



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR**

MAIN PAPER

**FIRST YEAR FIRST SEMESTER EXAMINATIONS
FOR THE DEGREE
OF
BSC. HUMAN NUTRITION AND DIETETICS**

COURSE CODE: HND 101

COURSE TITLE: PRINCIPLE OF HUMAN NUTRITION

DATE: 27TH APRIL 2022 TIME: 12.00PM -2.00PM

INSTRUCTIONS TO CANDIDATES

Answer ALL Questions in section A and B
Answer ONLY TWO questions in section C

TIME: 2Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 3 Printed Pages. Please Turn Over.

Enter all answers in the answer booklet provided
Section I: MCQs 10 questions. Answer ALL of them. Total 10 Marks

1. Identify the definition which describes the Recommended Dietary Allowances (RDAs)
 - a. The intake value thought to meet the requirement of half the healthy individuals in a population
 - b. The average daily dietary intake level considered to meet the nutrient requirements of nearly all healthy individuals in a population
 - c. Intake levels of a nutrient that seem to maintain adequate nutritional status in a population of healthy individuals
 - d. The highest level of continuing nutrient intake likely to pose no risk of adverse health effects

2. A person who chooses highly nutritious, low-fat food would likely to have a diet that is;
 - a. high in nutrient density and low in calories.
 - b. low in nutrient density and low in calories.
 - c. high in nutrient density and high in calories.
 - d. low in nutrient density and high in calories.

3. Foods with a high glycemic index;
 - a. help to lower the level of glucose in the blood.
 - b. cause a rapid and large surge in blood glucose levels.
 - c. do not contain glucose.
 - d. None of the above

4. A protein food source provides 4 Kilocalories per gram andKilojoules/gram.
 - a. 16.7
 - b. 37.6
 - c. 29.3
 - d. 20.5

5. An organic compound which contain carbon, hydrogen, oxygen, nitrogen, sulphur and phosphorous is
 - a. Lipids
 - b. Carbohydrates
 - c. Proteins
 - d. Mineral

6. Tocopherols are forms of Vitamin
 - a. A
 - b. D
 - c. E
 - d. K

7. The chemical composition of fats include the following **EXCEPT**

- a. Hydrogenation
 - b. Oxygenation
 - c. Emulsification
 - d. Rancidity
8. A body mass index of 27 is considered to be;
- a. Underweight
 - b. Normal
 - c. Overweight
 - d. Obese
9. Which of the following are **NOT** considered essential nutrients?
- a. Lipids
 - b. Water-soluble vitamins
 - c. Phytochemicals
 - d. Minerals
10. A high quality protein is best described as one that contains;
- a. 10gms of protein per 100gms of food.
 - b. All of the essential amino acids in the proper amounts and ratio.
 - c. All of the nonessential amino acids.
 - d. Contains adequate amounts of glucose for protein sparing.

SECTION II : FIVE SHORT QUESTIONS, EACH 6 MARKS (Total 30 MARKS)

11. Describe **six (6)** factors that affect food choices of an individual (6marks)
12. Explain the **four (4)** dietary reference intakes for macronutrients and micronutrients (6marks)
13. List **six** essential amino acid and **six** non-essential amino acids (6marks)
14. Contrast the symptoms of Kwashiorkor and marasmus (6marks)
15. Explain four functions of fats in the body (6marks)
16. A plate serving of rice, beans and cheese contains 8grams of protein, 20 grams of carbohydrates and 11 grams of fats;
- a. Calculate the energy provided by each nutrient (4marks)
 - b. Calculate the total energy provided by all nutrients (2marks)

SECTION III: LONG ANSWER QUESTIONS,15 MARKS EACH , ANSWER ANY OF THE TWO. TOTAL 30 MARKS

17. Tom has a weight of 72kilograms and height of 1.52 meters.
- Calculate his body mass index (1mark)
 - Categorize his body mass index (1mark)
 - Discuss the factors which may have caused the body mass index in (b) above (6marks)
 - Being a nutrition student, provide the best approach to Tom for maintaining optimal nutritional status (7marks).
18. Discuss the uses of recommended daily allowances in society (15 marks)
19. Describe the effect of malnutrition on the economic of our society (15mks).