



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

BACHELOR OF MEDICAL LABORATORY SCIENCES

ANH 4101: PRINCIPLES OF HUMAN NUTRITION

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2016

TIME: 2 HOURS

DATE: Dec 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of Choose No Section(s). Attempt ALL questions.

Circle the correct answer in section A.

PAPER ONE

Section A.

Attempt all the questions provided in this section

1. Which statement about vitamins is true?
 - a. Are inorganic
 - b. Directly supply energy
 - c. Help regulate chemical reactions in the body
 - d. Cannot be stored by the body.
 - e. Are major macronutrients

2. Acquiring sufficient vitamin B₁₂ from the diet may be a problem to vegans because
 - a. Phytic acid in vegetable proteins may inhibit its absorption
 - b. It is only found in animal products
 - c. They lack the R-protein in the stomach
 - d. Deficiency may result from high intakes of legumes
 - e. None of the above

3. Which of the following is not a monosacchride
 - a. Pentoses

- b. Sucroses
 - c. Trioses
 - d. Hexoses
 - e. Fructoses
4. The essential fatty acids that must be derived from the diet are:
- a. Stearidonic acid and eicosatetraenoic acid
 - b. Eicosapentaenoic acid and docosapentaenoic acid
 - c. Lino leic and alpha-linoleic acid
 - d. Gamma-linoleic acid and arachidonic acid
 - e. all the above
5. Margaret, an elderly woman, needs to limit her kcalorie intake without sacrificing needed nutrients. Keeping in mind the Food Guide Pyramid, which of the following could she do
- a. Carefully select foods rich in nutrients but low in kcalorie
 - b. Eliminate Dairy foods
 - c. Count kcalories and not worry about the food groups
 - d. Eliminate carbohydrate
 - e. Eliminate fats
6. All of the following are characteristic of cholesterol *except*
- a. It is used for making estrogen and testosterone.
 - b. It is incorporated into cell membranes.
 - c. It is converted to bile
 - d. It is an essential nutrient
 - e. All the above
7. The body energy that can be stored in almost unlimited amounts is
- a. Glycogen
 - b. proteins
 - c. Triglyceride
 - d. Glucose
 - e. Amino acids
8. If a fat contains mostly saturated fatty acids, it is likely to be
- a. Solid at room temperature
 - b. Soft at room temperature
 - c. Liquid at room temperature
 - d. Rancid at room temperature
 - e. Evaporate at room temperature
9. Which of the following is a major source of lactose
- a. Buttermilk
 - b. Broccoli
 - c. Honey
 - d. cashewnuts
 - e. lavlose
10. Which of the following are substances in plant foods that are not digested in the stomach or small intestine
- a. Dextrose
 - b. Simple sugars
 - c. Dietary fibers
 - d. Dissachrides
 - e. Monossachride

11. Which of the following nutrients can directly supply energy for human use
 - a. Vitamins
 - b. Fibers
 - c. Lipids and oils
 - d. Minerals
 - e. All the above
12. All of the following statements about omega-3 fatty acids are true except:
 - a. They help to maintain healthy triglyceride and high-density lipoprotein
 - b. They have significantly contributed to the obesity epidemic
 - c. They are necessary for healthy infant growth and development
 - d. They play an important role in the production of hormones that govern numerous metabolic and biological processes
 - e. both a and d
13. To be transported throughout the body, fats are packaged in structures called
 - a. Phospholipids
 - b. Triglycerides
 - c. Micelles
 - d. Lipoproteins
 - e. Chylomicrones
14. All of the following may be associated with scurvy except:
 - a. Loss of appetite and irritability
 - b. Diarrhea and fever
 - c. Tenderness and swelling in legs
 - d. First symptom is altered mental status .
 - e. both b and c
15. The only fat-soluble antioxidant synthesized in the body is?
 - a. Vitamin D
 - b. Thiamine
 - c. Ascorbic acid
 - d. CoQ10
 - e. vitamin C
16. Good source of vitamin D include all except:
 - a. blueberries
 - b. Sunlight
 - c. Salmon, tuna sardines and mackerel
 - d. Fortified milk and other dairy products
 - e. cheese
17. One of the fat-soluble vitamins involved in coagulation is:
 - a. Vitamin K
 - b. Vitamin A
 - c. Vitamin D
 - d. Vitamin E
 - e. non of the above
18. Nondigestible food ingredients that stimulate the growth and activity of certain bacteria in the colon are called:
 - a. Insoluble fiber
 - b. Probiotics
 - c. Prebiotics
 - d. Cellulose
 - e. oligosachrides

19. A deficiency of thiamine (vitamin B1) in the diet causes:
- Osteopenia
 - Beri-beri
 - Scurvy
 - Marasmus
 - Protein malnutrition
20. The USDA Dietary Guidelines for Americans advise:
- Limiting carbohydrates to 10 percent of daily calories
 - Limiting total fat intake to 20 to 35 percent of calories
 - Limiting protein to 10 percent of daily calories
 - Limiting intake of fats and oils to 10 percent of daily calories
 - Limiting protein to 40 percent of daily calories
21. All of the following statements about vitamin B3 (niacin) are true except:
- It helps to release energy in carbohydrates, fat, and protein
 - It improves blood lipid levels
 - Deficiency causes beriberi
 - It is involved in the synthesis of sex hormones
 - Non of the above
22. All of the following are potentially modifiable risk factors for osteoporosis except:
- Anorexia nervosa
 - Chronically low intake of calcium and vitamin D
 - Chronically low intake of vitamins C and B6
 - Excessive alcohol consumption
 - Low intake of milk and milk products
23. Consuming fewer than 130 grams of carbohydrate per day may lead to:
- Hypoglycemia
 - Ketosis
 - Kwashiorkor
 - Marasmus
 - acidosis
24. Characteristics of successful dieters include all of the following except:
- Maintaining a daily food journal
 - Counting calories
 - Adhering to a strict eating plan
 - Eliminating all carbohydrates from their diets
 - Eating plenty of vegetables
25. Iron supplements are frequently recommended for all of the following except:
- Women who are pregnant
 - Infants and toddlers
 - Teenage girls
 - Post-menopausal women
 - Both b and c
26. A high Body Mass Index (BMI) in an adult man is associated with all of the following except
- Cardiovascular disease
 - Hypertension
 - Coronary heart disease

- d. Type 2 diabetes mellitus
 - e. Brain cancer
27. Which of the following is a limitations of Anthropometry
- a. Limited nutritional diagnosis
 - b. Readings are reproducible
 - c. Measures many variables of nutritional significance (Ht, Wt, MAC, HC, skin fold thickness, waist and hip ratio & BMI).
 - d. Objective with high specificity & sensitivity
 - e. Non-expensive and need minimal training
28. The nutritional status of an individual can be assessed by Dietary assessment method which include all of the following except .
- a. 48 hours dietary recall
 - b. Food frequency questionnaire
 - c. Dietary history since early life
 - d. Food dairy technique
 - e. Observed food consumption
29. Which of the following is not a Limitations of Biochemical Method of nutritional assessment
- a. Time consuming
 - b. Expensive
 - c. They can only be applied on large scale
 - d. Needs trained personnel and facilities
 - e. Both c and d
30. Which of the following is a macronutrient?
- a. Fats
 - b. Carnitine
 - c. Selenium
 - d. Antioxidants
 - e. Folic acid

SECTION B

Answer all the question in this section

- 31 a. Give a dietary guideline which can be recommended 12marks
- 31b) List the different methods of nutritional assessment 8marks
- 32) List the various clinical signs of nutritional deficiency 20marks