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# DMI-ST. EUGENE UNIVERSITY

ZAMBIA

DEGREE EXAMINATION – JUNE 2024

Semester: V

357 FP 52 NUTRITION THROUGH LIFE CYCLE

Time: 3:00 Hours

Max. Marks: 100

**Answer any FIVE Questions (5 x 20 = 100 Marks)**

1. a) Explain how age influences recommended dietary allowances (RDAs)? Provide examples of nutrients for which requirements vary across different age groups. **(10 Marks)**  
b) Discuss the impact of sex on nutrient requirements according to RDAs. Provide reasons why females may require higher intake of certain nutrients compared to males. **(5 Marks)**  
c) Compare the BMRs of a 35-year-old man and a 35-year-old woman who have the same weight and height. What factors might explain any differences in their BMRs? **(5 Marks)**
2. a) Explain the significance of exclusive breastfeeding for infants during the first six months of life. Provide examples of nutrients found in breast milk and their roles in infant health and development. **(10 Marks)**  
b) Discuss the health benefits of exclusive breastfeeding for both infants and mothers. How does exclusive breastfeeding contribute to reducing the risk of mortality and various illnesses in infants? **(10 Marks)**
3. a) Propose community-based interventions and support services to promote healthy eating behaviors and prevent eating disorders among adolescents in Zambia. How can collaboration between government agencies, schools, healthcare providers, and non-profit organizations facilitate the implementation of these interventions? **(10 Marks)**  
b) Compare and contrast the characteristics and health risks associated with anorexia nervosa, bulimia nervosa, and binge eating disorder among adolescents. How do these eating disorders impact physical and psychological well-being. **(10 Marks)**
4. a) Evaluate the impact of maternal malnutrition on pregnancy outcomes, including low birth weight, preterm birth, and developmental abnormalities. How can nutritional interventions during pregnancy mitigate these risks? **(10 Marks)**  
b) Examine the role of prenatal supplements, such as prenatal vitamins and mineral

supplements, in meeting the increased nutrient requirements during pregnancy. How do prenatal supplements complement dietary intake and support maternal and fetal health?

**(10 Marks)**

5. a) Discuss the impact of nutrition on work efficiency and productivity among older adults in the workforce. How can modifications in diet, such as incorporating nutrient-dense foods, hydration strategies, and meal timing adjustments, enhance cognitive function, energy levels, and overall performance in the workplace?**(10 Marks)**
- b) Evaluate the effectiveness of nutrition interventions aimed at improving dietary intake, nutritional status, and overall well-being in geriatric populations. **(10 Marks)**
6. a) Compare the nutrient requirements of infants and children to those of adults. Discuss why higher amounts of certain nutrients are needed for proper growth and development during childhood.**(10 Marks)**
- b) Evaluate the significance of adhering to recommended dietary allowances for promoting optimal health. Discuss the potential consequences of nutrient deficiencies and the importance of meeting individual nutrient needs.**(5 Marks)**
- c) A woman's BMR is calculated to be 1500 calories per day using Harrison's formula. If she wants to lose weight, how many calories should she aim to consume daily to create a calorie deficit, give an explanation to support your answer.**(5 Marks)**
7. a) Analyze the long-term implications of exclusive breastfeeding on preventing obesity and non-communicable diseases later in life. How does breastfeeding during infancy impact the risk of developing chronic diseases in adulthood?**(10 Marks)**
- b) Evaluate the risks associated with relying solely on breastmilk for meeting the nutritional needs of infants beyond six months. How can deficiencies in essential nutrients affect growth and development?**(10 Marks)**