



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF REHABILITATIVE MEDICINE
BACHELOR OF SCIENCE IN PHYSIOTHERAPY

END OF TRIMESTER EXAMINATIONS JANUARY TO APRIL 2024

UNIT CODE: PHT 234
UNIT NAME: PRINCIPLES OF NUTRITION

DATE: 9TH APRIL 2024

TIME: 9AM-11AM

INSTRUCTIONS

1. All students will have two (2) hours to complete the examination
2. Attempt all questions as per the instruction
3. It is the student's responsibility to report any page and number missing in this paper.
4. Check that the paper is complete
5. Total number of pages is 10 including the cover.
6. Read through the paper quickly before you start.
7. Upon finishing the exam paper, on submission, the message 'Your examination has been submitted' will appear.

TOTAL: _____/70

PERCENT: _____/100%

POINTS EARNED TOWARDS FINAL GRADE _____/70

PART A: MCQ ANSWER ALL QUESTIONS – 30 MARKS

1. How many servings of vegetables do we need each day?

A C 3-5

6-11

B 2-3

D 1-2

2. Amylases in saliva begin the breakdown of carbohydrates into _____.

A. Fatty Acids

B. Simple Sugars

C. Polypeptides

D. Amino Acids

3. Food passes through the stomach directly by _____.

A. The small intestine

B. The heart

C. The large intestine

D. The pancreas

4. A mineral that the body needs to work properly is _____.

A Calcium

B Silver

C Gold

D Lead

5. According to the food pyramid, a person should obtain most of their fat from _____.

A beef, chicken, and fish

B vegetables oils, nuts, and fish

C fats, oils, and sweets

D milk, yogurt, and cheese

6. _____ Is a unit of energy that indicates the amount of energy contained in food.

A Nutrient

- B Starch
- C Calorie
- D Cholesterol

7. Which of these is required on food labels?

- A total carbohydrate
- B sugars
- C iron
- D all of the above

8. Which of the following has the highest calorific value?

- A Carbohydrates
- B Fats
- C Proteins
- D Vitamins

9. Milk, cheese and eggs are the sources of

- A. Vitamin C and A
- B. Vitamin A and D
- C. Vitamin C and D
- D. Vitamin B and C

10. Washing of peeled vegetables removes vitamin?

- A. E
- B. D
- C. C
- D. B

11. Citrus fruits are an excellent source of _____?

- A calcium

- B vitamin c
- C vitamin B
- D Vitamin A

12. Which of the following nutrients is needed to build and maintain the structural components of the body?

- A Carbohydrates
- B Protein
- C Fat
- D Fiber

13. Which of the following nutrients is known as the sunshine vitamin?

- A Vitamin C
- B Vitamin A
- C Vitamin K
- D Vitamin D

14. Which of the following is NOT considered a nutrient?

- A Vitamins
- B Minerals
- C Fiber
- D Fats

15. About half of your diet should be made up of _____.

- A Grains and Vegetables
- B Fruits and Milk
- C Milk and Cheese
- D Fats and Sugars

16. Which of the following food constituents is not digested but is still important for our body?

- A. vitamins
- B. minerals
- C. proteins

D. fiber

17. Sweetex used by the diabetic patients has energy content of?

- A Five calories
- B Ten calories
- C Hundred calories
- D Zero calorie

18. Which of the following is also sometimes referred to as Vitamin H?

- A Keratin
- B Niacin
- C Biotin
- D Riboflavin

19. All of the following are nutrients found in food except _____.

- A plasma
- B proteins
- C carbohydrates
- D vitamins

20. A diet high in saturated fats can be linked to which of the following?

- A Kidney failure
- B Bulimia
- C Anorexia
- D Cardiovascular disease

21. Your body needs vitamins and minerals because _____.

- A They give the body energy
- B They help carry out metabolic reactions
- C They insulate the body's organs
- D They withdraw heat from the body

22. This food group is our body's best source of energy?

- A Meat group

B Fats, Oils and Sweets

C Breads and Cereals

D Milk and Cheese

23. Which of these is added to the food label because people sometimes do not eat ENOUGH of this?

A Fat

B Calcium

C Sodium

D Cholesterol

24. The bread, cereal, rice and pasta group is a good source of _____?

A carbohydrate

B vitamin C

C calcium

D vitamin D

25. Foods from the meat, poultry, fish dry beans, eggs and nuts group are an important source of _____?

A. Iron

B. Fiber

C. Beta Carotene

D. Calcium

26. The milk, cheese & yogurt group are important for _____?

A Strong Bones

B Teeth

C Muscles

D All of the above

27. Pulses are a good source of?

A Carbohydrates

B Proteins

C Fats

D Vitamins

28. Which of the following contains lauric acid which is used to treat certain infections and also in the manufacture of soaps?

A Coconut Oil

B Olive Oil

C Mustard Oil

D Butter

29. Which of the following is considered an easily digestible source of protein?

A. Egg albumin

B. Soya bean

C. Fish flesh

D. Red meat

30. Fucoxanthin is a unique compound found in brown seaweed and has been shown to have

A. Anti -Obesity & Anti-inflammatory effects

B. Stamina effects

C. Weight gain effects

D. None of the above

PART B: ANSWER ALL QUESTIONS - 10 MARKS – Answers in yellow highlight

1. Briefly state the importance of nutrients (2 marks)

A substance needed by the body for growth, energy, repair and maintenance of vital body processes

2. Using examples explain the difference between Saturated fats and unsaturated fats? (3 marks)

Saturated fats: these fats are typically solid at room temperature and are found in animal products such as meat, dairy products and eggs.

Unsaturated fats: they are considered healthier fats. They are usually liquid at room temperature and are found in plant based oils, such as olive oil, canola oil, and soybean oil.

3. Provide brief explanations for the following key terminologies as used in nutrition (1 mark each)

i. Cholesterol:

Cholesterol is a waxy, fat-like substance that's found in all cells of the body. Your body needs some cholesterol to make hormones, vitamin D, and substances that help you digest food.

ii. Electrolytes:

Electrolytes are minerals in body fluids. They include sodium, potassium, magnesium, and chloride.

iii. Glycemic Index:

The glycemic index (GI) measures how a carbohydrate-containing food raises blood sugar.

4. Microalgae contain prebiotics, which are compounds that nourish thein the gut. (1 Mark) Prebiotics

5. Vitamin is a water-soluble vitamin and hence is required to be taken every day (1 Mark)

Vitamin C

PART C: PICK YOUR BEST THREE QUESTIONS 10 MARKS – EACH QUESTION CARRIES 10 MARKS (TO BE MARKED MANUALLY)

1). You have been assigned to talk to mothers at Maisha community health services about proper nutrition and nourishment in children. Using examples explain to them five distinct nutrient deficiencies in children. (10 Marks)

2a). Using examples explain the two forms of protein energy malnutrition? 4 marks)

2b). Describe sequentially what happens to the body during under-nutrition (6marks)

3a). What do you understand by the term syndrome? (1 mark)

3b). Refeeding syndrome can manifest in a variety of ways. The most common forms are the following acute deficiencies. Discuss any three using relevant examples (9 marks)

- i. Phosphate deficiency
- ii. Body-fluid disturbances
- iii. Magnesium deficiency
- iv. Blood sugar problems
- v. Potassium deficiency
- vi. Thiamine deficiency

4). You have been invited to a workshop to present on the key factors that make up a healthy diet. Discuss the five key factors in details (10 marks)

5a) Define the term safety margin (1 mark)

5b) Illustrate the differences between macronutrients and micronutrients (4marks)

5c) Distinguish and explain the functions of high-density lipoproteins (HDL) and low-density lipoproteins (LDL). (5 Marks)

END!