THE NATIONAL UNIVERSITY OF LESOTHO

DEPARTMENT OF NUTRITION

NUTRITIONAL ASSESSMENT METHODS NUT3314

SUPPLEMENTARY EXAMINATION 2022/23   3 HOURS   TOTAL MARKS: 100

Instructions:

- The paper consists of two (2) sections; section A (50 marks) and section B (50 marks).

- Attempt all the questions.

- Outline your points clearly.

- Show all your workings.

- Write neat and clean.

SECTION A

Question 1

1.1 Describe the concept and purpose for establishing a nutrition surveillance system.

[10 marks]

1.2 Aging is accompanied by numerous physiologic changes that negatively impact nutritional status and increase the risk of malnutrition. Discuss how you would assess a 72-year-old man using Comprehensive Geriatric Assessment (CGA). **[12 marks]**

1.3 You have had a patient in the Male Ward G for three months. He is aged 54 years and diagnosed with Tuberculosis of the spinal cord. His situation does not get better, and one of the concerns is his nutritional status. His MUAC is 39.8cm, and the waist and hip circumferences readings are 119.7cm and 0.687m, respectively. Give a detailed description of his nutritional diagnosis. Show all your workings when determining his BMI and WHR.

[13 marks]

1.4 'Mé Ntja is a retired senior economist at the Central Bank of Lesotho. She is living with her 32-year-old boyfriend in her new apartment in Ha Abia. She celebrated her 66th birthday a week ago. She has been battling uncontrollable blood glucose and hypertension since she was 56 years old. Due to gangrene, her foot was amputated (1.5%). She is weighing 79kg at a knee height of 0.42m. Assess her nutritional status and give a detailed interpretation.

[15 marks]

Total: 50 marks

SECTION B

Question 2

A 52-year-old woman with obesity and hypertension was prescribed a low-energy diet to promote weight loss. She was admitted to the cardiac intensive care unit for acute dyspnea and chest pain. An angiography revealed filling defects affecting the right and left branches of the pulmonary artery, suggestive of pulmonary embolism. She was placed on anticoagulant therapy.

Medical history

She reported a long-term history of obesity and hypertension. The patient had been on oral contraceptive therapy since the age of 22 years. The therapy was discontinued by her physicians after her pulmonary embolism. She denied allergies and cigarette smoking and reported a sedentary lifestyle with no physical activity.

Medication: Atenolol, warfarin, vitamin B12 and folate supplementation (400μg).

Blood test results on admission to hospital

Indicator	Normal value	Admission
RBC	10^{12}/L	2.78
Hb	12.1-16.3g/dL	13.4
Hematocrit	0.37-0.49L/L	0.4
MCV	80-89FL	83.2
MCH	27-33pg	24.9
WBC	$4-10^9$/L	6.69
D-Dimer	<0.50μg/ml	1.4μg/ml
Folate	2-20ng/ml	5.8ng/ml
Vitamin B12	190-900ng/ml	372ng/ml
Plasma triglycerides	<150 mg/dL	160 mg/dL
Plasma HDL cholesterol	≥60 mg/dL	38 mg/dL
Total cholesterol	<200 mg/dL	298 mg/dL

Clinical

Blood pressure: 145/98mmHg
s-glucose: 4.2 – 8.7mmol/L

Anthropometry

Weight: 93.6 kg
Height: 160 cm
Waist circumference: 122cm

Questions

2.1 Calculate her LDL-C. **[4 marks]**

2.2 Discuss in detail the interpretation of her nutritional assessment data. **[20 marks]**

2.3 Provide a nutritional diagnosis and give five risk factors related to the diagnosis. **[8 marks]**

2.4 Using Cardiovascular Health Metrics - *seven key health factors and behaviors* or **"Life's Simple 7"** as a guide, discuss how you would advise this patient to improve her health and nutritional status. **[14 marks]**

2.5 Based on the nutritional assessment report, what other two chronic diseases is she at risk of? **[4 marks]**

Total: 50 marks