



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

KAKUMA CAMPUS

MAIN UNIVERSITY EXAMINATIONS

2021/2022 ACADEMIC YEAR

FIRST YEAR, FIRST SEMESTER EXAMINATION

FOR THE DEGREE

OF

B.Sc. HUMAN NUTRITION AND DIETETICS

CODE: HND 100

TITLE: MACRO NUTRIENTS

DATE: 27/4/2022

TIME: 8-10

INSTRUCTIONS TO CANDIDATES

Answer ALL questions in SECTION A, B and C

- a. Read additional instructions under each subsection**
- b. Enter ALL answers in the answer booklet provided**
- c. Write the university registration number on each piece of paper used.**

MMUST observes ZERO tolerance to examination Cheating

This paper consists Four printed Pages. Please Turn Over

SECTION A: Comprises of 10 multiple choice questions each 1mark –total 10marks

1. The process of obtaining food for growth, energy, repair, and maintenance is called ?
 - a. Digestion
 - b. Nutrition
 - c. Metabolism
 - d. Ingestion
2. How much energy will you get from one gram of glucose?
 - a. 3.8 kilocalories
 - b. 4.2 kilocalories
 - c. 4.8 kilocalories
 - d. 5.2 kilocalories
3. Which of the following is found more in the human milk in comparison to cow's milk?
 - a. Lactose
 - b. Fructose
 - c. Starch
 - d. Cellulose
4. Which organ of human body stores glucose in the form of glycogen?
 - a. Lungs
 - b. Liver and muscles
 - c. Stomach and muscles
 - d. Small intestine
5. The energy derived from food which can also be used in physical activity can be expressed in
 - a. Joules
 - b. Calories
 - c. Kilograms
 - d. Grams

6. There are different amino acids that are used in the body, but only nine of these must be supplied by the diet.
- a. 19
 - b. 22
 - c. 17
 - d. 20
7. Which of the in the diet means consuming all four of the basic food groups each day: staple foods (starches)
- a. diet variety
 - b. diet diversity
 - c. balanced diet
 - d. optimal diet
8. To better understand family diet, a more detailed set of 12 food categories can be used to examine the kinds of foods eaten or how diets are changing over time tracking....
- a. diet variety
 - b. diet diversity
 - c. balanced diet
 - d. optimal diet
9. Hydrogenated fats are generally fortified with.....
- a. Vitamin C
 - b. Vitamin K
 - c. Vitamin D
 - d. Vitamin B
10. Fat-like substances produced from fats and fatty compounds are known as ...
- a. Steroids
 - b. Compound lipids
 - c. Simple lipids
 - d. Derived lipid

SECTION B: ANSWER ALL QUESTIONS, EACH QUESTION,6 MARKS

(30 MARKS)

11. Illustrate the food pyramid as a guide used in food selection (6mks)
12. List **SIX** dietary goals needed to achieve appropriate dietary choices (6mks)
13. Outline **SIX** factors that affect thermic effect of food (6mks)
14. Explain the structural functions of protein in the human diet (6mks)
15. Briefly describe any **THREE** synthetic carbohydrates (6mks)

SECTION C: ANSWER ALL QUESTIONS; EACH QUESTION15 MARKS (30 MARKS)

16. Discuss the importance of consuming a nutritionally adequate diet (15mks)
17. Energy expenditure in health is made up of three different components, each of which can be measured. Discuss (15mks)
18. Amino acids are the precursors for many other metabolic intermediates and products with structural and functional roles. Discuss (15mks)