



**MACHAKOS UNIVERSITY**  
**SCHOOL OF HOSPITALITY AND TOURISM MANAGEMENT**  
**DEPARTMENT OF HOSPITALITY MANAGEMENT**  
**FIRST YEAR SPECIAL EXAMINATION FOR CERTIFICATE IN**  
**HOSPITALITY AND TOURISM OPERATIONS**  
**CHTO 013: INTRODUCTION TO NUTRITION**

**DATE:** \_\_\_\_\_

**TIME:** \_\_\_\_\_

**INSTRUCTIONS:**

**Answer all the questions in section A and any two in section B.**

**SECTION A**

- 1 a) Define the following terms(10 marks)
  - i. Nutrition
  - ii. Diet
  - iii. Balanced diet
  - iv. Nutrients
  - v. Malnutrition
- b) Identify four functions of Vitamin C in the body (4 marks).
- c) Describe the effects of heat on fats (6 marks).
- d) Calculate the energy value of the following meal (10 marks).  
8g of carbohydrates  
4g of protein  
3g of fat

**SECTION B**

- 2 a) Explain five factors that influence recommended dietary allowances (10 marks).  
d) Explain the classification of carbohydrates (10 marks).
- 3 a) Describe five symptoms of Pellagra (10 marks).

b) Explain five causes of malnutrition in Kenya today (10 marks).

4 a) Explain five factors to consider when planning meals (10 marks).

b) Nutrients work together for the proper functioning of the body. Giving examples, explain such interactions (10 marks).

5 a) Describe five nutritional needs of Invalids (10 marks)

b) Fill in the gaps for the following trace elements (10 marks).

Trace element	Biological function	Dietary sources
Iron		
Zinc		
Magnese		
Cobalt		
Selenium		