



**AMREF INTERNATIONAL UNIVERSITY**  
**SCHOOL OF MEDICAL SCIENCES**  
**DEPARTMENT OF NURSING & MIDWIFERY SCIENCES**  
**END OF SEMESTER EXAMINATION JAN-APRIL 2026 EXAMINATION**

**COURSE CODE AND TITLE: BSN 217: Human Nutrition and Dietetics**

**DATE: 8<sup>TH</sup> APRIL 2026**

Duration: 2PM

Start: 9:00AM

Finish: 11:00PM

**INSTRUCTIONS**

1. This exam is out of 70 marks
2. This Examination comprises THREE Sections. Section I: Multiple Choice Questions (20 marks) Section II: Short Answer Questions (30 marks) and Section III: Long Answer Questions (20 marks)
3. Answer ALL Questions.
4. Do Not write anything on the question paper -use the back of your booklet for rough work if need be.

**SECTION I: MULTIPLE ANSWER QUESTION (20 MARKS)**

1. A patient presents with hair loss, pale conjunctiva, and spoon-shaped nails. Which type of nutritional assessment is being applied?
  - A) Dietary assessment
  - B) Anthropometric assessment

C) Clinical assessment

D) Biochemical assessment

2. A nurse is teaching a patient with a nutritional deficit about nutrient-dense foods. What nutrient provides the most energy per gram of nutrient?

A) Carbohydrates

B) Fats

C) Protein

D) Fiber

3. The term “nutrition” mainly refers to:

A) The digestion and absorption of nutrients

B) The study of food and disease treatment

C) The cultivation of crops

D) Food preservation techniques

4. A nurse is caring for an older adult patient who is dehydrated. The nurse understands that the majority of water in the human body is found where?

A) Inside the body cell

B) In the vascular system

C) In interstitial fluids

D) In the urinary tract

5. A nurse assessing a patient’s nutritional status measures height, weight, and Body Mass Index (BMI). These measurements fall under which assessment category?

A) Biochemical assessment

B) Anthropometric assessment

C) Clinical assessment

D) Dietary assessment

6. Antoine Lavoisier is known as the father of modern nutrition because he:

A) Discovered vitamins

B) Linked food metabolism to energy production

C) Developed food preservation methods

D) Discovered minerals

7. A nurse is reviewing a patient's medication list and notes the patient takes vitamin D tablets once a day. What does the nurse know is true about vitamin D?

A) Found naturally in many foods

B) Found only in animal products

C) Absorbed through direct sunlight

D) A trace mineral

8. A patient consuming a diet high in refined carbohydrates but low in vitamins develops peripheral neuropathy. Which deficiency is most likely responsible?

A) Vitamin B complex

B) Vitamin C

C) Vitamin D

D) Calcium

9. A patient with chronic kidney disease is advised to restrict protein intake. What is the main reason for this dietary modification?

A) Prevent obesity

B) Reduce kidney workload

C) Improve digestion

D) Prevent dehydration

10. Pregnant women require increased intake of which nutrient to prevent neural tube defects in the fetus?

A) Vitamin C

B) Folic acid

C) Calcium

D) Vitamin D

11. The deficiency of which nutrient historically caused beriberi?

A. Vitamin A

B. Vitamin B1 (Thiamine)

C. Vitamin C

D. Vitamin D

12. A nurse is teaching about nutrition during pregnancy and lactation. What foods would be the healthiest option to meet nutritional goals during this time?

- A) Whole milk and red meat
- B) Rice and beans
- C) Eggs and low-fat dairy
- D) Fresh fruits and fruit juices

13. A malnourished patient presents with muscle wasting but normal vitamin levels. Which classification of nutrients is most deficient?

- A. Micronutrients
- B. Macronutrients
- C. Trace elements
- D. Electrolytes

14. A home health nurse is visiting a patient with multiple chronic diseases. The patient is experiencing unintentional weight loss. The nurse considers the role of nutrition in chronic illness. What conditions will not lead to unintentional weight loss in patients with chronic illness?

- A) Conditions that interfere with nutrient resorption
- B) Conditions that interfere with ingestion of nutrients
- C) Conditions that alter the daily allowance of nutrients needed
- D) Conditions that decrease metabolic rate

15. A nurse is developing a program to promote healthy eating for a local community center. What nutrient should make up the largest daily percentage of intake in a healthy diet?

- A) Carbohydrates
- B) Proteins
- C) Fats
- D) Simple sugars

16. A therapeutic diet is best defined as:

- A) A diet taken for weight loss only
- B) A diet modified to meet specific medical and nutritional needs
- C) A diet meant for athletes
- D) A diet containing only organic foods

17. A patient has been newly diagnosed with anemia. The goal of treatment is to maintain stable hemoglobin levels. What supplement can help increase hemoglobin levels?

- A) Vitamin C
- B) Folate
- C) Magnesium
- D) Calcium

18. A nurse is taking a health history. The patient reports that they have a chronic cough, smoke one pack per week, have food allergies, and have a history of dieting. Which has the most impact on nutritional status?

- A) Has a chronic cough
- B) Smokes one pack per week
- C) Has food allergies
- D) Has a history of dieting

19. A patient recovering from major surgery requires increased tissue repair and wound healing. Which nutrient should be prioritized in the diet?

- A) Carbohydrates
- B) Vitamins
- C) Proteins
- D) Minerals

20. A child presents with fatigue, pale conjunctiva, and poor concentration. Laboratory findings reveal low hemoglobin levels. Which nutrient classification is most likely deficient?

- A) Macronutrients
- B) Micronutrients
- C) Electrolytes
- D) Lipid

## **SECTION II: SHORT ANSWER QUESTIONS (30 MARKS)**

1. Highlight the importance of anthropometric measurements in nutritional assessment.

(4mks)

2. Differentiate between macronutrients and micronutrients. (4mks)
3. Identify five nutrients that can be found on a food label. (5mks)
4. A patient shows signs of muscle wasting and edema. Describe how clinical assessment helps in identifying malnutrition. (4 mks)
5. Describe the differences between anorexia nervosa and bulimia. (4mks)
6. List four types of therapeutic diets and give one indication for each. (4mks)
7. Describe the nutritional needs of infants and explain why exclusive breastfeeding is recommended. (5mks)

**SECTION III: LONG ANSWER QUESTION (20 MARKS)**

1. Mr. Otieno, a 72-year-old male, has been admitted to the medical ward following a stroke. He complains of difficulty swallowing food and fluids. During feeding, he coughs frequently and sometimes chokes. The nurse observes that he has poor oral hygiene, swollen gums, and poorly fitting dentures. He has also lost 6 kg over the past two months and appears weak and fatigued. The doctor has requested a nutritional assessment and feeding plan.
  - a) Identify and explain THREE physiological factors affecting Mr. Otieno's nutritional intake..... (6 mks)
  - b) Explain FOUR roles of oral health in maintaining adequate nutrition. (6 mks)
  - c) Outline FOUR nursing interventions to improve Mr. Otieno's nutritional status. (4 mks)
  - d) Describe how BMI is calculated and its importance in nutritional assessment. (4mks)