

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN NURSING

NURS 121: NUTRITION AND HEALTH

STREAMS: BSC (NURSING) Y1S1

TIME: 2 HOURS

DAY/DATE: TUESDAY 04/12/2018

8.30 A.M – 10.30 A.M

INSTRUCTIONS:

- **ANSWER ALL QUESTIONS**

SECTION A (20 MARKS)

1. Treatment protocols for management of severe protein-energy malnutrition begin with: (1 mark)
 - a. Immunization to enhance ability to fight infection
 - b. Treatment of medical complication and refeeding using F75 formula
 - c. Vitamin supplementation
 - d. Deworming
2. Which of the following is the easiest and most popular method for obtaining information about dietary intake? (1 mark)
 - a) Food frequency questionnaire
 - b) 3-day food diary
 - c) 24-hour recall
 - d) Direct observation
3. The following hormones are secreted in response to low blood sugar except: (1 mark)
 - a) Glucagon
 - b) Epinephrine
 - c) Insulin
 - d) Cortisol
4. The pancreas is an accessory organ that aides in digestion. The following are important functions of the pancreases except: (1 mark)

- a) Production of enzymes which help break down proteins, lipids, and carbohydrates
 - b) Production of hormones that regulate blood glucose levels
 - c) Production of lactic acid that helps in glycolysis
 - d) Production of sodium bicarbonate which helps to neutralize stomach acids
5. Which disease is related with total energy depletion, where individuals are alert, ravenous and irritable, potentially causing cognitive impairment? (1 mark)
- a) Kwashiorkor
 - b) Marasmus
 - c) Stunting
 - d) Underweight
6. Which of the following deficiencies results in goiters and cretinism? (1 mark)
- a) Folic Acid
 - b) Vitamin A
 - c) Iodine
 - d) Zinc
7. Which of the following is not true of breast milk? (1 mark)
- a) Those not exclusively breastfeeding for the first 4-6 months (EBF) have higher risk of mortality compared to the EBF
 - b) Frequent breast feeding can lead to diminished milk supply
 - c) Enhances child spacing as it suppresses ovulation
 - d) Anti-infective agents to help protect the infant from disease
8. Obesity is associated with early occurrence of type 2 diabetes (1/2 mark)
- a) True
 - b) False
9. High density lipoprotein (HDL) recommended in prevention of heart diseases (1/2 mark)
- a) True
 - b) False
10. Essential amino acids are amino acids that the adult body can synthesize in adequate amounts (1/2 mark)
- a) True
 - b) False
11. During energy expenditure glycogen is used first (1/2 mark)
- a) True
 - b) False
12. Inspection of hair, eyes, skin, and posture is part of the nutrition assessment component known as the: (1 mark)
- a) Anthropometrics.

- b) Biochemical testing
 - c) Clinical examination
 - d) Initial evaluation
13. Which of the following nutrients is considered nonessential? (1 mark)
- a) Iron
 - b) Cholesterol
 - c) Potassium
 - d) Vitamin E
14. Which of the following is NOT a clinical consequence of refeeding syndrome? (1 mark)
- a) Hypophosphatemia
 - b) Hypomagnesemia
 - c) Hypervolemia
 - d) Hyperglycemia
15. Which of the following components of energy expenditure generally accounts for the largest proportion of the 24h energy expenditure total? (1 mark)
- a) Thermic Effect of Food
 - b) Resting Energy Expenditure
 - c) Activity related energy expenditure
 - d) Energy of Catabolism
16. There is increasing concern about the importance of adequate nutrition in the pre-conception period to support a successful pregnancy. The following statements are true except: (1 mark)
- a) In the embryonic period the foetus is vulnerable to external factors in its environment
 - b) The embryonic period often occurs before a woman knows she is pregnant
 - c) Antenatal care is recommended after the first trimester
 - d) Interventions in late pregnancy may be too late to be effective
17. The test for checking mean plasma glucose concentration over the previous 8-10 weeks is: (1 mark)
- a) Hemoglobin A1c
 - b) Oral glucose tolerance test (OGTT)
 - c) Fructosamine test
 - d) Fasting plasma glucose concentration
18. All of the following are characteristic of cholesterol except (1 mark)
- a) It is used for making estrogen and testosterone
 - b) It is incorporated into cell membranes
 - c) It is converted to bile salts
 - d) It is an essential nutrient.

19. The World Health Organization recommends zinc supplements for which groups of people? (1 mark)
- a) Pregnant and lactating women
 - b) Children with severe malnutrition or diarrhea
 - c) All children in low income areas
 - d) Elderly people with low incomes
20. The following are true of anorexia nervosa except (1 mark)
- a) Increased body temperature
 - b) Decreased heart rate
 - c) Denial of appetite
 - d) Cachexia
21. Match the anthropometric indicator with the context in which it is applied (2 marks)
- a) Underweight (i) Associated with poverty and may be assessed in stable situations to measure changes in chronic poverty
 - b) Stunting (ii) The most common indicator collected through growth monitoring systems
 - c) Wasting (iii) Indicator for stable contexts where it can measure changes in maternal malnutrition over time
 - d) BMI (iv) The indicator for assess acute malnutrition
(iv) the indicator used to assess adult nutritional status

SECTION B SHORT ANSWER QUESTIONS (30 MARKS)

1. Briefly explain five nourishment functions of nutrients (5 marks)
2. The world today is experiencing nutrition transition marked by a stage of non-communicable disease. Explain factors leading to this shift (3 marks)
3. Explain the mechanism by which the body maintains blood glucose concentrations (4 marks)
4. Briefly describe the reductive adaptation processes that the body undergoes during malnutrition (6 marks)
5. Briefly discuss six principles which should be considered when planning a meal (3 marks)
6. Describe the presentation of vitamin D deficiency in children and in adults highlighting the reasons that would lead to the deficiency in these groups (6 marks)
7. Explain why celiac disease is associated with diarrhea, protein energy malnutrition and anemia (3 marks)

SECTION C LONG ANSWER QUESTION (20 MARKS)

- a) Alcohol consumption can lead to serious low blood sugar reactions for those taking insulin or oral diabetes medication that stimulate insulin production. Discuss (10 marks)

 - b) Discuss five physiological benefits of fiber consumption (10 marks)
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