



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF NURSING & MIDWIFERY SCIENCES
END OF SEMESTER DECEMBER 2023 EXAMINATIONS**

COURSE CODE AND TITLE: BSN 217 HUMAN NUTRITION AND DIETETICS

DATE: 5-DECEMBER-2023

Duration: 2 HOURS START: 2:00PM FINISH: 4:00PM

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 A: MULTIPLE CHOICE QUESTIONS

(20 MARKS)

1. The following statements is correct: -
 - A. Carbohydrates are the body's major energy reserve
 - B. When there is no further need for amino acids for growth or repair, they are broken down and used for energy
 - C. The carbohydrates glucose, sucrose and fructose are non-glycaemic carbohydrates
 - D. In addition to carbon, hydrogen and oxygen, all fats contain nitrogen
2. Which one of the following statements is incorrect?
 - A. Rickets is the major symptom of vitamin D deficiency
 - B. Goiter is the major symptom of iodine deficiency
 - C. Beriberi is the major symptom of vitamin B2 deficiency
 - D. Scurvy is the major symptom of vitamin C deficiency
3. Which one of the following statements is correct?
 - A. Proteins, fats and carbohydrates provide energy to the body, but alcohol does not
 - B. Minerals and vitamins do not provide energy themselves and are not required to release energy from foods
 - C. The metabolisable energy content of a food is greater than its heat of combustion
 - D. Dietary fiber combusts completely in a bomb calorimeter but is indigestible to humans
4. Which one of the following hormones does not induce satiety?
 - A. Ghrelin
 - B. Insulin
 - C. Cholecystokinin
 - D. Peptide YY
5. Which one of these statements about starch digestion is incorrect?
 - A. It begins in the mouth
 - B. It occurs in the stomach
 - C. It requires the action of pancreatic enzymes
 - D. It requires brush border enzymes for completion

6. Which of the following is a water-soluble vitamin and hence is required to be taken every day?
- A. Vitamin D
 - B. Vitamin C
 - C. Vitamin K
 - D. Vitamin A
7. To help prevent neural tube defects, grain products are now fortified with:
- A. Iron
 - B. Folate
 - C. Protein
 - D. Vitamin C
8. Breast milk has almost no amount of ...
- A. Potassium
 - B. Iron
 - C. Fluoride
 - D. Magnesium
9. Breast milk has almost no amount of ...
- A. Potassium
 - B. Iron
 - C. Fluoride
 - D. Magnesium
10. Which vitamin improves Ca⁺ absorption?
- A. Vitamin A
 - B. Vitamin D
 - C. Vitamin C
 - D. Phytates
11. A classical sign of Zinc deficiency is
- A. Anemia
 - B. Goiter
 - C. Mottled teeth
 - D. Growth retardation
12. Hyperkalemia is known as
- A. Elevated level of potassium
 - B. Lower level of potassium
 - C. Elevated level of calcium
 - D. Lower level of calcium

13. BMR stands for-----
- A. Body metabolism rate
 - B. Basal metabolic rate
 - C. Body mass index
 - D. Basal energy expenditure
14. Fat-soluble Vitamins
- A. Easily excreted
 - B. Seldom cause toxicity
 - C. Require bile for absorption
 - D. Not stored in body
15. Iron RDA during Pregnancy:
- A. 25 mg/day
 - B. 27 mg/day
 - C. 29 mg/day
 - D. 17 mg/day
16. A breastfeeding woman should drink plenty of water to...
- A. Produce more milk
 - B. Suppress lactation
 - C. Prevent dehydration
 - D. Dilute nutrient concentration
17. The head circumference and chest circumference ratio is measured for:
- A. Elderly people
 - B. Adults
 - C. Children
 - D. Women
18. Clinical symptom of Osteoporosis
- A. Easy fracture
 - B. Low bone density
 - C. stooped posture
 - D. Back pain
19. Pernicious anemia is a type of:
- A. Macrocytic anemia
 - B. Microcytic anemia
 - C. Normocytic anemia
 - D. Hemolytic anemia

20. Anthropometric measurements include:

- A. Weight, height, food frequency
- B. Weight, height
- C. 24-hour dietary recall
- D. Height and food diary

SECTION II: SHORT ANSWER QUESTIONS

(30 MARKS)

1. State five (5) factors that influence glycemic index score (5 marks)
2. State five (5) principles in diet preparation (5 marks)
3. State five (5) factors that increase calcium absorption in the body (5 marks)
4. Outline five (5) complications of rickets (5marks)
5. Outline five (5) benefits of breastfeeding to the infant (5 marks)
6. (i) State four (4) health risks associated with overweight and obesity. (4 marks)
(ii) Differentiate between bulimia nervosa and binge eating (1 mark)

SECTION III: LONG ANSWER QUESTION –

(20 MARKS)

1. Describe the nutritional requirements and special needs for each of the following:
 - a. Infancy and early childhood (10 marks)
 - b. Pregnant mothers (10 marks)