

**UNIVERSITY OF ESWATINI**  
**FACULTY OF HEALTH SCIENCES**  
**DEPARTMENT OF MIDWIFERY SCIENCE**

**MAIN EXAMINATION PAPER- AUGUST, 2020**

**TITLE OF PAPER** : CHILD NUTRITION  
**COURSE CODE** : MWF 426  
**MARKS ALLOCATED** : 75  
**TIME ALLOWED** : TWO (2) HOURS

Number of pages including cover page: 4

**INSTRUCTIONS / INFORMATION:**

1. There are two sections in this paper.
2. Section one (1) comprises of multiple choice questions.
3. Section two (2) comprises of short essay questions.
4. Answer **ALL** questions.

**DO NOT OPEN THIS PAPER UNTIL YOU ARE GIVEN PERMISSION TO DO SO**

## SECTION A: MULTIPLE CHOICE QUESTIONS

**Instruction:** For each of the following questions, write down the letter that indicates the best answer out of the given options.

1. Fruits, vegetables and cereals are critical nutrients in pregnancy. Which of the following is/ are encompassed as potent nutrients of fruits, vegetables and cereals?
  - A. antioxidants
  - B. unsaturated fat
  - C. saturated fat
  - D. free radicals
2. Which of the deficiencies is the leading cause of neural tube defects among infants?
  - A. calcium-rich foods
  - B. iron-rich foods
  - C. vitamin D rich foods
  - D. prebiotics and probiotics
3. Which of the following are essential fatty acids that must be derived from the diet?
  - A. stearidonic acid and eicosatetraenoic acid
  - B. eicosapentaenoic acid and docosapentaenoic acid
  - C. linoleic and alpha-linoleic acid
  - D. gamma-linoleic acid and arachidonic acid
4. Omega-3 fatty acids are among commendable nutrients during pregnancy and are positively correlated a good state of child nutrition. Which of the following statements about omega-3 fatty acids **NOT** true?
  - A. They help to maintain healthy triglyceride and high-density lipoprotein
  - B. They have significantly contributed to the obesity epidemic
  - C. They are necessary for healthy infant growth and development
  - D. They play an important role in the production of hormones that govern numerous metabolic and biological processes
5. With regards to a child's health and nutritional status; which one of the following is **NOT** associated with scurvy?
  - A. Loss of appetite and irritability
  - B. Diarrhea and fever
  - C. Tenderness and swelling in legs
  - D. First symptom is altered mental status
6. Which one of the following is the only fat-soluble antioxidant synthesized in the body?
  - A. Vitamin D
  - B. Thiamine
  - C. Ascorbic acid
  - D. CoQ10

7. Nutritional deficiency of vitamin D deficiency can cause rickets, delayed motor development, muscle weakness, aches and pains, and fractures among children. Which one of the following is /are **NOT** good sources of vitamin D?
- A. blueberries
  - B. Sunlight
  - C. Salmon, tuna sardines and mackerel
  - D. Fortified milk and other dairy products
8. Which one of the following fat-soluble vitamins is important in the 3<sup>rd</sup> stage of labour and is involved in coagulation?
- A. Vitamin K
  - B. Vitamin A
  - C. Vitamin D
  - D. Vitamin E
9. Products that contain live microorganisms in sufficient numbers to alter intestinal micro flora and promote intestinal microbial balance are important in management of constipation, a common challenge in pregnancy. What name is given to these products?
- A. Antibiotics
  - B. Probiotics
  - C. Fruits and vegetables
  - D. Digestive enzymes
10. What is the name given to non-digestible food ingredients that stimulate the growth and activity of certain bacteria in the colon?
- A. insoluble fiber
  - B. probiotics
  - C. prebiotics
  - D. cellulose

**[Total marks = 10]**

## **SECTION B: SHORT ESSAY QUESTIONS**

### **QUESTION 1**

- A. What actions can be taken to reduce the chances of a mother transmitting HIV to her baby through breast milk? (15 marks)
- B. Advise a breastfeeding woman on how to sustain breastfeeding even when a baby is sick.

(10 marks)

**[Total marks = 25]**

## QUESTION 2

Read the scenario given below and answer the questions that follow.

J was 10 days old when her parents were told that the screening test for Phenylketonuria (PKU) was positive. Further tests showed a serum phenylalanine concentration of 35mg/dl. J's mother was careful to follow the instructions of the nutritionist at the health facility and J's serum phenylalanine dropped to 6 mg/dl. J liked her formula and grew at a normal physical and mental rate. As J developed, solid foods were added to her diet at the usual times for normal children. On one occasion, J had an upper respiratory tract infection (URTI) and refused to drink her formula. When serum phenylalanine was determined, it had risen to 15mg/dl. The nutritionist carefully examined the 3-day food intake record that J's mom brought.

- A. Describe PKU and why the condition is a concern. (3 marks)
- B. What is the normal serum phenylalanine level in the new born infant? (1 mark)
- C. Why did serum phenylalanine increase in classic PKU? (2 marks)
- D. Describe any 5 metabolic alterations that occur in PKU (10 marks)
- E. Why did serum phenylalanine level rise when J had an infection? (2 marks)
- F. What advice would you give to J's mother concerning her child's diet during this period? (1 mark)
- G. Why optimal amounts of folate are needed post fertilization? (1 mark)

**[Total marks = 20]**

## QUESTION 3

- A. Describe the following nutritional concepts
  - i. LDL (2 marks)
  - ii. HDL (2 marks)
  - iii. Lipoproteins (2 marks)
  - iv. Nutritional surveillance (2 marks)
  - v. Nutrition (2 marks)
  
- B. You are a midwife in a regional health facility that has a high rate of child mortality. Through decentralized collaborative efforts, you engage on a community approach whose goal is to reduce child mortality rates by 25%. The set goal demands that you and your team intensify communal efforts. Discuss two (2) action areas involving the children and maternal women in which the communal efforts maybe intensified. (10 marks)

**[Total marks = 20]**