUCTIONS: -** *Answer question* ***one*** *and any other* ***two*** *questions*

**QUESTION ONE (30 MARKS)**

1. Differentiate between
2. Host, environment and agent. (2 marks)
3. Morbidity and mortality. (2 marks)
4. Population and sample. (2 marks)
5. Open ended and closed ended questionnaire. (2 marks)
6. Explain four host factors that influence the exposure and susceptibility of a host to disease. ( 2marks)
7. With the aid of an example, elaborate on the epidemiological approach as applied in epidemiological studies. (5 marks)
8. Use the example of iron in child growth to demonstrate the role of epidemiology in generating new hypothesis about diet and disease. (3 marks)
9. Using your own words, elaborate on the major difficulty you would expect while undertaking nutritional epidemiologic studies. (2 marks)
10. Briefly explain the purpose of data collection in research work. (4 marks)
11. Describe the three levels of prevention indicating the aim at each level. (6 marks)

**QUESTION TWO (20 MARKS)**

1. Briefly explain four key goals of nutritional epidemiology. (4 marks)
2. A study investigating the effect of high dose of vitamin E supplements on coronary heart disease (CHD) followed 1,600 post-menopausal women, 800 who took the high-dose vitamin E supplement (exposed) and 800 who did not (unexposed). 500 new cases of CHD were recorded over the 5 years of study. 50 cases in the exposed and 450 cases in the unexposed.
3. Present the above scenario in a 2x2 table (4 marks)
4. Calculate the;

-Incidence in the entire population

-Risk ratio

-Odd

-Odd ratio

And interpret your findings in each case. (12 marks)

**QUESTION THREE (20 MARKS)**

1. Discuss the natural history of disease. (10 marks)
2. Use diagram ( a conceptual scheme) to distinguish case-control and cohort studies. (10 marks)

**QUESTION FOUR (20 MARKS)**

1. Elaborate on the key chapter in report writing (chronologically) after research work. (14 marks)
2. Explain the main measures of dispersion in a survey/research. (6 marks)