



# **MASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS**

**2021/2022 ACADEMIC YEAR**

**FIRST YEAR FIRST TRIMESTER**

**SCHOOL OF PURE APPLIED & HEALTH  
SCIENCES**

**DIPLOMA IN FOOD, NUTRITION AND  
DIETETICS**

**COURSE CODE: DND 1106**

**COURSE TITLE: INTRODUCTION TO HUMAN  
NUTRITION**

**DATE: 8<sup>TH</sup> APRIL, 2022**

**TIME: 0830-1030**

**INSTRUCTIONS TO CANDIDATES**

- i. This end of year examination consists of three sections; namely section A, B and C.
- ii. Section A is Multiple Choice Questions (MCQs). There are twenty questions, answer all questions.
- iii. Section B is Short Answer Questions (SAQs). 40 marks. All questions are compulsory. Answer questions on the piece of papers provided.
- iv. Section C is Long Essay Questions (LEQs). 40 marks. Answer any two questions on the piece of paper provided.
- v. Write your registration number and NOT your name on all the pages of your answer sheet.

## SECTION A

1. Amylases in saliva begin the breakdown of carbohydrates into
  - A. Fatty acids
  - B. Polypeptides
  - C. Amino acids
  - D. Simple
  
2. Your body needs vitamins and minerals because
  - A. They give the body energy
  - B. They help carry out metabolic reactions
  - C. They insulate the body organs
  - D. They withdraw heat from the body
  
3. Food passes through the stomach directly by
  - A. The large intestine
  - B. The small intestine
  - C. The heart
  - D. The pancreas
  
4. About half your diet should be made up of
  - A. Grains and vegetables
  - B. Fruits and milk
  - C. Milk and cheese
  - D. Fats and sugars
  
5. According to the pyramid food guidance system, a person should obtain most of their fat from
  - A. Beef, chicken and fish
  - B. Vegetable oils, nuts and fish
  - C. Fats, oils and sweets
  - D. Milk, yogurt and cheese
  
6. A \_\_\_\_\_ is a unit of energy that indicates the amount of energy contained in food
  - A. Label
  - B. Food guide pyramid
  - C. Calorie
  - D. Basket
  
7. The bread, cereal, rice and pasta group is a good source of
  - A. Carbohydrates
  - B. Vitamin C
  - C. Calcium
  - D. Vitamin D
  
8. Foods from the meat, poultry, fish, dry beans, eggs and nuts group are an important source of
  - A. Iron
  - B. Fiber
  - C. Beta carotene
  - D. Calcium

9. How many servings of vegetables do we need each day
- A. 6-11
  - B. 2-3
  - C. 3-5
  - D. 1-2
10. Which of the following is the best source of omega and fatty acids
- A. Corn oil
  - B. Wheat product
  - C. Pork
  - D. Sardines
11. Fat soluble vitamins are
- A. A, D
  - B. B, C
  - C. E, D
  - D. F, E
12. The disease caused in adults because of deficiency of vitamin D is
- A. Hemophilia
  - B. Tuberculosis
  - C. Osteoporosis
  - D. Osteomalacia
13. The soup like mixture in which food is converted after digestion is called
- A. Saliva
  - B. Bolus
  - C. Chyme
  - D. Pepsin
14. The process of elimination of all the undigested food from the body is classified as
- A. Digestion
  - B. Defecation
  - C. Refraction
  - D. Diffraction
15. The portion of the stomach which is present immediately after the esophagus is known as
- Pyloric portion
  - Cardiac portion
  - Opsin portion
  - Gastric portion
16. The amount of calories found in one gram of lipid is
- A. 9 kilocalories
  - B. 7 kilocalories
  - C. 4 kilocalories
  - D. 6 kilocalories

17. Dakavia wants to eat a more healthy diet. She currently does not get much exercise and eats pretty poorly. She did some internet research and found the mypyramid diagram, but she is not sure how to read it. Which of the following recommendations is a part of my pyramid?
- A. People should eat more of foods in the wider base of the pyramid since this represents the most nutritionally dense foods in that food group
  - B. People should aim for 90 minutes of vigorous physical activity everyday
  - C. People should start with a juice cleanse for three days and work out
  - D. People should eat the same five healthy foods everyday
18. Which of the following is not an example of a carbohydrate?
- A. Starch
  - B. Sucrose
  - C. Glycogen
  - D. Cholesterol
19. Food passes through the stomach directly by
- A. The large intestine
  - B. The small intestine
  - C. The heart
  - D. The pancreas
20. Which of these is NOT considered as a nutrient
- A. Vitamins
  - B. Minerals
  - C. Fiber
  - D. Fats

**ANSWER ALL QUESTIONS IN THIS SECTION**

**SECTION B (40MARKS)**

1. Briefly explain the six categories of nutrients? (6mks)
2. Essential amino acids are indispensable amino acids that the body cannot synthesize and must be provided through the diet. List at least FIVE and their major sources (5mks)
3. Marasmus, Chronic PEM occurs commonly in children from 6 to 18 months, highlight FIVE major clinical signs .(5mks)
4. Under the sources of carbohydrates, state the examples of roots and tubers foods(5mks)
5. What is the scientific name of the following minerals(5mks)
  - i. B-9
  - ii. B-12
  - iii. B-7
  - iv. B-5
  - v. B-2
6. State the five food groups under my pyramid guide and the number of serving per group(5mk)

7. State 3 ways in which water is gained through the body (3mks)
8. Discuss the three main/broad classes of food according to their grouping (6mks)

### **SECTION C (40MARKS)**

#### **ANSWER ANY 2 QUESTIONS IN THIS SECTION.**

1. Giving examples, discuss classification of carbohydrates under the following classes:
  - a) Simple carbohydrates (simple sugars) (5mks)
  - b) Complex carbohydrates (starches and fiber) (5mks)
  - c) Discuss at least FIVE major functions of carbohydrates to the human body. (10 mks)
  
2. Water, next to oxygen, is the body most urgent need, more essential to life than food itself.
  - a) Discuss at least FIVE points on why water is an essential component of the body. (10 mks)
  - b) Water deficiency occurs when there is rapid excessive loss of water than the kidneys, through vomiting, diarrhea, heavy sweating and even burns and wounds. Discuss the effect of Dehydration in the human body. (10 mks)
  
3. The micronutrients play a vital crucial role in the normal functioning of the body.
  - a) Vitamin A has several roles to play in the human body. Discuss at least 6 major Roles. (12 mks)
  - b) Vitamin D is intricately related to Calcium and Phosphorus in its functioning, as it is required for optimal absorption and utilization in the body. Vitamin D facilitates a number of activities at different sites in the body, at least discuss FOUR major functions of it. (8 mks)
  
4. Minerals are one of the major Micronutrients and they perform important functions in the body.
  - a) Differentiate between macro-minerals and trace elements (micro-minerals) and give examples for each.(2 mks)
  - b) State and explain SIX major General functions of Minerals in human body.(8 mks)
  - c) Discuss Malnutrition under the following sub-topics:
    - i. Protein Energy Malnutrition (PEM) (5 mks)
    - ii. Severe Acute Malnutrition (SAM) (5 mks)

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