



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF HEALTH, APPLIED SCIENCES AND NATURAL RESOURCES

DEPARTMENT OF HEALTH SCIENCES

| | |
|--|-----------------------------|
| QUALIFICATION : BACHELOR OF HUMAN NUTRITION | |
| QUALIFICATION CODE: 08BOHN | LEVEL: 6 |
| COURSE NAME: MATERNAL AND EARLY CHILDHOOD NUTRITION | COURSE CODE: MCN621S |
| SESSION: JANUARY 2023 | PAPER: THEORY |
| DURATION: 3 HOURS | MARKS: 100 |

| | |
|--|--------------------------|
| SUPPLEMENTARY/SECOND OPPORTUNITY EXAMINATION QUESTION PAPER | |
| EXAMINER: | DR FRANCIS FARAI CHIKUSE |
| MODERATOR: | DR ROSWITHA MAHALIE |

| |
|--|
| INSTRUCTIONS |
| <ol style="list-style-type: none">1. Answer ALL the questions.2. Write clearly and neatly.3. Number the answers clearly. |

PERMISSIBLE MATERIALS

NONE

THIS QUESTION PAPER CONSISTS OF 4 PAGES (Including this front page)

SECTION A

QUESTION 1

(5 MARKS)

Evaluate the statements in each numbered section and select the most appropriate answer or phrase from the given possibilities. Next to the question number, fill in the appropriate letter of the correct statement/phrase on your answer sheet. *(Each question carries 1 mark.)*

- 1.1 The following nutrient is necessary for central nervous system (CNS) development (particularly the memory center):
- A. Iron
 - B. Vitamin B12
 - C. Calcium
 - D. Choline
- 1.2 Mothers can decrease their intake of which of the following nutrients when they move from pregnancy to lactation:
- A. Iron
 - B. Folic Acid
 - C. Calcium
 - D. Choline
- 1.3 After the hollowing out of the developing mass of cells, the developing human is called a:
- A. Trophoblast
 - B. Syncytiotrophoblast
 - C. Blastocyst
 - D. Inner cell mass
- 1.4 What are components of preconception care that should be addressed to improve outcomes for the mother and child:
- A. Medical, behavioral, and social
 - B. Social, financial, and medical
 - C. Social, financial, and religious
 - D. Medical, financial, and behavioral
- 1.5 What are the roles of FSH and LH in the follicular phase of the menstrual cycle:
- A. Stimulate progesterone production
 - B. Stimulate eggs to grow in the ovaries
 - C. Release eggs from the ovaries
 - D. FSH and LH are not released during the follicular phase

QUESTION 2

(5 MARKS)

Evaluate the definitions in each numbered section and select the most appropriate answer or phrase from the given possibilities. Next to the question number, fill in the appropriate letter of the correct answer/phrase on your answer sheet. *(Each question carries 1 mark.)*

- 2.1 Occurs around day 7 after fertilization.
 - 2.2 Immediately after fertilization the newly developing human life form is called.
 - 2.3 This process starts with groove formation, and then tube formation.
 - 2.4 This embryonic layer produces the skin and nervous system.
 - 2.5 This embryonic layer produces the gastrointestinal tract.
-
- a. Endoderm
 - b. Implantation
 - c. Ectoderm
 - d. Neurulation
 - e. Zygote

QUESTION 3

(20 MARKS)

Evaluate the statements in each numbered section and determine whether the statement is true or false. On the answer sheet, fill in the appropriate answer, using T for True, and a F for False statement/phrase **(1 mark)** and the justification for your answer **(1 mark)**.

- 3.1 Gastrulation divides the bilaminar disk into three layers.
- 3.2 Anencephaly is a neural tube defect caused by high folate.
- 3.3 During pregnancy, the fats eaten provide energy and help build many foetal organs and the placenta.
- 3.4 Vitamin B works with calcium to help the foetus's bones and teeth develop.
- 3.5 A BMI between 15 and 25 results in the best chances of becoming pregnant
- 3.6 Breast development begins at puberty.
- 3.7 Bilirubinemia cannot be reduced by encouraging early and frequent breastfeeding.
- 3.8 By 6 months, normal infants' birthweight must increase twice and thrice by 12 months.
- 3.9 Adequate carbohydrates, fats, and proteins for breastfeeding mothers consists of 55%, 35% and 15% respectively.
- 3.10 Nipple Shields can improve milk transfer and breast-feeding duration.

SECTION B

QUESTION 4

(30 MARKS)

- 4.1 Why is folic acid (folate) needed during pregnancy, and what is the amount required per day (in mcg) during preconception and during pregnancy? (5)
- 4.2 What are three (3) potential future consequences on childbearing that can result from being infected by sexually transmitted diseases? (3)
- 4.3 List four (4) benefits of exercise during pregnancy. (4)
- 4.4 A conceptus consists of an embryo plus four foetal membranes. Name the four (4) foetal membranes and their functions (8)
- 4.5. Discuss the process of Neurulation during embryology (10)

QUESTION 5

(40 MARKS)

- 5.1 List the benefits of breastfeeding to the:
- 5.1.1 Mother (5)
 - 5.1.2 Infants and Children (5)
 - 5.1.3 Families and Society (3)
- 5.2 Name six (6) nutritional problems associated with school aged children and toddlers (6)
- 5.3 Outline four (4) problems in infant nutrition (8)
- 5.4 State the energy and protein need in the first 6 months among infants (4)
- 5.5 Describe any three (3) physical, three (3) social and three (3) emotional consequences of obesity among children (9)