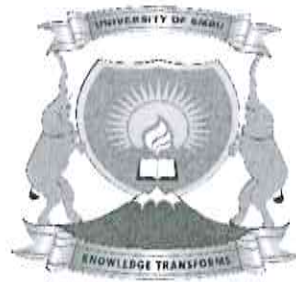


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UNIVERSITY OF EMBU

2019/2020 ACADEMIC YEAR

FIRST SEMESTER EXAMINATION

**FIRST YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
(NURSING)**

NGS 114: NUTRITION AND HEALTH

DATE: JANUARY 14, 2020

TIME: 2:00 PM – 5:00 PM

INSTRUCTIONS:

Answer:

All MCQs in Section A;

All Short-answer Questions in Section B

All Long-answer Questions in Section C

Cancelled work should be done neatly by crossing with a single line in the essay and by use of X in the MCQs.

SECTION A: MULTIPLE CHOICE QUESTIONS (TOTAL: 20 MARKS)

Choose (CIRCLE/TICK) only one correct answer from the following questions

- 1) The main form of lipid in food is ..
 - a) Fiber
 - b) Starch



ISO 27001:2013 Certified

Knowledge Transforms



ISO 9001:2015 Certified

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- c) Glucose
 - d) Triglyceride
- 2) A person who has glossitis is likely to be deficiency in
- a) Vitamin B₁
 - b) Vitamin B₃
 - c) Vitamin B₂
 - d) Vitamin B₁₂
- 3) Waist for hips ratio is a measure of
- a) Body composition
 - b) Body weight
 - c) Risk of macronutrients
 - d) Risk of micronutrients
- 4) During pregnancy, folate plays a key role in
- a) Reduction of soil eating behaviors
 - b) Prevention if infections to the mother
 - c) Foetal metabolism
 - d) Foetal cell division
- 5) The leading cause of blindness in the world today (not counting accident) is dietary deficiency of
- a) Vitamin K
 - b) Vitamin E
 - c) Vitamin D
 - d) Vitamin A
- 6) To increase bioavailability of non-heme iron, iron Fe⁻³ is reduced to Fe⁻² by help of
- a) Phosphorous
 - b) Calcium
 - c) Vitamin C
 - d) Vitamin A
- 7) The amount of calories generated by the metabolism of 1 (one) gram of fat is
- a) 7



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- b) 6
 - c) 4
 - d) 9
- 8) The deficiency of vitamin B 12 is associated with.....
- a) Pernicious anemia
 - b) Rickets
 - c) Osteomalacia
 - d) Goitre
- 9) Iodine deficiency leads to.....
- a) Marasmus
 - b) Goitre
 - c) Pellagra
 - d) Kwashiorkor
- 10) Body mass index (BMI) is a ratio of ...
- a) Weight (in Kg²): Height (in m²)
 - b) Weight (in Kg): Height (in m²)
 - c) Height in m²: Weight in Kg²)
 - d) Weight (in kg): Height (in cm²)
- 11) One disadvantage of taking excess cholesterol is that it
- a) Causes anorexia
 - b) May reduce the heart rate
 - c) May clog the blood vessels
 - d) May lead to body reaction against most of the animal products
- 12) Children suffering from marasmus
- a) Have good appetite
 - b) Present with edema
 - c) Flaky paint rash
 - d) Enamel dermatosis



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- 13) Fat soluble vitamins are vitamins that can only be absorbed in presence of fat in the diet and among them include
- a) Niacin
 - b) Biotin
 - c) Tocopherol
 - d) Riboflavin
- 14) At birth infant are immunized with BCG and administered with
- a) Vitamin B₁₂
 - b) Vitamin K
 - c) Vitamin C
 - d) Vitamin D
- 15) The term Pica in nutrition refers to
- a) Craving a non-food items
 - b) Eating excess food
 - c) Vomiting in pregnancy
 - d) Food aversion
- 16) Practical application of the principles of nutrition is referred to as
- a) Dietetics
 - b) Digestion
 - c) Nutrition
 - d) Metabolism
- 17) Simple sugars cannot be hydrolyzed further into simpler carbohydrates, they include
- a) Glucose, maltose and sucrose
 - b) Galactose, glucose and lactose
 - c) Fructose, glucose and galactose
 - d) Lactose, maltose and sucrose
- 18) Beta – carotene is a pro-vitamin A, which help to support eye health and promote immunity. The best sources of this vitamin includes
- a) Orange- fleshed sweet potatoes



- b) Liver
- c) Kidney
- d) Beans

19) Rickets is characterised by

- a) Edema, dyspnea, knocked kneel and bow legs
- b) Bow legs, knocked kneel, protruding belly and enlarged joints
- c) Bow legs, knocked kneels, edema and protruding belly
- d) Dyspnea, knocked kneel, delayed eruption of teeth and edema

20) Three forms of vitamin A are used in the body which are collectively known as

- a) Retinol
- b) Retinoic acid
- c) Retinoids
- d) Retinal

Section B: Answer ALL the questions in this section (40 marks; use the answer booklet provided)

1) With the aid of structural diagram, describe the metabolism of vitamin A.

(8 marks)

2) Complementary feeding is the process of introducing other foods in addition to breast milk at six months of age, when breast milk alone is no longer sufficient to meet the nutritional requirements of infant. Explain the minimum food groups recommended in this case.

(8 marks)

3) a) Explain any two (2) nutrition assessment methods used in a health facility.

(4 marks)

b) State two (2) characteristics of a good diet plan.

(4 marks)

4.

a) Outline the procedure of taking MUAC (mid upper arm circumference) measurement in children.

(6 marks)

b) List four (4) characteristics of kwashiorkor (signs and symptoms).

(2 marks)



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5.

- a) Outline 4 factors influencing the nutrition requirements and dietary choices in various populations. (4 marks)
- b) Explain the two groups of nutrients. (4 marks)

Section C: Answer ALL the questions in this section (40 marks; use the answer booklet provided)

- 1) Mr. F was diagnosed with type 2 diabetes mellitus at age of 46 years, at this time, he was overweight, enjoyed foods with carbohydrates and fat content and led a sedentary life. His family history indicated that his mother and his brother had diabetes.
- a) List two contributing factors to diabetes mellitus in Mr. F case. (1 mark)
 - b) Discuss the pathophysiology of diabetes mellitus. (6 marks)
 - c) Explain four simple steps that a nurse would advise Mr. F, as a guide for the management of diabetes mellitus. (8 marks)
 - d) Describe five tools that a nurse or nutritionist would use in meal planning for Mr. F (15 marks)
- 2) Explain five (5) methods of food preservation. (10 marks)

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