



(University of Choice)

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

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR**

MAIN EXAMS

FIRST YEAR FIRST SEMESTER EXAMINATIONS

FOR THE DEGREE OF

BSC. HUMAN NUTRITION AND DIETETICS

COURSE CODE: HND 100

COURSE TITLE: MACRONUTRIENTS

DATE: 6-12-2023

TIME: 12PM – 2PM

INSTRUCTIONS TO CANDIDATES

There are three sections in the paper, answer questions in **ALL** the three sections.

1. **Section A** comprises of 10 multiple choice questions.
2. **Section B** comprises of 4 short answer questions.
3. **Section C** comprises of 2 essay type questions. Answer **BOTH**

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

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

SECTION A: ANSWER ALL QUESTIONS. EACH QUESTION IS 1 MARK- TOTAL 10 MARKS.

1. In the milk of mammals, the disaccharide presents is _____.
 - a) Glucose.
 - b) Fructose.
 - c) Galactose.
 - d) Lactose.

2. Inulin is a type of carbohydrate found in _____ and _____ food sources.
 - a) Onions and garlic.
 - b) Oats and wheat.
 - c) Onions and cabbage.
 - d) Irish potatoes and Onions.

3. How many of your calories should come from proteins?
 - a) 10% to 35%
 - b) 5% to 15%
 - c) 35% to 50%
 - d) 50% to 60%

4. Our bodies are good at storing protein to use later _____.
 - a) True
 - b) False

5. A disaccharide that gives two units of glucose upon Hydrolysis is _____.
 - a) Sucrose.
 - b) Maltose.
 - c) Lactose.
 - d) None of the above.

6. Mucilages are _____.
 - a) Proteins.
 - b) Polysaccharides.
 - c) Lipids.
 - d) Glycolipids.

7. What are the contents of Pancreatic Juice?
 - a) Pancreatic Lipase- For the digestion of triglycerides.
 - b) Phospholipase A2- for the digestion of Phospholipids.
 - c) Cholesterol esterase-For the digestion of Cholesteryl esters.
 - d) All of the above.

8. Bile salts are formed from _____.
- Bile acids.
 - Bile alkaline.
 - Cholic acids
 - Choline salts
9. Most common monomer of carbohydrate is _____.
- Maltose
 - Glucose
 - Fructose
 - Sucrose
10. Sugar present in DNA is _____.
- Dextrose
 - Ribose
 - Ribulose
 - Deoxyribose

SECTION B: ANSWER ALL QUESTIONS. EACH QUESTION IS 4 MARKS. TOTAL – 20 MARKS.

11. a) What are essential fatty acids? **(2 Marks)**
- b) Name two essential fatty acids **(2 Marks).**
12. Discuss the importance of cellulose in the human diet **(4Marks).**
13. What is the significance of Lipase in the human digestive system? **(4 Marks).**
14. Describe one of the known unsaturated fats **(4Marks).**
15. Discuss the importance of proteins in the human body **(4 Marks).**

SECTION C: ANSWER TWO QUESTIONS. EACH QUESTION IS 15 MARKS. TOTAL 30 MARKS).

14. Name 3 methods of feeding patients in critical conditions and describe one in details **(15 Marks).**
15. Discuss glycolysis and its role in metabolism **(15 Marks).**
16. Discuss the importance of the Krebs cycle in the metabolism of macronutrients **(15 Marks).**

