

UGANDA MARTYRS UNIVERSITY

FACULTY OF HEALTH SCIENCES

BACHELOR OF PUBLIC HEALTH HEALTH PROMOTION YEAR THREE

END OF MODULE EXAMINATION BPHP 2334 FOOD & NUTRITION

DATE: 23rd September, 2022 TIME: 2:00PM-5:00PM

Instructions

1. Attempt ALL questions
2. Attempt questions 34-37 in the answer book provided

SECTION A: MULTIPLE CHOICE (30 MARKS)

Circle the most correct answer

1. The following are selective feeding programs except?
 - a. Therapeutic feeding program
 - b. Supplementary feeding program
 - c. General food distribution
 - d. Blanket supplementary feeding program
2. Which of the following is NOT a malnutrition emergency?
 - a. Vitamin A deficiency
 - b. Marasmus
 - c. Kwashiorkor
 - d. Marasmic Kwashiorkor
 - e. None of the above
3. Which condition is more common with non-cereal based diet?
 - a. Vitamin A deficiency
 - b. Marasmus
 - c. Kwashiorkor
 - d. Marasmus Kwashiorkor
4. "the average daily dietary intake level of a nutrient considered sufficient to meet the requirements of nearly all (97–98%) healthy individuals in a specific age and gender group".
 - a. Estimated average requirement
 - b. Recommended dietary allowance
 - c. Adequate intake
 - d. Tolerable upper limit
5. RDA for protein on average for the females is?

- a. 45-55 g/day
 - b. 50-60 g/day
 - c. 45-50g/day
 - d. 45-55mg/day
6. "is the measure of the proportion of absorbed protein from the food which becomes incorporated into the proteins of the body"
- a. Net protein utilization
 - b. Biological value
 - c. Nitrogen balance
 - d. Protein net absorption
7. The following describe a positive nitrogen balance except
- a. Convalescence
 - b. Pregnancy
 - c. Trauma
 - d. Growth
8. Deficiency of which of the following is associated with neuro-tube defects?
- a. Thiamine
 - b. Niacin
 - c. Folate
 - d. Cobalamin
9. vitamin is best known for its role in coagulation cascade
- a. A
 - b. C
 - c. K
 - d. B12
10. The following Labs are highly suggestive of? Serum Albumin < 2.5gm/dl, Iron & folic acid deficiencies, and Liver biopsy for fatty liver (Hepatomegaly)
- a. Vitamin A deficiency
 - b. Marasmus
 - c. Kwashiokor
 - d. Marasmic Kwashiokor
11. Hydrogenation of vegetable oil makes it easy to store and increase its shelf life. However, it comes with its own risks like;
- A. Changing the saturated fats to unsaturated fats
 - B. Changing the trans-fats to unsaturated fats
 - C. Hardening the oil
 - D. Changing the cis-fats to trans-fats
 - E. Formation of cholesterol in the hydrogenation process

12. Deficiency of _____ causes pernicious anemia, while that of _____ results in hypochromic microcytic anemia

- A. Mo, Cu
- B. Fe, Mn
- C. Co, Cu
- D. Mg, Fe
- E. Zn, I

13. The biological activity of vitamin E has been attributed in part to its action as a (n):

- A. antioxidant
- B. carrier in the electron transport chain
- C. anticoagulant
- D. precursor of a hormone
- E. antidote for lead poisoning

14. Body mass index:

- A. Is commonly assessed as an index of the body weight in grams divided by the height in metres squared
- B. Is commonly assessed using an index expressed as the height in metres squared divided by the body weight in kilograms squared
- C. Is a group of metabolic disorders including increased plasma free fatty acids and ketogenesis
- D. Is commonly expressed as the body weight in kilograms divided by the height in metres squared
- E. Is not necessary in control of diabetes

15. Jeska was brought to the hospital suffering from bone pain, hepatosplenomegaly, nausea and diarrhea. Biochemical tests were done, and the most likely Jeska's condition was a manifestation of;

- A. Hypervitaminosis E
- B. Hypervitaminosis D
- C. Excess accumulation of vitamin A
- D. Excess accumulation of vitamin C
- E. High consumption of omega 3 fats

16. Which of the following vitamins/ elements enables normal bone mineralization and prevents hypocalcemic tetany?

- A. Vitamin C
- B. Vitamin D
- C. Calcium
- D. Zinc

E. Selenium

17. One of the following nutrients is most important for bone and teeth formation; and activity of kinases

A. Phosphorus

B. Vitamin D

C. Calcium

D. Magnesium

E. Manganese

18. The flag sign is highly suggested of

a. Kwashakoir

b. Marasmus

c. PEM

d. All of the sudden

19. Which of these IS NOT a diagnostic sign for Kwashakoir

a. Hair changes

b. Edema

c. Muscle wasting

d. Psychomotor changes

20. Which of the following vitamins lacks antioxidant effect?

a. Vitamin A

b. Vitamin B

c. Vitamin C

d. Vitamin E

21. In management of COVID 19, Vitamin C, vitamin A and Zinc are mainly included for their principle effect

a. Antibiotic

b. Antioxidant

c. Anti-inflammatory

d. Anti-viral

22. Which of the following is NOT routine for assessment of a patient with Diabetes melitus type II

a. Fasting blood sugar

b. Random blood sugar

c. Oral glucose tolerance test

d. Glycosylated hemoglobin

23. Which of the following is not indicated in biochemical assessment in a nutritional assessment? Select one: ☒

- a. Lipid profile
- b. ☐ Serum ferritin
- c. ☐ liver function tests
- d. ☐ 24-hour food diary

24. What is the normal BMI?

- a. 18.5-24.9 Kg/cm²
- b. 30.0-39.9 Kg/cm²
- c. 16.0-16.9 Kg/cm²
- d. None of the above

25. Phytochemicals is another class of compounds that have proved beneficial in the body, and should be provided in the diet in addition to the re-known macro and micro-nutrients. This is because of;

- A. Their antioxidant activity
- B. Their ability to protecting the body against pathogens
- C. They are structural components of most body tissues
- D. They are important in the metabolism of macro and micro-nutrients
- E. They are important for organ development

26. Insufficient maternal nutrition is associated with Intrauterine Growth Restriction (IUGR) which is also linked to increased risk of late-onset of metabolic diseases, such as obesity, diabetes and hypertension in adulthood.

The following are true EXCEPT;

- A. Children born with IUGR when exposed to improved nutrition after birth have accelerated growth rate.
- B. Permanent modifications arise prenatally or in the early postnatal period and alter the function of various organs during adulthood.
- C. IUGR results in small birth weight and size
- D. Birth weight and size determines the weight and size during adult hood
- E. None the above

27. Nutritionists and dietitians are promoting consumption of whole-plant foods rather than processed ones. The most importance reason behind this promotion is that whole-plant foods;

- A. Provide more of the essential nutrients compared to processed foods.
- B. Prevents intake of too much of certain nutrients that can be harmful
- C. Provide more calories to meet the body's energy needs

- D. Slow digestion and allow better absorption
- E. They specifically prevent type II diabetes

28. Jema who weighs 90kg, celebrated his 50th birthday with lots of chicken despite him being a fan of pork. He got a serious illness for a whole month after the celebrations and then recovered. He has been stable for the last 6 months. His trend of change of state would best be described as;

- A. Positive, zero, negative nitrogen balance
- B. Negative, zero, positive nitrogen balance
- C. Zero, negative, slightly positive nitrogen balance
- D. Slightly negative, positive, zero nitrogen balance
- E. Obesity to normal

29. In considering protein utilization and protein quality

- A. The nutritional value of a protein can be assessed quantitatively by expressing the nitrogen retained in the body as a percentage of nitrogen intake
- B. The nutritional value of a protein can be improved by mixing complementary proteins
- C. High quality proteins contain all the essential amino acids in proportions similar to those needed for daily turn over
- D. The limiting amino acid in any protein is the essential amino acid present in the lowest concentration compared to the reference protein

30. Breast milk is highly recommended and preferred to cow's milk /formula for young infants. Which of the following statements is WRONG regarding breast milk and cow's milk?

- A. Cow's milk has smaller amounts of carbohydrates than breast milk
- B. The amount of protein in cow's milk is more than the amount in breast milk
- C. The protein in cow's milk is more digestible type than that in breast milk
- D. Antibodies that are in breast milk are not in cow's milk
- E. There are several ingredients in breast milk which are not in cow's milk

SECTION B: STRUCTURED (30 MARKS)

31. List one major condition associated with deficiency of the following

- i. Vitamin B1
- ii. Vitamin B2
- iii. Vitamin B 12
- iv. Vitamin B3
- v. Vitamin C

32. List the 4 sequelae in vitamin A deficiency

- i.
- ii.
- iii.
- iv.
- v.

33. List the 5 constituents of colostrum

- i.
- ii.
- iii.
- iv.
- v.

SHORT ESSAY

34. Outline the steps of measuring and interpretation of Mid-upper arm circumference (10 marks)

35. Briefly describe how a nutritional assessment is done (5 marks)

SECTION C: ESSAY QUESTIONS (40 MARKS)

36. In the recent past, Karamoja was hit by a spell of famine that claimed many lives. This is one of the many times people in this region have been faced with "failure to access all the time sufficient, safe and nutritious food to meet their preferences and dietary needs for a healthy living".

- i. What overall term is given to the bolded description? (2 marks)
- ii. Describe in detail 4 of its dimensions as applied to the recent situation in Karamojong (12 marks)
- iii. The capacity needed to generate and disseminate timely and meaningful information of the possible extreme events or disasters that threatens people's lives has been lacking in Uganda. Explain any 6 constraints that affect this area (6 marks)

37. Discuss Value chain addition under the headings

- i. Definition (2 marks)
- ii. Characteristics (4 marks)
- iii. Benefits (4 marks)
- iv. Challenges (5 marks)
- v. Solutions (5 marks)

THE END