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UNIVERSITY EXAMINATIONS 2024/2025

SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR
OF SCIENCE IN NURSING

NND 3217/NNU 3214 – NUTRITION AND HEALTH

DATE: JANUARY 2025

TIME: 2 HOURS

INSTRUCTIONS: *All questions are compulsory*

Ensure that all your answers are properly numbered

Part 1 Multiple Choice Questions (MCQs): Write the correct answer on the space provided in the answer booklet. Each MCQ is one mark.

Part 11: Short Answer Questions-Answer questions following each other on the answer booklet

Part 111: Long Answer Questions-Answer

SECTION A: SHORT ANSWER QUESTIONS (20 MARKS)

1. The body energy that can be stored in almost unlimited amounts is:
 - a) Glycogen
 - b) Protein
 - c) Glucose
 - d) Triglyceride
 2. If a fat contains mostly saturated fatty acids, it is likely to be:
 - a) Solid at room temperature
 - b) Soft at room temperature
 - c) Rancid at room temperature
 - d) Liquid at room temperature
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3. Which statement best describes nutrient density?
- a) Choose a number of different foods within any given food group .
 - b) Consume foods have the most nutrients for their calories
 - c) Plan your entire day's foods so that you don't over consume nutrients
 - d) Plan your food portions from every food group
4. Which one of following statements about nitrogen balance is correct?
- a) In nitrogen equilibrium the excretion of nitrogenous metabolites is greater than the dietary intake of nitrogenous compounds
 - b) Positive nitrogen balance means that there is a net loss of protein from the body
 - c) In positive nitrogen balance the excretion of nitrogenous metabolites is less than the dietary intake of nitrogenous compounds
 - d) In negative nitrogen balance the excretion of nitrogenous metabolites is less than the dietary intake of nitrogenous compounds
5. Which statement about vitamins is true?
- a) Are inorganic in nature
 - b) Directly supply energy
 - c) Help regulate chemical reactions
 - d) Cannot be stored by the body
6. The B vitamins generally function as:
- a) Coenzymes
 - b) Emulsifiers
 - c) Antioxidants
 - d) Reducing agents
7. What is the storage form of Vitamin A in the liver?
- a) Preformed vitamin
 - b) Beta carotene
 - c) Retinol
 - d) Adipose
8. Children under five years at risk of malnutrition have a mid-upper arm circumference measuring.....
- a) 17.5 cm
 - b) 10.5- 11cm



- c) 15.5 - 16.5 cm
d) 12.5-13.4 cm
9. Iodine deficiency during pregnancy may lead to:
- a) Reduced head circumference
 - b) Cretinism
 - c) Increased risk of infection
 - d) Decrease bone
10. The most important factor in diet planning is:
- a) Nutritional adequacy
 - b) Age
 - c) Quantity of the people to feed
 - d) The amount of money
11. All except one are true about the significance of dietary fiber?
- a) It promotes peristalsis
 - b) Reduces Cholesterol absorption
 - c) Increases glycemic index
 - d) Acts as a nutrient binder
12. A person who has had a renal transplant should regulate the intake of_____
- a) Carbohydrates
 - b) Proteins
 - c) Fats
 - d) Vitamins
13. Long periods of parenteral nutrition is not recommended because of_____
- a) It increases the toxicity of blood
 - b) It puts pressure on the kidney
 - c) It puts pressure on the heart
 - d) It causes gastrointestinal atrophy
14. An 8 months-old-child has been brought to the pediatric out patient. The examination reveals a thin lean emaciated child. There is history of diarrhea and refusal to feeds from the last few days. The child has been diagnosed with 'marasmus'. What could have been the source of energy to the brain cells during the period of food deprivation?
- a) Glucose
 - b) Fatty acids

- c) Ketone bodies
 - d) Branched chain amino acid
15. The most common lipid elevated in the blood of someone with diabetes is:
- a) High density lipoprotein
 - b) Total cholesterol
 - c) Triglycerides
 - d) Low density lipoprotein
16. A patient admitted with type 2 diabetes asks the nurse what 'type 2' means. What is the most appropriate response by the nurse?
- a) With type 2 diabetes, the pancreas becomes inflamed
 - b) With type 2 diabetes, insulin secretion is decreased and insulin resistance is increased
 - c) With type 2 diabetes, one is totally dependant on exogenous insulin
 - d) With type 2 diabetes, the body produces autoantibodies that destroy beta pancreatic cells
17. Which of the following is most likely to be associated with anorexia nervosa?
- a) Osteoporosis
 - b) Binge eating
 - c) A body mass index of about 22
 - d) Kwashiorkor
18. The best criterion for a surgical patient's nutritional state is:
- a) Nitrogen balance
 - b) Mid-arm muscle circumference
 - c) A determination of plasma albumin
 - d) Functional impairment, such as inability to walk
19. All of the following are true of the basal energy expenditure (BEE), also known as the basal metabolic rate (BMR) except?
- a) The decrease in old age due to loss of muscle mass is inevitable
 - b) It is generally higher for men than for women of equal age and surface area
 - c) Measurements are made in the fasted state
 - d) It peaks in the first years of life
20. Around 60% of all fluids in the human body are stored in which compartment?
- a) Intracellular fluid

- b) Extracellular fluid
- c) Plasma
- d) Interstitial fluid

SECTION B: SHORT ANSWER QUESTION (30 MARKS)

1. Laboratory results of a 60-year female indicates low protein levels. Explain the effect of this outcome on her fluid balance indicating three possible symptoms that are likely to a o these findings (5 marks)
2. Explain three strategies that are effective in preventing cardiovascular complication to a person with diabetes (6 marks)
3. Describe prevention and management strategies for cachexia in a cancer patient (6 marks)
4. Explain the importance of addressing nutrition in emergency situations. (6 marks)
5. Mr Abera is a 65-year-old man, who used to be a farmer, but now he doesn't go out into the fields very often. He has smoked cigarettes for the last 25 years, he drinks alcohol almost every day, and he likes to eat a lot of fatty meat. His body mass index (BMI) is 33. What metabolic risk factors do you observe in Mr Abera's lifestyle that increase his chances of developing steatosis/fatty liver (4 marks)
6. Wendy is taking a multi vitamin that has B complex and vitamin C daily. Should Wendy be concerned about toxicity from this multi vitamin? Explain your answer (3 marks)

SECTION C: LONG ANSWER QUESTION (20 MARKS)

A severely malnourished child is being monitored in an outpatient clinic. Management includes ready to use therapeutic foods, vitamin A implementation and deworming. Describe nutrition assessment methods that can be used to evaluate outcome of these interventions (20 marks)

