

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

# **UNIVERSITY EXAMINATIONS 2014/2015**

**THIRD YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF FOOD SCIENCE AND NUTRITION/ HUMAN NUTRITION AND DIETETICS**

**AFN 2301: NUTRITION EPIDEMIOLOGY II**

**DATE: DECEMBER 2014 TIME: 2 HOURS**

**INSTRUCTIONS:**

**SECTION A: [ANSWER ALL QUESTIONS]**

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1. In less than 30 words, describe the following concepts as applied in the study of nutrition epidemiology [15 marks]
2. Neonatal mortality rate (NMR)
3. Cause specific death rate (CSDR)
4. Period prevalence (PR)
5. Old ratio (OR)
6. Single binding experiment (SBE)
7. Distinguish the following approaches for testing hypothesis in analytical epidemiology observational and experimental approach. [5 marks]
8. (a) Describe the structure of randomized trials [5 marks]

(b) What are the advantages of using RCT, [Randomized Control Trials] in nutrition epidemiology?

**SECTION B: ANSWER ANY TWO QUESTIONS IN THIS SECTION**

1. To aid in calculation of measures of disease association, epidemiological data are often presented in form of 2-by-2 tables. (Four told tables/contingency table]. Use this information to answer the following questions
2. Distinguish between relative risk and attributable risk as measures of disease association [4 marks]
3. Construct a 2-by-2 table if in a retrospective study of 256 diabetic women only 123 were current insulin users at their hospital admission, and of the 4120 control women without diabetes only 1304 were current insulin users. [4 marks]
4. Using the 2-by-2 table constructed in (b) above calculate the following measures of association
5. Odd ratio
6. Relative risk
7. Attributable risk [12 marks]
8. (a) Describe the following important characteristics of a nutrition screening test [8 marks]
9. Validity
10. Reliability
11. Yield [8 marks]

(b) Validity is determined by sensitivity and specificity of the mutational test. Given the following malnutrition diagnostic test results complete the table and determine the two measures of validity [12 marks]

|  |  |  |
| --- | --- | --- |
|  | Diagnostic test | |
| + | - |
| Malnutrition test  (+) | 35 | 45 |
| Malnutrition test (-) | 25 | 33 |

1. Natural development of disease is how a disease develops, while the level of disease prevention refers to the appropriate measure to prevent its effect at different stages of development. Use this information to answer the following questions
   1. Describe the natural development of acute malnutrition in young children [10 marks]
   2. With the aid of a diagram discuss the different levels of prevention and treatment of acute malnutrition [10 marks]