

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN
HUMAN NUTRITION AND DIETETICS**

HNDS 223: NUTRITION ASSESSMENT

STREAMS: BSC HNDS Y2S1

TIME: 2 HOURS

DAY/DATE: THURSDAY 19/12/2024

8.30 A.M – 10.30 A.M.

INSTRUCTIONS:

- Answer **ALL** questions
- Do not write anything on the question paper
- **No** use of mobile phones or any other unauthorized materials
- Write your answers legibly and use your time wisely

SECTION A: MULTIPLE CHOICE QUESTIONS [ONE MARK EACH] [30MARKS]

1. Which of the following is NOT a method of nutrition assessment?
 - a) Anthropometric measurements
 - b) Biochemical analysis
 - c) Clinical assessment
 - d) Genetic testing
2. Which source of nutrition information is considered most reliable for assessing national dietary intake trends?
 - a) Food frequency questionnaires
 - b) Dietary recalls
 - c) National nutrition surveys
 - d) Expert opinion
3. The main focus of a nutrition survey is to:
 - a) Treat individuals with nutritional deficiencies
 - b) Monitor and assess the nutritional status of a population
 - c) Provide education on healthy eating
 - d) Evaluate the effectiveness of a diet plan

4. Which of the following is a major indicator of acute malnutrition?
 - a) Stunting
 - b) Wasting
 - c) Underweight
 - d) Overweight

5. Vulnerable groups to nutrition deficiencies include:
 - a) Middle-aged men
 - b) Pregnant women and children under five
 - c) Young adult athletes
 - d) The elderly only

6. Which anthropometric measurement is commonly used to assess obesity?
 - a) Height-for-age
 - b) Mid-upper arm circumference (MUAC)
 - c) Weight-for-height
 - d) Body Mass Index (BMI)

7. In growth monitoring, which of the following is the standard reference for assessing child growth?
 - a) WHO Child Growth Standards
 - b) Dietary Reference Intakes (DRIs)
 - c) Body Mass Index Percentiles
 - d) CDC Growth Charts

8. Which of the following biochemical markers is used to assess iron deficiency?
 - a) Serum albumin
 - b) Hemoglobin levels
 - c) Cholesterol levels
 - d) Glucose levels

9. Clinical signs of Vitamin A deficiency include:
 - a) Brittle nails
 - b) Night blindness
 - c) Excessive thirst
 - d) Bone fractures

10. The most appropriate dietary assessment method for individuals in a hospital setting is:
 - a) 24-hour dietary recall
 - b) Food frequency questionnaire
 - c) Diet history
 - d) Direct observation

11. What is a key determinant of nutrition status in individuals?
 - a) Age
 - b) Physical activity
 - c) Food security
 - d) Education level

12. The Mid-Upper Arm Circumference (MUAC) measurement is primarily used for assessing:
 - a) Micronutrient deficiencies
 - b) Childhood obesity
 - c) Protein-energy malnutrition
 - d) Overweight in adults

13. Rapid screening for malnutrition is most often performed:
 - a) In schools for monitoring childhood obesity
 - b) In clinical settings during health emergencies
 - c) During annual wellness visits
 - d) As part of national nutrition surveys

14. Which of the following is an advantage of using computerized dietary analysis systems?
 - a) Reduces food waste
 - b) Provides accurate energy expenditure data
 - c) Helps assess large populations quickly
 - d) Enables accurate nutrient intake calculations

15. A common clinical assessment sign of protein-energy malnutrition is:
 - a) Edema
 - b) Hair loss
 - c) Pale skin
 - d) Rapid weight gain

16. Which is the most suitable indicator for assessing long-term nutritional status in children?
 - a) Weight-for-height
 - b) Mid-upper arm circumference (MUAC)
 - c) Weight-for-age
 - d) Height-for-age

17. The main goal of growth monitoring in children is to:
- a) Diagnose diseases
 - b) Prevent malnutrition and promote healthy growth
 - c) Provide dietary recommendations
 - d) Measure BMI
18. An example of an index of nutritional status is:
- a) Basal metabolic rate (BMR)
 - b) Body mass index (BMI)
 - c) Resting energy expenditure
 - d) Blood glucose level
19. Biochemical measurements are useful in nutrition assessment because they:
- a) Detect nutrient intake levels in populations
 - b) Help diagnose chronic diseases early
 - c) Identify nutrient deficiencies before clinical symptoms appear
 - d) Reflect changes in weight and height over time
20. Which of the following is a common biochemical indicator for assessing iron status?
- a) Blood glucose levels
 - b) Hemoglobin
 - c) Serum cholesterol
 - d) Albumin
21. Stunting is an indicator of:
- a) Acute malnutrition
 - b) Chronic malnutrition
 - c) Micronutrient deficiency
 - d) Overnutrition
22. The term "nutrition vulnerability" refers to:
- a) The risk of food poisoning
 - b) A population's susceptibility to malnutrition
 - c) The inability to digest food properly
 - d) The lack of access to clean water
23. Which of the following anthropometric measurements is used to assess underweight in adults?
- a) Waist circumference
 - b) BMI
 - c) Mid-upper arm circumference (MUAC)
 - d) Height-for-age

24. What is a limitation of using 24-hour recall for dietary assessment?
- a) It requires laboratory testing
 - b) It only captures short-term intake
 - c) It is expensive
 - d) It requires specialized equipment
25. What is the first step in conducting a 24-hour dietary recall?
- a) Asking about portion size
 - b) Recording the respondent's medical history
 - c) Asking for general dietary preferences
 - d) Requesting a complete list of all foods and beverages consumed
26. Which nutrient deficiency can be detected by serum albumin levels?
- a) Iron
 - b) Protein
 - c) Calcium
 - d) Vitamin C
27. What is the significance of Mid-Upper Arm Circumference (MUAC) in children?
- a) It assesses chronic malnutrition
 - b) It measures acute malnutrition
 - c) It determines muscle mass
 - d) It identifies stunting
28. What is a key role of nutrition surveillance?
- a) Diagnose medical conditions
 - b) Monitor trends in nutritional status
 - c) Provide individual dietary advice
 - d) Treat malnutrition
29. When interpreting nutrition data, which factor is most important to consider?
- a) The source of the data
 - b) The weight of the respondents
 - c) The age of the participants
 - d) The socioeconomic status of the population

30. Which of the following is a computer program commonly used for analyzing dietary intake?
- a) SPSS
 - b) Microsoft Excel
 - c) NutriSurvey
 - d) R programming

SECTION B: SHORT ESSAY QUESTIONS [20 MARKS]

1. Explain the following concepts as used in nutrition assessment. [6 marks]
 - i. Nutrition status.
 - ii. Growth monitoring.
 - iii. Anthropometry.
2. Explain two (2) advantages and two (2) limitations of biochemical assessments in nutrition assessment.. [4 marks]
3. State four (4) major nutrition problems commonly found in developing countries. [4 marks]
4. With examples, discuss how dietary assessments can be used to evaluate the risk of chronic diseases. [4 marks]
5. Outline two (2) immediate causes of malnutrition in children. [2 marks]

SECTION C: LONG ESSAY QUESTIONS [20 MARKS]

6. Describe the different dietary assessment methods used in understanding nutritional intake. Discuss the strengths and limitations of each method in the context of different populations. [10 marks]
 7. Discuss the significance of cut-off points based on anthropometric measurements when assessing nutritional status. Provide examples of commonly used anthropometric cut-off points and their application in identifying malnutrition. [10 marks]
-