



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

**Faculty of Health, Natural
Resources and Applied
Sciences**

School of Health Sciences

Department of Preventative
Health Sciences

13 Jackson Kaujeua Street T: +264 61 207 2970
Private Bag 13388 F: +264 61 207 9970
Windhoek E: dphs@nust.na
NAMIBIA W: www.nust.na

QUALIFICATION : BACHELOR OF HUMAN NUTRITION	
QUALIFICATION CODE: 08BOHN	LEVEL: 5
COURSE: INTRODUCTION TO FOODS, NUTRITION AND HEALTH	COURSE CODE: IFN521S
DATE: NOVEMBER 2023	SESSION: 1
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY: QUESTION PAPER

EXAMINER: MS. MARJORIE VAN WYK

MODERATOR: DR LARAI AKU-AKAI

INSTRUCTIONS:

Answer all questions on the separate answer sheet.

1. Please write neatly and legibly.
2. Do not use the left side margin of the exam paper. This must be allowed for the examiner.
3. No books, notes and other additional aids are allowed.
4. Mark all answers clearly with their respective question numbers.

PERMISSIBLE MATERIALS:

1. Non-Programmable Calculator

This paper consists of 6 pages including this front page

QUESTION 1: MULTIPLE CHOICE QUESTIONS**[10 MARKS]**

Evaluate the statements in each numbered section and select the most appropriate answer or phrase from the given possibilities. Fill in the appropriate letter next to the number of the correct statement/phrase on your ANSWER SHEET. [10]

- 1.1 Compare the following statements and identify a **health claim**: [1]
A. Reduced fat.
B. Vitamin C contributes to the reduction of tiredness and fatigue.
C. Source of Calcium.
D. None of the above.
- 1.2 Hidden hunger can also be referred to as: [1]
A. Protein energy malnutrition
B. macronutrient malnutrition
C. vitamin A deficiency
D. none of the above
- 1.3 Which of the following are not a sign of marasmus: [1]
A. Muscle wasting and baggy pants
B. Moon face and brown hair
C. Visible ribs and old man's face
D. Monkey face and baggy pants
- 1.4 Which of the following terms refers to the balance between nutrition requirements and nutritional intake: [1]
A. Nutritional assessment
B. Balance of nutrients
C. Optimal nutritional status
D. None of the above
- 1.5 The definition of a **balanced** diet is: [1]
A. It provides enough of the energy, nutrients and fiber to maintain health
B. It contains the combinations of food that provide the proper proportions of nutrients.
C. It refers to eating any foods in moderate amounts
D. It refers to eating many different foods from different food groups
- 1.6 Compare the ingredients of these food products and identify which product is more nutrient dense: [1]
A. Sugar, citric acid, natural flavours
B. Puffed milled corn, sugar, corn syrup, molasses
C. Sugar, apples, water
D. Apples, water

- 1.7 A common anthropometric measure for infants is: [1]
A. Standing height
B. Recumbent length
C. Sitting height
D. Laying height
- 1.8 Which of the following are examples of water-soluble vitamins: [1]
A. Vitamin B₁ and B₁₂
B. Vitamin E and A
C. Vitamin B₃ and A
D. Vitamin K and B₆
- 1.9 Which of the following vitamins is mostly synthesised by micro-organisms: [1]
A. Biotin
B. Vitamin B₆
C. Vitamin B₃
D. Vitamin B₁₂
- 1.10 Which of the following minerals are essential in the maintenance of body fluid osmolarity: [1]
A. Phosphorus and magnesium
B. Sodium and Potassium
C. Calcium and magnesium
D. Sodium and phosphorus

QUESTION 2: TRUE/FALSE QUESTIONS

[5 MARKS]

Evaluate the statements and select whether the statement is true or false. Write the word 'True' or 'False' next to the corresponding number on your ANSWER SHEET. [5]

- 2.1 Dietary cholesterol is not required, because the body makes all the cholesterol it needs.
2.2 The asymptomatic phase of HIV does not involve muscle wasting.
2.3 A healthful diet should always include vitamin supplements
2.4 Proteins are not a primary source of energy for our body.
2.5 Vitamin A can also be referred to as retinol and carotenoid.

QUESTION 3: MATCHING QUESTIONS**[5 MARKS]**

Evaluate the Nutrition Recommendation in Column 1 and the Nutrition Guidelines presented in Column 2. Write the letter of the Nutrition Guideline presented in Column 2 that is best defined by the Nutrition Recommendation in Column 1, next to the corresponding number of the Nutrition Recommendation on your ANSWER SHEET. Use each Nutrition Guideline only once. [5]

COLUMN 1	COLUMN 2
3.1 Choose foods that provide an adequate level of dietary fiber, as well as nutrients, including potassium, calcium and vitamin D.	A. Eat a variety of food
3.2 Increase consumption of healthful foods rich in nutrients, while keeping calorie intake within daily needs	B. Eat more fish
3.3 Balance your calories by choosing nutrient-dense foods and beverages.	C. Eat beans or meat regularly
3.4 Choose food that is lower in solid fat and calories.	D. Use whole-grain products
3.5 To ensure that everybody receives all the nutrients and other healthful substances, it is advisable to spread food intake evenly throughout the day.	E. Eat at least three meals a day
	F. Achieve and maintain a healthy body weight

SECTION B: SHORT ANSWER QUESTIONS**[20 MARKS]**

Please answer ALL of the questions in this section.

QUESTION 4**[20 MARKS]**

- 4.1 Define the following terms:
- 4.1.1 Whole foods. [2]
 - 4.1.2 Functional foods. [2]
 - 4.1.3 Absorption [2]
 - 4.1.4 Kilocalorie. [2]
 - 4.1.5 Nutrient density. [2]
- 4.2 Identify the nutrient deficiency or disease that is indicated by the following signs and symptoms:
- 4.2.1 Pallor. [1]
 - 4.2.2 Goitre. [1]
 - 4.2.3 Bitot's spots. [1]
 - 4.2.4 Scurvy. [1]
 - 4.2.5 Severe visible wasting. [1]

- 4.3 Identify **one (1)** fat-soluble vitamin. [1]
- 4.4 Identify the missing words:
- 4.4.1 Nutrition is the science of _____, the _____ and other substances therein. [2]
- 4.5 Explain how **gender (male vs female)**, influences basal metabolic rate. [2]

SECTION C: LONG ANSWER QUESTIONS [35 MARKS]

Please answer ALL of the questions in this section.

QUESTION 5 [10 MARKS]

- 5.1 Briefly outline **four (4)** methods of nutritional assessment. [4]
- 5.2 Describe any **three (3)** principles of diet planning. [6]

QUESTION 6 [10 MARKS]

- 6.1 Nutrition appears to play a role in the development of many diseases. Describe the relationship between nutrition and health and give examples of each relationship. [10]

QUESTION 7 [15 MARKS]

- 7.1 Nutrients are absorbed across the mucosal membrane and into the bloodstream or lymph via four mechanisms. Identify these four mechanisms. [4]
- 7.2 Protein is the second highest compound in the body, following water. A large proportion of protein is in muscle. Protein is also present in skin and blood. Briefly describe the functions of protein in the body. [4]
- 7.3 Explain how the following factors influence food choices:
- 7.3.1 Social interaction [2]
- 7.3.2 Ethnic heritage [2]
- 7.3.3 Emotions [2]
- 7.3.4 Habit [1]

SECTION D: CASE STUDY QUESTIONS [25 MARKS]

Please answer ALL of the questions in this section.

QUESTION 8 [25 MARKS]

CASE STUDY

Remy is a 19 years old boy who came to the hospital complaining of bleeding gums, loosened teeth and slow wound healing. He weighs 50 kg and his height is 169 cm. During his previous visit to the hospital, Remy weighed 56 kg. Remy is moderately active.

- 8.1 Calculate Remy's BMI. [2]

- 8.2 Determine the nutritional status of Remy, based on his BMI. [1]
- 8.3 Calculate the percentage loss of weight of Remy. Indicate the significance of this loss. [3]
- 8.4 Identify the micronutrient deficiency Remy is suffering from. [1]
- 8.5 List any three (3) foods or types of food, Remy needs to consume to address the micronutrient deficiency. [3]
- 8.6 Calculate the energy requirements of Remy. [3]
- 8.7 If, for example Remy's energy requirements are 1750 kcal, design a diet for Remy that provides 55% carbohydrates, 20% protein and 25% fat. Calculate the quantities of carbohydrates, protein and fat in grams and also the energy contribution of each macronutrient to the total energy requirement. [12]

END OF QUESTION PAPER