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**UNIVERSITY OF SWAZILAND**  
**FINAL EXAMINATION PAPER**

**PROGRAMME** : **BACHELOR OF SCIENCE IN FOOD  
SCIENCE, NUTRITION AND  
TECHNOLOGY YEAR IV**

**COURSE CODE** : **FSNT 404**

**TITLE OF PAPER** : **CLINICAL NUTRITION**

**TIME ALLOWED** : **TWO (2) HOURS**

**INSTRUCTION** : **ANSWER QUESTION ONE (1) AND  
ANY OTHER TWO (2) QUESTIONS**

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GRANTED BY THE CHIEF INVIGILATOR**

**QUESTION 1 (COMPULSORY)**

**(a) CASE STUDY: Elderly Man with Hypertension.**

Mr. Masuku is a 72-year-old man who has been treated in an outpatient clinic for hypertension over the past four years. Since his wife died one year ago, he has lived alone and has been eating poorly. He has lost 15kgs in the past year. The doctor has prescribed a diuretic (chlorothiazide) for his hypertension and a potassium supplement, because chlorothiazide can lead to potassium depletion.

- i. What factors in Mr. Masuku's history suggest that he is at risk of poor nutrition status? What factors in his history suggest that drug-nutrient interactions should be considered in his case?  
(8 Marks)
- ii. What are the possible side effects of the diuretic and potassium supplement that Mr. Masuku is taking?  
(4 Marks)
- iii. Should these prescription medications be given with food or on an empty stomach? Give the reasons for your answer.  
(4 Marks)
- iv. If Mr. Masuku also was taking prednisone and aspirin for arthritis, how would his risks of drug-nutrient – supplement interactions be changed? What other possible nutrient deficiency would you be alert to?  
(4 Marks)

**(b) Suggest possible diet modifications for the following disorders:**

- i. Cirrhosis (4 Marks)
- ii. Cystic fibrosis (3 Marks)
- iii. Bumping syndrome (4 Marks)
- iv. Hepatitis (3 Marks)
- v. Acute renal failure (6 Marks)

**[TOTAL MARKS = 40]**



**QUESTION 2**

Write brief notes on the following:

- (a) The Stroke Victim (10 Marks)
- (b) Peptic Ulcers (10 Marks)
- (c) Diverticular Disease (10 Marks)

[TOTAL MARKS = 30]

**QUESTION 3**

**CASE STUDY:** Child with Type 1 Diabetes.

Themba is a 10-year-old boy who was diagnosed as having type 1 diabetes. His parents had taken him to visit their physician when he began to lose weight, to urinate excessively, and to complain of thirst. Several family members also have diabetes. Recently Themba was admitted to the emergency room because of nausea and vomiting. The physician could smell acetone on his breath. Urine tests for glycosuria and ketonuria were positive. Blood tests showed that the blood glucose level was 400 milligrams per 100 milliliters. The diagnosis was diabetic ketoacidosis. Themba is 5 feet tall and weighs 36.4 kgs.

- (a) Explain the appearance of the symptoms that eventually led to the initial diagnosis of diabetes. (10 Marks)
- (b) Were Themba's physical symptoms and laboratory tests consistent with the diagnosis of diabetic ketoacidosis? How can you distinguish between diabetic ketoacidosis and insulin shock? (10 Marks)
- (c) Assume that Themba has never had a diabetic diet instruction. What dietary modifications will be important for him to follow? (10 Marks)

[TOTAL MARKS = 30]

**QUESTION 4**

**CASE STUDY: Hypelipidemia**

At age 38 Jane Smith is becoming increasingly concerned about her health. She was recently diagnosed with type II b hyperlipidemia. Ms. Smith has a family history of CHD. She is a vice president of a software company and her schedule is hectic. She smokes a pack of cigarettes a day, seldom exercises, and is 20 pounds overweight. She is 5 feet 9 inches tall and weighs 165 pounds. Her diet is high in kcalories, total fat, saturated fat, and cholesterol.

- (a) Name the risk factors for CHD in Ms. Smith's history. Which of them can be controlled? Which can be helped by diet? What complications can result from CHD?  
(15 Marks)

- (b) What type of diet, if any, would you recommend for Ms. Smith's type of hyperlipidemia? Explain the rationale for each diet change. How will her current diet change?

(9 Marks)

- (c) Name at least two ways in which Ms. Smith could benefit from losing weight. How can exercise fit into a weight-loss plan?

(6 Marks)

[TOTAL MARKS = 30]