

# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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## University Examinations 2015/2016

THIRD YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR  
OF SCIENCE IN FOOD SCIENCE AND NUTRITION

**AFN 3325: NUTRITIONAL EPIDEMIOLOGY II**

**DATE: NOVEMBER 2015**

**TIME: 2 HOURS**

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

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### QUESTION ONE (30 MARKS)

- a) Differentiate between the following terms:
  - (i) Host, environment and agent. (3 Marks)
  - (ii) Nutrition and nutritional status. (2 Marks)
- b) Briefly describe three different types of disease host. (3 Marks)
- c) Explain the various methods of nutritional status assessment. (4 Marks)
- d) Briefly discuss the various types of specialized nutritional therapy. (5 Marks)
- e) Briefly describe the goals of nutritional epidemiology. (3 Marks)
- f) Using a nutrition-related health event or disease as an example, briefly describe the concept of multifactorial etiology. (4 Marks)
- g) Explain four types of disease screening. (3 Marks)
- h) Use the example of the role of folic acid in foetal development to demonstrate the role of epidemiology in generating new hypothesis about diet and disease. (3 Marks)

**QUESTION TWO (20 MARKS)**

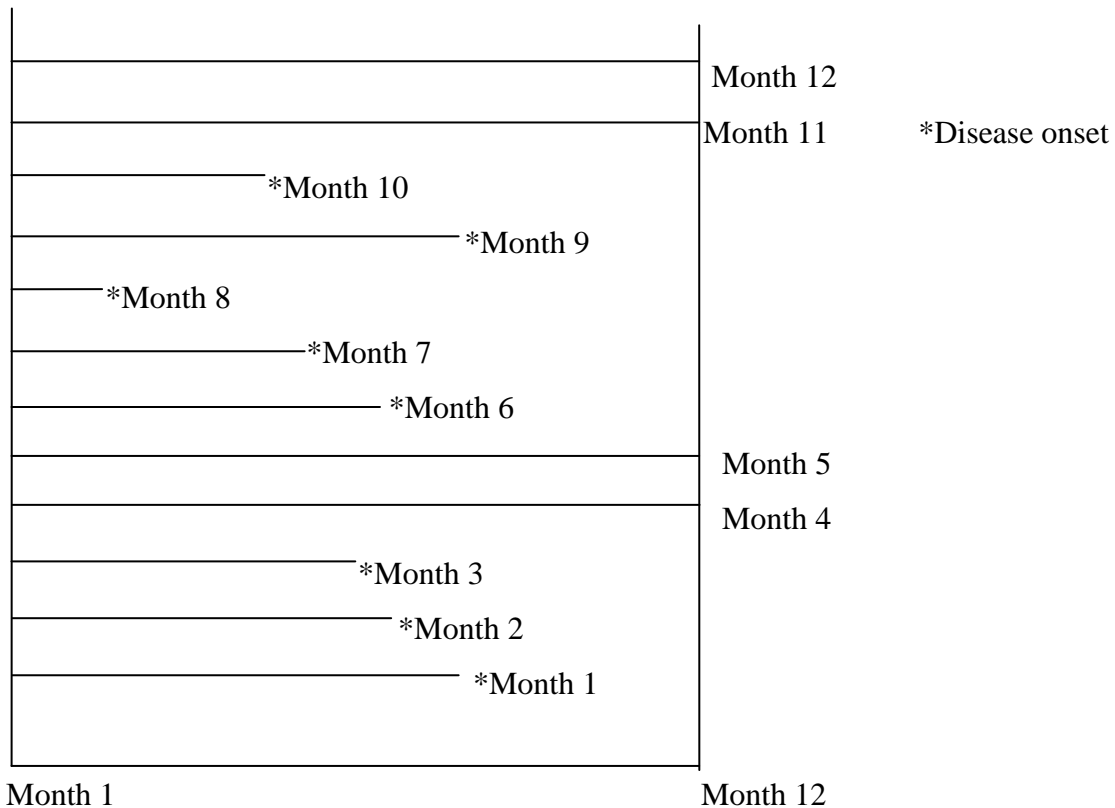
- a) Distinguish between case-control studies and cohort studies. (10 Marks)
- b) Discuss statistical significance versus clinical significance (use examples). (10 Marks)

**QUESTION THREE (20 MARKS)**

- a) Use a diagram (a conceptual scheme) and a hypothetical disease to elaborate on the sufficient cause and component causes model of disease causation. (10 Marks)
- b) Discuss the various measurement of morbidity and mortality. (10 Marks)

**QUESTION FOUR (20 MARKS)**

- a) In a population of 30 thousand students in the year 2007 there were 500 new case of all illness. Calculate the incidence rate. (3 Marks)



- b) Assuming that entire population at risks was followed up for specified time period.  
Calculate the cumulative incidence. (3 Marks)
- c) Discuss the natural history of disease. (14 Marks)