



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 TWO

SECTION A

Attempt all the questions provided in this section

1. Which of the following is not a direct method of nutritional assessment
 - a. Anthropometric methods
 - b. Biochemical, laboratory methods
 - c. Clinical methods
 - d. Dietary evaluation methods
 - e. Vital health statistics
2. A BMI level of greater than 40 is associated with which of the following
 - a. Type 2 diabetes
 - b. High risk of cardiovascular morbidity & mortality
 - c. Hypertension
 - d. Stroke
 - e. All the above
3. Which of the following is NOT a macronutrient?
 - a. Fats
 - b. monosaccharide

- c. Protein
 - d. vitamin A
 - e. polysacchrides
4. Which of the following is NOT an example of a carbohydrate?
- a. Starch
 - b. Sucrose
 - c. Glycogen
 - d. Cholesterol
 - e. Monosacharide
5. Which of the following is NOT a monosaccharide?
- a. Glucose
 - b. Galactose
 - c. Fructose
 - d. Maltose
 - e. Non of the above
6. Which of the following is the actually composition of Sucrose
- a. Glucose + Fructose
 - b. 2 Fructose molecules
 - c. 2 glucose molecules
 - d. Fructose and a lot of other industrial chemicals
 - e. maltose plus fructose
7. Which of the following is a carbohydrate, AND is found in large quantities in a potato?
- a. Starch
 - b. pure glucose
 - c. pure fructose
 - d. stearic acid
 - e. polysaccharides
8. Which of the following is NOT a function of polysaccharides in human nutrition?
- a. Energy
 - b. Fiber
 - c. Prevents ketoacidosis
 - d. building enzymes
 - e. glucose production
9. Which form of carbohydrate does the human body use to store energy?
- a. Starch
 - b. cellulose
 - c. glycogen
 - d. chitin
 - e. monosaccharides

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.
 - e. Both glucose and glucagon levels in the blood go up
11. Which of the following is a sugar alcohol?
 - a. Glucose
 - b. stearic acid
 - c. xylitol
 - d. sucrose
 - e. fructose
12. Most dietary fiber is made of...
 - a. cellulose
 - b. starch
 - c. chitin
 - d. glycogen
 - e. none of the above
13. Which of the following is NOT a known advantage of including fiber in the diet?
 - a. Reduced risk of brain cancer.
 - b. Prevents constipation and diarrhea
 - c. Reduces hunger by making you feel full longer.
 - d. Reduces risk of colon cancer
 - e. Reduces risks of diverticula and hemorrhoids
14. Which of the following is NOT a lipid?
 - a. Fatty acids
 - b. Triglycerides
 - c. Cholesterol
 - d. Polypeptides
 - e. low density lipoprotein
15. What do we get when we break down a triglyceride?
 - a. 3 fatty acids and glycerol
 - b. 3 fatty acids and glucose
 - c. 2 fatty acids and cholesterol
 - d. 2 fatty acids and glycerol
 - e. glycerol and cholesterol
16. Which of the following is the most important function of phospholipids?
 - a. Energy
 - b. Building cell membranes
 - c. Building DNA
 - d. making hormones
 - e. making chromosomes
17. Which of the following is a FALSE statement about cholesterol?

- a. The body produces cholesterol.
 - b. Cholesterol is the most harmful kind of lipid in our diet.
 - c. We use cholesterol to make some hormones
 - d. Cholesterol has a 4-ring structure.e.
 - e. All the above
18. Which of the following is the best source of omega-3 fatty acids?
- a. Steak
 - b. fish
 - c. pork
 - d. corn oil
 - e. mutton
19. Which of the following kinds of chylomicron contains the most cholesterol?
- a. A Very Low Density Lipoprotein
 - b. A Low Density Lipoprotein
 - c. A Medium Density Lipoprotein
 - d. A High Density Lipoprotein
 - e. none of the above
20. Which of the following is an essential amino acid?
- a. Fatty acids
 - b. Valine
 - c. Alanine
 - d. Glycine
 - e. Both b and c
21. Which of the following contains a complete protein?
- a. Kidney beans
 - b. wheat
 - c. steak
 - d. potatoes
 - e. both a and b
22. What is a complete protein?
- a. It is a food that contains significant amounts of all the essential amino acids
 - b. It is a food hat contains significant amounts of every single amino acid.
 - c. It is a food that is made completely of protein.
 - d. It is a single protein that contains every single amino acid.
 - e. It is afood that contains plant proteins
23. Which of the following does NOT contribute to a specific protein's individual proprties and functions in the body?
- a. Shape
 - b. color
 - c. sequence of amino acids
 - d. arrangement of charges, and regions of polarity or non-polarity.
 - e. Both a and b
24. Which of the following is NOT a function of protein?

- a. Provides several important players in the immune system
 - b. Acid-base balance
 - c. Muscular contraction
 - d. Protein is the body's first choice for an energy source.
 - e. All the above
25. Which of the following is used primarily to store amino acids in the body?
- a. Glycogen
 - b. Triglycerides
 - c. Enzymes
 - d. Cholesterol
 - e. The human body does not have a good storage mechanism for amino acids
26. Which of the following is referred to as the “primary structure” of a protein?
- a. The sequence of amino acids
 - b. The pattern of re-occurring motifs such as coils and sheets
 - c. The over-all shape of a single protein
 - d. The way that separate proteins fit together
 - e. All the above
27. The three D's of pellagra are:
- a. diarrhea dementia dermatitis
 - b. dementia deafness dermatitis
 - c. deafness dermatitis diarrhea
 - d. dermatitis dissociation diarrhea
 - e. Dissociation dermatitis deafness
28. Cheilosis and glossitis are features of:
- a. vitamin A deficiency
 - b. riboflavin (B2) deficiency
 - c. vitamin C deficiency
 - d. pyridoxine (B6) deficiency
 - e. both b and d
29. The features of scurvy, or vitamin C deficiency includes all the following except.
- a. bone disease in growing children
 - b. hemorrhagic disease, including mucosal involvement, subperiosteal bleeds, and bleeding into joint spaces
 - c. cheilosis, glossitis
 - d. impaired wound healing
 - e. Anemia
30. Which of the following is a water soluble vitamin?
- a. Vitamin A
 - b. Vitamin C
 - c. Vitamin D
 - d. Vitamin E
 - e. Vitamin K

SECTION B

Answer all the question in this section

31. Give a brief description of five nutrition related disorders 20marks
32. Describe the main group of fats and their role in the body 20marks