



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

**SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR
OF SCIENCE (FOODS, NUTRITION AND DIETETICS)**

HFN 207: NUTRITIONAL EPIDEMIOLOGY

DATE: Monday, 26th March, 2012

TIME: 2.00 p.m. – 4.00 p.m.

INSTRUCTIONS:

Answer **ALL** questions in the scripts provided.

1. Giving relevant examples, define the following terms as used in epidemiology
 - a) Endemic
 - b) Epidemic
 - c) Pandemic
 - d) Pseudo epidemic
 - e) Population at risk

(10 marks)
2. Identify 5 factors that may influence the prognostic accuracy of a disease.

(5 marks)
3. Discuss the relationship between acute diseases and prevalence

(5 marks)
4. Differentiate between experimental and non-experimental study designs in Epidemiology

(5 marks)

5. Differentiate between a ratio, a proportion and a rate. Which of the three is the most important measure of morbidity and mortality and why? (5 marks)
6. Explain why hospital records could give a biased picture of disease occurrence in any community (5 marks)
7. Using the 4 levels of disease development, trace the steps that one would go through, before they develop a disability due to vitamin A deficiency. (10 marks)
8. Using the epidemiologic triangle as a basis, briefly discuss what happens to disease occurrence in the following scenarios. Give relevant examples.
- a) The host and agent are in a state of equilibrium (3 marks)
 - b) When a change occurs that favors the existence and multiplication of the agent (4 marks)
 - c) When a change occurs that favors the host (3 marks)
9. A total of 2040 pregnant mothers were screened in January of 2010 and 6040 of them were confirmed to be Anemic. The mothers were followed up for a period of 6 months and a total of 40 mothers died within the follow up period, with 15 of the deaths being attributed to Anemia. By the 6th month, 1460 births were reported, 20 of which were still births. In the preceding one month after birth, 60 of the babies were reported to have died. Showing all your working calculate
- a) The prevalence rate of Anemia in January 2010 (3 marks)
 - b) The prevalence rate of Anemia by the sixth month (3 marks)
 - c) The infant mortality rate (3 marks)
 - d) The proportionate mortality rate due to Anemia (3 marks)
 - e) The case fatality rate due to Anemia (3 marks)