

| | |
|--|-----------------------------|
| QUALIFICATION : BACHELOR of HUMAN NUTRITION | |
| QUALIFICATION CODE: 08BOHN | LEVEL: 6 |
| COURSE: MATERNAL AND CHILDHOOD NUTRITION | COURSE CODE: MCN621S |
| DATE: NOVEMBER 2024 | SESSION: 1 |
| DURATION: 3 HOURS | MARKS: 100 |

FIRST OPPORTUNITY EXAMINATION: QUESTION PAPER

EXAMINER: MRS MARI-LOUISE JEFFERY

MODERATOR: DR ROSWITHA MAHALIE

INSTRUCTIONS:

1. Answer all questions on the separate answer sheet.
2. Please write neatly and legibly.
3. Do not use the left side margin of the exam paper. This must be allowed for the examiner.
4. No books, notes and other additional aids are allowed.
5. Mark all answers clearly with their respective question numbers.

PERMISSIBLE MATERIALS:

Non-programmable scientific calculator

ATTACHEMENTS

NONE

This paper consists of 5 pages including this front page

SECTION A: MULTIPLE CHOICE AND TRUE / FALSE**[20 MARKS]****QUESTION 1: MULTIPLE CHOICE QUESTIONS****[10 MARKS]**

Evaluate the statements in each numbered section and select the most appropriate answer or phrase from the given possibilities. Fill in the appropriate letter next to the number of the correct statement/phrase on your ANSWER SHEET. [10]

1.1 Montgomery glands are:

- a) Cells in the milk gland, responsible for secreting the milk into the ducts
- b) Circular area of hyper pigmented breast surrounding the nipple
- c) Small, pimple-like swellings on the areola that secrete an oily fluid to protect the nipple and areola during breastfeeding
- d) Specialized cells that line the alveoli and can contract to cause milk to be secreted into the duct

1.2 In preparation for optimal breastfeeding, estrogen:

- a) Initiates growth of the breast and the milk producing apparatus
- b) Promotes the development of the lobules and alveoli, causing the alveolar cells to proliferate, enlarge and become secretory in nature
- c) Makes the alveoli secrete the milk
- d) Cause the alveoli to contract to cause milk to be secreted into the duct

1.3 Freshly expressed breastmilk can be stored for:

- a) A maximum of 2 hours at 25 degrees Celsius
- b) Up to 4 days in a refrigerator
- c) 18 months in a freezer
- d) Up to 24 hours at room temperature

1.4 To prevent vitamin D deficiency in infants:

- a) Sunlight exposure of 90 minutes/week (in only a diaper) or 2 hours/week (fully clothed with no hat)
- b) Sunlight exposure of 30 minutes/week (in only a diaper) or 4 hours/week (fully clothed with no hat)
- c) Sunlight exposure of 50 minutes/week (in only a diaper) or 3 hours/week (fully clothed with no hat)
- d) Sunlight exposure of 30 minutes/week (in only a diaper) or 2 hours/week (fully clothed with no hat)

1.5 Weight-for-height < -2 standard deviations is representative of:

- a) Underweight
- b) Wasting
- c) Overweight
- d) Severe stunting

1.6 Mothers known to be HIV-infected (and whose infants are HIV uninfected or of unknown HIV status) should:

- a) Exclusively breastfeed their infants for the first 6 months of life
- b) Introduce appropriate complementary foods after 12 months
- c) Continue breastfeeding for the first 3 years of life.
- d) Breastfeeding should then only stop once infant formula can be provided

1.7 Newborn infants require supplementation of:

- a) Vitamin E
- b) Vitamin C
- c) Folate
- d) Vitamin K

1.8 A thorough nutrition assessment is required to:

- a) Diagnose a nutrition problem
- b) Design a nutrition plan
- c) Determine whether a plan has been successful or not
- d) A, B and C

1.9 A skinfold caliper is used to measure:

- a) Waist circumference
- b) Head circumference
- c) Subscapular and triceps measurements
- d) Energy requirements

1.10 Weaning food should be:

- a) Shop bought
- b) Low energy, high nutrient dense
- c) Based on cultural practices and beliefs
- d) Blended with a commercial blender

QUESTION 2: TRUE/FALSE QUESTIONS

[10 MARKS]

Evaluate the statements and select whether the statement is true or false. Write the word 'True' or 'False' next to the corresponding number on your ANSWER SHEET. [10]

2.1 The breastmilk content of water-soluble vitamins are reflected by maternal intake or supplements.

2.2 A baby cannot contract HIV through the breastmilk of a HIV-infected mother.

2.3 The stomach capacity of a newborn baby is approximately 50 ml.

- 2.4 Healthy sources of carbohydrates for infants aged 8 months include rice cereal, potatoes, honey and pasta.
- 2.5 Health care workers may accept donations of free or subsidised supplies of breast-milk substitutes or related products.
- 2.6 Mid-upper arm circumference is the gold-standard in assessing the nutritional status of pregnant women.
- 2.7 Solid foods are not advised before age 4 months because the baby isn't physically developed enough to eat solid food from a spoon.
- 2.8 Breastfed babies eat until their hunger is satisfied, leading to healthier eating patterns as they grow.
- 2.9 Enzymes involved in carbohydrate digestion reach adult levels by 20-32 weeks gestation.
- 2.10 Nutrition assessment involves collecting information about a client's medical history, dietary patterns, anthropometric measurements, clinical and biochemical characteristics, and social and economic situation

SECTION B: SHORT / LONG ANSWER QUESTIONS

[80 MARKS]

QUESTION 3:

[7 MARKS]

Please answer ALL of the questions in this section.

3.1 Define the following terms:

- a) RUTF [3]
- b) Weaning [2]
- c) Anthropometry [2]

QUESTION 4:

[29 MARKS]

Please answer ALL of the questions in this section.

- 4.1 Illustrate how a very low body mass index (BMI) may impact various aspects of pregnancy, including maternal health and fetal development? [7]
- 4.2 Discuss the benefits of breastfeeding for the mother. [10]
- 4.3 Calculate the energy, protein, carbohydrate and fat requirements for an infant aged 0 to 6 months based on a weight of 2.5 kg. [12]

QUESTION 5:

[44 MARKS]

Please answer ALL of the questions in this section.

- 5.1 Describe, in detail, the process of measuring recumbent length in children under the age of 4 years. [10]
- 5.2 Distinguish between the phases involved in the female reproductive system and evaluate how each phase and hormone levels contribute to a healthy pregnancy. [19]
- 5.3 Outline the diagnostic criteria and action plan for children aged 5-9 years with severe acute malnutrition (SAM). [6]
- 5.4 A pregnant mother is experiencing gastroesophageal reflux and battling to meet her nutritional needs. Compile an information document with key strategies that can be employed to effectively manage her condition. [9]

END OF PAPER