MACHAKOS UNIVERSITY

University Examinations for 2022/2023Academic Year

SCHOOL OF AGRICULTURE, ENVIRONMENT AND HEALTH SCIENCES

DEPARTMENT OF HEALTH SCIENCES

SECOND YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (FOODS, NUTRITION AND DIETETICS)

HFN 246: NUTRITION ASSESSMENT

DATE: **TIME:**

INSTRUCTIONS:

This paper consists of two sections A and B

SECTION A

- **This section has one question**
- **The question is compulsory**
- **The question is 30 marks**

QUESTION ONE

a) Giving examples differentiate between direct and indirect nutrition assessment methods

(3 marks)

b) Define nutrition assessment (3 marks)

c) Highlight three (3) purposes of dietary assessments in the community (3 marks)

d) Identify the 6 Ps determinants of Malnutrition (3 marks)

e) Explain why anthropometric measures except MUAC are not ideal in nutrition

assessments in pregnant women (3 marks)

f) Explain the challenges associated with biochemical/laboratory nutrition assessment

methods (3 marks)

g)   Alex is 1.7m tall and weighs 102 Kgs. Calculate his Body mass index and determine his nutritional status.   (2 marks)

h)   Using the reference chart provided, determine the nutrition status (SD deviations) of the following children

      i.   Bob, three-year-old boy weight 4.5kg height is 60cm.

      ii.   Maria, 9 months, Weight 5.5 kg height 58 cm   (2 marks)

i)   During screening, Mwikali a pregnant woman was found to have a MUAC measurement of 17cm. Interpret her nutrition status.   (2 marks)

j)   Identify three (3) disadvantages of anthropometric assessment measures   (3 marks)

k)   Highlight the disadvantages of dietary records as a tool in nutrition assessment. (3 marks)

SECTION B: ANSWER ANY TWO QUESTIONS. EACH QUESTION CONTAINS 20 MARKS

- **This section has four (4) questions**
- **Answer any two (2) questions**
- **Each question is 20 marks**

QUESTION TWO (20 MARKS)

a)   Discuss the importance of nutrition assessments in any community   (10 marks)

b)   Discuss the process of using the 24 hour dietary recall as a nutrition assessment method

(10 marks)

QUESTION THREE (20 MARKS)

a)   Using the UNICEFs conceptual framework as a basis, discuss the causes of malnutrition

(12 marks)

b)   The food frequency questionnaire has been used as a tool for dietary assessment. Design a sample food frequency questionnaire and describe how it is used   (8 marks)

QUESTION FOUR (20 MARKS)

a) You have been invited to Mutituni community to carry out a clinical nutrition assessment exercise. The following are some of the clinical signs you notice. For each of the signs indicate a possible nutrient deficiency

     i.   Pallor

    ii.   Goiter

    iii.   Bitot's spots

    iv.   Bilateral pitting oedema

    v.   Severe visible wasting

    vi.   Bleeding and spongy gums

    vii.   Spooning of nails

    viii.   Bow legs

    ix.   Sparse and thin hair

    x.   Glossitis   (10 marks)

b) Describe the dietary assessment principles applied in Nutrition assessments (10 marks)

QUESTION FIVE (20 MARKS)

a) Describe the three (3) non-nutritional methods of nutrition assessment that can be used as proxy indicators of nutritional status   (12 marks)

b) Describe the advantages and disadvantages of each of the following dietary assessment methods

    i.   Diet history

    ii.   Food frequency questionnaire

    iii.   Food records   (8 marks)