MURANG'A UNIVERSITY COLLEGE
(A constituent college of Jomo Kenyatta University of Agriculture and Technology

SCHOOL: HOSPITALITY AND TOURISM MANAGEMENT

DEPARTMENT: FOOD SCIENCE AND TECHNOLOGY

UNIT COD: DND 1102

UNIT TITLE: INTRODUCTION TO HUMAN NUTRITION

END OF SEMESTER EXAMINATION

DATE: 9-12-2015   **TIME: 2.00PM-4.00PM**

ANSWER 4 QUESTIONS IN TOTAL.

QUESTION <u>ONE</u> IS COMPULSORY.

<u>QUESTION 1 COMPULSORY.</u>

a) Define the following terms
   i.   nutrition   (2marks)
   ii. essential nutrient   (2marks)
b).List three functions provided by nutrients   (3marks)
c) Differentiate with examples between a Saturated and Unsaturated fatty acids   **(**6marks**)**
d) Sate the micro nutrientsdeficientin the following diseases stating symptoms
      i) Beriberi   (4marks)

      ii) Pellagra   (4marks)

      iii) Goitre   (4marks)

<u>QUESTION 2</u>

   a) Explain the Classification of carbohydrates and give two examples in each class   (6marks)
   b) Outline the digestion of carbohydrates andstate the enzymes involved.   (6marks)
   c) State the functions of carbohydrates   (4marks)
   d) Discuss the deficiency disease of carbohydrates.   (6marks)
   e) State food sources of carbohydrates.   (3marks)

QUESTION 3

a) Define the terms;
       a. i)Protein Quality   (2marks)
       b. ii) Amino acid   (2marks)

b) Distinguish with examples between essential andNon-essential amino acid   (6marks)
c) Explain the Digestion and absorption of proteins.   (6marks)
d) State FOUR functions of proteins   (4marks)
e) Discuss the deficiency disease of protein.   (5marks)

QUESTION 4

a)   Highlight thecharacteristics of Vitamin A   (4marks)
b)   State the sources, functions and deficiency diseases of each of the
        following vitamins;
        Vitamin C
        Vitamin D
        Vitamin K   (12marks)

  c) Outline two functions and deficiency diseases for each of the following
        i.   calcium
        ii.   Iron

        iii.   iodine   (9marks)

QUESTION 5

a) Discuss four groups that are more vulnerable to malnutrition than others giving reasons for vulnerability.   (10marks)
b) Describe how to undertake the anthropometric measurements   (9marks)
c) Discuss two methods of assessing the dietary intake.   (4marks