



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR
SECOND YEAR SECOND TRIMESTER**

**SCHOOL OF PURE, APPLIED AND HEALTH
SCIENCES
BACHELOR OF SCIENCE IN FOODS, NUTRITION,
AND DIETETICS**

**COURSE CODE: FND 2234
COURSE TITLE: DIET THERAPY 1**

DATE: 24TH APRIL, 2024

TIME: 1400-1700 HRS

INSTRUCTION TO CANDIDATES

Section A: Multiple Choice Questions. Answer ALL Questions

Section B: Short Answer Questions. Answer ALL Questions

Section C: Long Answer Questions. Answer Question ONE and any other ONE question.

This paper consists of 6 printed pages. Please turn over.

SECTION A: MULTIPLE CHOICE QUESTIONS (20 MARKS) SELECT THE CORRECT ANSWER.

- 1) Which of the following statement best define the term 'functional foods'
 - A. Foods that have been fortified with vitamins and minerals
 - B. Foods that provide additional health benefits beyond basic nutrition
 - C. Foods that are low in calories and high in fiber
 - D. Foods that are processed and contain added sugars and fats
- 2) Which feeding tube is used when feeding through stomach is not tolerated?
 - A. Nasojejunal feeding
 - B. Gastrostomy feeding
 - C. Tube feeding
 - D. None of the above
- 3) Which of the following is an example of a functional food?
 - A. White bread
 - B. Whole milk
 - C. Yogurt with probiotics
 - D. French fries
- 4) True or False: Polymeric formula contain hydrolyzed nutrient.
 - A. True
 - B. False
- 5) Lucy has been trying to loose weight all her life. She often goes on starvation diets, only to gain the weight back, go back to starving, gain the weight back, etc. This is called
 - A. The diet cycle.
 - B. Anorexia nervosa.
 - C. Extreme dieting.
 - D. Yo-yo dieting.
- 6) Which of the following is considered a nutraceutical?
 - A. Regular fruits and vegetables
 - B. Fast food items
 - C. Herbal products like garlic and ginger
 - D. Plain water
- 7) Which one of the following terms describes an inborn error of iron metabolism due to excessive iron absorption and accumulation in the liver
 - A. Carnitine transporter deficiency
 - B. Hemochromatosis
 - C. Galactosemia
 - D. Hypertyrosinemia
- 8) Which of the following BMI ranges describes an obese class II individual ?
 - A. BMI 30.0-34.9 kgm⁻²
 - B. BMI 18.5-24.5 kgm⁻²

- A. BMI 25-29.9 kgm⁻²
 - C. BMI 35.5-39.9 kgm⁻²
- 9) Which method of enteral feeding administration involves a steady and extended delivery of nutrients over 24 hours using a pump?
- A. Intermittent feeding
 - B. Bolus feeding
 - C. Continuous feeding
 - D. Gravity feeding
- 10) Why might central access be preferred over peripheral access in parenteral nutrition?
- A. Peripheral veins can handle higher osmolality solutions
 - B. Peripheral veins have unlimited fluid capacity
 - C. Central access can accommodate larger fluid volumes and higher osmolality solutions
 - D. Central access has a faster absorption rate
- 11) Why is the elderly population more susceptible to drug-nutrient interactions?
- A. Due to decreased exposure to drugs
 - B. Due to increased efficiency of nutrient absorption
 - C. Due to decreased variability in response to drugs
 - D. Due to increased exposure to drugs for chronic conditions
- 12) Which of the following is the first step in the Nutrition Care Process?
- A. Nutrition diagnosis
 - B. Nutrition intervention
 - C. Nutrition assessment
 - D. Nutrition monitoring
- 13) What is the primary focus of the "D" in the ADIME documentation style?
- A. Diagnosis
 - B. Data
 - C. Decision-making
 - D. Documentation
- 14) How do diuretics affect nutrient excretion?
- A. Increase excretion of potassium, sodium, magnesium, calcium, and chloride
 - B. Decrease excretion of potassium and magnesium
 - C. Increase reabsorption of calcium in the kidneys
 - D. Increase excretion of vitamin B2
- 15) Enteral formulas with high protein content may not be well-tolerated in patients with:
- A. Renal or hepatic disorders
 - B. Gastrointestinal disorders

- C. Neurological disorders
- D. Respiratory disorders
- 16) Elemental formulas are beneficial for patients with:
 - A. Full digestive capabilities
 - B. Limited digestive capacity
 - C. Normal protein metabolism
 - D. High renal solute load
- 17) What is the unit of measure for the diameter of catheters and tubes?
 - A. Inches
 - B. Millimeters
 - C. Centimeters
 - D. French
- 18) What is the primary functional component in fatty fish that helps reduce triglycerides and coronary heart disease risk?
 - A. Phytochemicals
 - B. Omega-3 fatty acids (DHA and EPA)
 - C. Plant Sterol
 - D. Isoflavones
- 19) LBW infants are defined as having a birth weight less than:
 - A. 2000 grams
 - B. 3000 grams
 - C. 2500 grams
 - D. 3500 grams
- 20) Which of the following statements is true regarding Vitamin K and Warfarin?
 - A. Warfarin inhibits the production of Vitamin K
 - B. Vitamin K enhances the effect of Warfarin
 - C. Warfarin and Vitamin K have no interaction with each other
 - D. Warfarin antagonizes the action of Vitamin K

PART B- SHORT ANSWER QUESTIONS (40MARKS), ANSWER ALL QUESTIONS.

- 1) Enumerate four reasons for studying diet therapy (4 Marks)
- 2) You are advising a post-gastric bypass surgery patient experiencing dumping syndrome. Outline six essential dietary recommendations to manage the symptoms (6 marks)
- 3) Outline six factors leading individuals to consume excessive calories (6 Marks)
- 4) Sarah, 45, underwent abdominal surgery and faces post-operative complications hindering oral food intake. The medical team considers enteral nutrition support. Highlight six advantages of enteral nutrition. (6 Marks)

- 5) A 28-year-old female patient, presents with persistent underweight issues. State six potential health risks associated with underweight condition. (6 Marks)
- 6) John, a 70-year-old patient with multiple chronic diseases, is prescribed several medications. He also suffers from malnutrition. Outline six risk factors for potential food-drug interactions in John's case. (6 Marks)
- 7) Outline six strategies that can be implemented to encourage children to eat more during illness and recovery (6 Marks)

PART C- LONG ESSAY QUESTIONS (40MARKS). ANSWER QUESTION ONE AND ANY OTHER QUESTION OF YOUR CHOICE

- 1) A 55-year-old patient with severe pancreatitis, is admitted to the hospital with intractable vomiting and diarrhea. Despite medical management, the patient is unable to tolerate oral or enteral feeding. As a result, the healthcare team decides to initiate parenteral nutrition (PN) to meet his nutritional needs.
 - a) Define the term 'parenteral nutrition' (2 Marks)
 - b) State four key factors influencing the decision for parenteral nutrition (4 Marks)
 - c) Enumerate six reasons that support the need for parenteral nutrition. (6 Marks)
 - d) Differentiate between total parenteral nutrition (TPN) and peripheral parenteral nutrition (PPN). (4 Marks)
 - e) Outline four disadvantages associated with parenteral feeding (4 Marks)
- 2) A 65-year-old patient complains of difficulty swallowing and frequent coughing during meals. The patient has a history of stroke affecting the left side, and signs of oropharyngeal dysphagia are observed upon examination.
 - a) Define oropharyngeal dysphagia (2 Marks)
 - b) Enumerate seven general warning signs of dysphagia. (7 Marks)
 - c) Identify four potential consequences of dysphagia (4 Marks)
 - d) Discuss the dietary management strategies for patients with dysphagia (7 Marks)
- 3) A 60-year-old patient, referred to as Mr. A, is admitted to the hospital following a severe stroke that has led to dysphagia. The healthcare team is considering enteral nutrition support as part of the treatment plan.
 - a) Discuss five key factors to consider when selecting an enteral feeding formula for Mr. A. (10 Marks)

- b) Outline five recommendations for proper management of enteral feeding formula (5 Marks)
 - c) State five potential complications associated with enteral nutrition support (5 Marks)
- 4) Mr. Smith, a 35-year-old office worker, has recently become concerned about his weight. He has noticed a gradual increase in his body mass index (BMI) over the past few years and wants to understand more about weight management. He has read about the different categories of weight, the risks associated with obesity, and the potential health issues linked to being underweight. Mr. Smith is motivated to make positive changes but is seeking guidance on the most effective approach.
- a) Define BMI and explain its classifications according to the World Health Organization (WHO). (5 Marks)
 - b) Explain two limitations of using BMI as a measure of body composition (3 Marks)
 - c) Differentiate between visceral and subcutaneous fat and explain their health implications (4 Marks)
 - d) Explain the following causes of obesity
 - i. Hereditary factors (2 Marks)
 - ii. Physiological factors (2 Marks)
 - e) Explain two health risks associated with overweight and obesity (4 Marks)

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