



(University of Choice)

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

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR**

FOURTH YEAR SECOND SEMESTER EXAMINATIONS

**FOR THE DEGREE
OF
BACHELOR OF MEDICAL LABORATORY SCIENCES (DIRECT
ENTRY/UPGRADING)**

MAIN EXAMINATION

COURSE CODE: BML 426

COURSE TITLE: NUTRITION FOR MEDICAL LAB SCIENCES

DATE: 29TH MAY 2019

TIME: 8.00 -10.00 AM

INSTRUCTIONS TO CANDIDATES

This paper is divided into three sections, **A B** and **C**, carrying respectively: Multiple Choice questions (**MCQs**), short answer questions (**SAQs**) and long answer questions (**LAQs**).

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 5 Printed Pages. Please Turn Over.



SECTION A: MULTIPLE CHOICE QUESTIONS (MCQs)

Instructions

1. This section has twenty (20) multiple choice questions (MCQs)
2. Indicate the correct option(s) for each question by writing the corresponding letter
3. Use the provided university examination booklet

- 1) **Lipoproteins are the main form in which the macronutrient class of compounds, lipids, circulate in blood, and of these**
 - a) Chylomicrons are the most dense and carry the most cholesterol
 - b) Very low-density lipoproteins (VLDL) have most triglycerides
 - c) Low density lipoproteins (LDL) are the ones implicated most in atheromatosis
 - d) Intermediate density lipoproteins (IDL) are the cause of disease in lipid over-nutrition
- 2) **The main hematological difference between iron deficiency-associated and copper deficiency-associated anemia is that**
 - a) Cu deficiency related anaemia goes with macrocytic erythrocytes
 - b) Fe deficiency-associated anaemia goes neutropenia
 - c) Cu deficiency-associated anaemia is accompanied with neutropenia
 - d) Iron deficiency-associated anaemia is accompanied with neutrophilia
- 3) **The list of non-essential nutrients consists of several substances and the fact about them is that**
 - a) Their roles in the body can be easily done by alternatives
 - b) They play minor roles in the body
 - c) Vitamins E, A and K are among them
 - d) They are can be represented by vitamin D
- 4) **Essential amino acids**
 - a) Are vitamins that dissolve in fat.
 - b) are the nine amino acids the body cannot produce
 - c) come from grains Legumes nuts, and seeds
 - d) are unit of energy produced by protein
- 5) **The only way to get all the nutrients you need is**
 - a) To drink alcohol in moderation
 - b) To eat a combination of foods
 - c) To eat the same foods over and over again
 - d) To eat a vegetarian diet
- 6) **Which of the following is a macronutrient?**
 - a) Vitamin A
 - b) Selenium
 - c) Protein
 - d) Antioxidant

- 7) Which of the following provides the body with zero Calories per gram?**
- a) Carbohydrates
 - b) Protein
 - c) Lipids
 - d) Water
- 8) Of the following dietary guidelines, which is used mostly by health experts for national planning and large-scale statistical purposes?**
- a) RDA
 - b) AI
 - c) EAR
 - d) UL
- 9) What defines all carbohydrates?**
- a) They all have the formula $(\text{CH}_2\text{O})_n$
 - b) They all contain carbon, hydrogen and only one oxygen.
 - c) They all contain oxygen and nitrogen
 - d) They are all made of long chains of sugars
- 10) What happens when insulin is released by the pancreas?**
- a) The glucose levels in the blood go down.
 - b) The glucose levels in the blood go up.
 - c) Glucagon is released by all the cells of the body.
 - d) Glucose is released by all the cells of the body.
- 11) In an omega-3 fatty acid, where do we expect to see a double bond?**
- a) Between the 1st and second carbons from the end.
 - b) Between the 3rd and 4th carbons from the end.
 - c) Between the omega carbon and the alpha carbon
 - d) Between all of the carbons.
- 12) The function of thick mucus in the stomach is to**
- a) Promote fat digestion.
 - b) Protect stomach cells from acid and enzymes.
 - c) activate stomach enzymes.
 - d) Keep the stomach bacteria-free
- 13) Which of the following hormones corrects a hyperglycemic state?**
- a) Insulin
 - b) Glucagon
 - c) Epinephrine
 - d) Cortisol
- 14) The purpose of nutritional assessment includes the following except:**
- a) Identify individuals or population groups at risk of becoming malnourished

- b) Identify individuals or population groups who are malnourished
- c) To develop health care programs that meet the community needs which are defined by the assessment
- d) To determine the ingredients to be included in food industry

15) The following is not a limitation of Food Frequency Questionnaire assessment method

- a) Long Questionnaire
- b) Errors with estimating serving size.
- c) Needs updating with new commercial food products to keep pace with changing dietary habits.
- d) Too accurate

16) The RDA for nutrients generally is

- a) Designed to be adequate for almost all healthy people.
- b) More than twice the requirements.
- c) The minimum amounts the average adult male requires.
- d) Designed to prevent deficiency disease in half the population.

17) All of the following are nutrients found in food except

- a) Creatinine
- b) Proteins
- c) Carbohydrates
- d) Minerals

18) Which of these is required on the food label?

- a) Total carbohydrates
- b) Sugars
- c) Irons
- d) All of the above

19) Anorexia nervosa is associated with the following except

- a) Fasting
- b) Coma
- c) Stroke
- d) Constipation

20) Marker of malabsorption includes

- a) Vitamin D
- b) Diarrhea
- c) Lipid profile
- d) Vitamin C

SECTION B: SHORT ANSWER QUESTIONS (SAQs)

- 21) Define the concepts Nutrition, dietetics, calories, food and metabolism (5marks)**
- 22) Describe the status of starvation, its symptoms and management (5mks)**
- 23) Explain any three functions of food nutrients (6marks)**
- 24) State the factors that enhances iron absorption (4mrks)**

SECTION C: SECTION C: LONG ANSWER QUESTIONS (LAQs)

Answer any one Question

- 25) Discuss the purpose and methods involved in nutritional assessment (20 marks)**
- 26) Describe the digestion, absorption, metabolism and excretion of carbohydrates (20mrks)**

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