



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

SECOND YEAR SECOND TRIMESTER EXAMINATION

FOR THE DEGREE

OF

**BACHELOR OF SCIENCE IN GLOBAL HEALTH AND TRAVEL
MEDICINE**

COURSE CODE: NCG 223

**COURSE TITLE: COMMUNITY HEALTH NUTRITION AND FOOD
SAFETY**

DATE: 9TH APRIL 2024 DAY: TUES TIME: 8AM – 11 AM

INSTRUCTIONS TO CANDIDATES

THIS PAPER CONSISTS OF THREE SECTIONS A, B AND C

ANSWER ALL QUESTIONS

TIME: 3 HOURS

MMUST observes ZERO tolerance to examination cheating

SECTION A: 20 MCQs (20 MARKS)

NCG 223

1. Which vitamins are necessary to convert glutamic acid into glutamine?
 - a) Vitamin B3 and vitamin B6
 - b) Vitamin E and vitamin D
 - c) Biotin and folate
 - d) Vitamin C and vitamin B12
2. Which of the following is a sign of marasmus?
 - a) Swelling of the legs
 - b) Moon face
 - c) No edema
 - d) Swollen abdomen, thin muscle
3. What is the building block of nutrient folic acid?
 - a) Triglyceride
 - b) Amino acid
 - c) Phenyl alanine
 - d) Vitamin B₉
4. Digestion of carbohydrates starts in the
 - a) Large intestines
 - b) Small intestines
 - c) Mouth
 - d) Stomach
5. What is the difference between kwashiorkor and marasmus?
 - a) **Kwashiorkor**-no interest in surrounding **Marasmus**-wizened appearance
 - b) **Kwashiorkor**-sparse hair **Marasmus**-thin muscle
 - c) **Kwashiorkor**-normal hair **Marasmus**-very under weight
 - d) **Kwashiorkor**-good appetite **Marasmus**-poor appetite
6. A condition called ariboflavinosis is caused by deficiencies in which nutrient?
 - a) B₁
 - b) B₁₂
 - c) B₆
 - d) B₂

7. Another name for vitamin B₃
- a) Thiamin
 - b) Pantothenic
 - c) Niacin
 - d) Pyridoxin
8. Which one of the following is not a symptom of **vitamin A** deficiency?
- a) Osteoporosis
 - b) Nyctalopia
 - c) Xerophthamia
 - d) Keratomalcia
9. Foods like kales, spinach and broccoli are rich in
- a) Carbohydrates
 - b) Proteins
 - c) Vitamins
 - d) Fabre
10.is essential for strengthening teethes and bones.
- a) Calcium
 - b) Iron
 - c) Phosphorous
 - d) Magnesium
11. Excess carbohydrates in the body are converted to
- a) Muscle tissue
 - b) Adipose tissue
 - c) Connective tissue
 - d) None of the above
12. Which of the following enzyme is a protease?
- a) Amylase
 - b) Maltase
 - c) Lactase
 - d) Trypsin

13. Which one is not a digestive enzyme
- a) Amylase
 - b) Maltose
 - c) Lactase
 - d) Lipase
14. Which of the following is a macronutrient?
- a) Vitamin K
 - b) Iodine
 - c) Triglyceride
 - d) Amino acid
15. What are the diagnostic manifestations of kwashiorkor?
- a) Moon face/muscle wasting/loss of body fat
 - b) Edema/muscle wasting/psychomotor changes
 - c) Old man's face/edema/flaky skin
 - d) Sparse hair/thin limbs/mentally alert
16. Which of the following is a protein deficiency related condition?
- a) Colorectal cancer
 - b) Osteoporosis
 - c) Kidney stones
 - d) Alzheimer's diseases
17. What is the scientific name for vitamin B₁?
- a) Riboflavin
 - b) Thiamine
 - c) Niacin
 - d) Pyridoxine
18. Iodine deficiency causes in adults andin children.
- a) Goiter, cretinism
 - b) Cretinism, goiter
 - c) Goiter, iodinitis
 - d) Iodinitis, cretinism

19. Identify the sources of the mineral zinc
- a) Milk, eggs, green vegetables, and orange vegetables
 - b) Beans and lentils, citrus fruits, and leafy green vegetables
 - c) Beans, nuts, whole grains, and dairy products
 - d) All of the above
20. Deficiency in vitamin B₉ causes
- a) Severe birth defects, growth problems, or anemia
 - b) Scurvy, dermatitis, keratinitis
 - c) Cracked lips, sore tongue, sores in the corners of the mouth
 - d) Pernicious anemia

SECTION B: SAQs (40 MARKS)

- 1. Differentiate between kwashiorkor and marasmus (8 marks)
- 2. Describe the different types of fats and oils (8 marks)
- 3. Explain the process of measuring waist to hip ratio and its interpretation (8 marks marks)
- 4. Based on the number of sugar units, carbohydrates are classified into three groups, explain (8 marks)
- 5. Describe the energy balance equation (8 marks)

SECTION C: LAQs (40 MARKS)

- 1. Discuss prevention and control of obesity in the community (20 marks)
- 2. Discuss factors that may interfere with safety of food supply (20 marks)

