NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY
Faculty of Health and Applied Sciences

Department of Health Sciences

Human Nutrition Programme

QUALIFICATION: BACHELOR OF HUMAN NUTRITION	
QUALIFICATION CODE: 08BOHN	**LEVEL:** 5
COURSE: INTRODUCTION TO FOOD AND NUTRITION	**COURSE CODE:** IFN521S
DATE: JANUARY 2019	**SESSION:**
DURATION: 3 Hours	**MARKS:** 100

SUPPLEMENTARY/ 2nd OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	MS LUSIA HEITA
MODERATOR:	DR LARAI AKU-AKAI

INSTRUCTIONS
1. Answer **ALL** the questions. 2. Write clearly and neatly in the provided answer booklet.
PERMISSIBLE MATERIALS
1. None

THIS QUESTION PAPER CONSISTS OF 4 PAGES (Excluding this front page)

SECTION A

QUESTION 1 (15 MARKS)

For each of the following questions chose the best answer: (1 mark each)

1.1 Roger is a healthy, normally active 70-kilogram adult male. According to the RDA, what would be his recommended amount of daily protein intake?

A. 38.5 grams
B. 56 grams
C. 70 grams
D. 123 grams

1.2 Which of the following criteria determines whether a nutrient is an essential nutrient?

A. Insufficient intake will cause impairments to health and deficiency symptoms
B. The body needs that nutrient to perform specific structural or functional roles
C. The body cannot produce that nutrient in sufficient amounts
D. All of the above

1.3 If one slice of the bread you are using to make your sandwich contains 23 g CHO, 4 g proteins, and 2g FAT, approximately how many kilocalories are in two slices of the bread for your sandwich?

A. 63 Cal
B. 138 Cal
C. 160 Cal
D. 252 Cal

1.4 Which nutrients are considered organic?

A. Those that contain carbon
B. Those that are synthesized by the body
C. Those that come from plant sources only
D. Water and minerals

1.5 What are the additional energy requirements of HIV-positive children who are symptomatic and experiencing weight loss?

A. 20–30 percent more than the recommended daily intake
B. 40-50 percent more than the recommended daily intake
C. 50-70 percent more than the recommended daily intake
D. 50–100 percent more than the recommended daily intake

1.6 An index of a person's weight in relation to height is called:

A. Body Mass Index.
B. Height to Weight index.
C. Ideal body Weight Index.
D. Desirable body weight index.

1.7 When somebody is in negative energy balance, energy intake is _____ energy expenditure, and body weight _____.

A. greater than / increases
B. less than / increases
C. greater than / decreases
D. less than / decreases

1.8 All of the following are trace minerals EXCEPT:

A. Iron
B. Copper
C. Calcium
D. Selenium

1.9 Which of the following statements regarding niacin deficiency is TRUE?

A. It is associated with diets low in fruits and vegetables.
B. It is associated with corn (maize)-based diets.
C. It cannot be supplemented with fortified or enriched foods.
D. It is never fatal

1.10 _____ is a measure of the nutrients a food provides compared to its energy content.

A. Calorie count
B. Nutrient density
C. Fortification level
D. Energy density

1.11 Match the nutrient with its typical sources (a-e). Use each ONCE. (1 mark each) (5)

	Nutrient		**Typical sources**
I.	Iron	A.	canned soups, condiments, table salt, & lunch meats
II.	Sodium	B.	meats, poultry, and seafood
III.	Calcium	C.	vegetables and legumes
IV.	Magnesium	D.	plant oils, wheat germ, sunflower seeds
V.	Tocopherol	E.	yogurt, milk, other dairy products

QUESTION 2 (18 MARKS)

2.1 When a child has Severe Acute Malnutrition, the body goes through a "shut down" mode called Reductive Adaptation. Enumerate three (3) consequences of Reductive Adaptation? (3)

2.2 Based on the WHO conceptual framework of the determinants of undernutrition, what are the three underlying causes of undernutrition? (3)

2.3 Discuss the differences between heme- and non-heme iron, with focus on the health benefits of each, giving an example of food source for each. (6)

2.4 Proteins serve a large number of functions in the body. Discuss on the roles of proteins in the body and diet. (6)

SECTION B

QUESTION 3 (7 MARKS)

As a Nutritionist, you have been carrying out voluntary community nutrition assessment in Goreagab location where you met a young man Tutu who took part in the assessment. During the assessment he complained of being weak, feeling very irritable, poor arm/leg coordination, poor or abnormal sensation in his limbs. He weighs 97kg and is 158cm in height.

3.1 Based on the above assessment what deficiency is he suffering from? Explain (2)

3.2 Discuss the Nutritional Status of Tutu? (5)

QUESTION 4 (20 MARKS)

Study the food label below and answer the questions below:

Nutrition Facts

Serving Size 1.25 Cup (286g)
Servings Per Container 5

Amount Per Serving	
Calories 310	Calories from Fat 110
	%Daily Value*
Total Fat 12g	**18%**
Saturated Fat 4g	**20%**
Trans Fat 0g	
Polyunsaturated Fat 1g	
Monounsaturated Fat 5g	
Cholesterol 20mg	**7%**
Sodium 290mg	**12%**
Potassium 780mg	**22%**
Total Carbohydrate 36g	**12%**
Dietary Fiber 12g	**48%**
Sugars 6g	
Protein 17g	

Vitamin A 20%	•	Vitamin C 80%
Calcium 20%	•	Iron 20%
Vitamin E 8%	•	Vitamin K 110%
Thiamin 25%	•	Riboflavin 20%

A

Nutrition Facts

Serving Size 1 packet (41 g)

Amount Per Serving	
Calories 302	**% Daily Value***
Total Fat 4 g	**6%**
Saturated Fat 1g	**5%**
Cholesterol 0mg	**0%**
Sodium 574mg	**24%**
Total Carbohydrates 62g	**21%**
Dietary Fiber 5g	**20%**
Sugars 25g	
Protein 7g	**14%**

Vitamin A 44%	•	Vitamin C 1%
Calcium 22%	•	Iron 45%
Magnesium 19%	•	Phosphorus 25%
Potassium 7%	•	Zinc 11%
Copper 9%	•	Manganese 1%
Thiamin 44%	•	Riboflavin 44%
Niacin 44%	•	Pantothenic Acid 4%
Vitamin E 1%	•	Vitamin K 2%

B

4.1 Calculate the energy density of each of these foods? (3)

4.2 Calculate % Energy per Serving from fat, and carbohydrate, for each food. (8)

4.3 Based on the dietary guidelines of macronutrient needs, calculate the carbohydrate portion size of Tutu he will need from the starchy food based on his energy needs show your calculations. (5)

4.4 Differentiate between portion size and serving size (4)

SECTION C

Question 5 (20 marks)

5.1 "Malnutrition is a common complication of immune system and plays a significant and independent role in its morbidity and mortality". What is the relationship between Nutrition and Infections? (4)

5.2 Nutritional assessment is the systematic process of collecting and interpreting information in order to make decisions about the nature and cause of nutrition related health issues that affect an individual. Describe the A, B, C, D of Nutritional assessment. (4)

5.3 Discuss the terms ***enriched*** and ***fortified***. What do they mean in relation to food products? Name foods that are enriched or fortified. (6)

5.4 Minerals and trace elements are inorganic substances that are essential for the body to function well. Elaborate on the relevance of the minerals in the body. (6)

QUESTION 6 (20 MARKS)

6.1 Food is perceived to be fundamental to life in all societies. There is no universal diet consumed by everyone, even those in the same geographical location. With clear and concise examples elaborate on the factors that influence food choice. (10)

6.2 Food has been a basic part of our existence. Life cannot exist without it. There are three (3) main functions of food, one of which is to satisfy our physiological needs. With clear and concise examples elaborate on the physiological function of food. (10)

Good luck!!!