


<b>Name:</b>			
<b>Enrolment No:</b>			
<b>UPES</b>			
<b>End Semester Examination, December 2024</b>			
<b>Course: Nutrition Through the Lifecycle</b>		<b>Semester : III</b>	
<b>Program: BSc Food Nutrition and Dietetics</b>		<b>Duration : 3 Hours</b>	
<b>Course Code: HSND2011</b>		<b>Max. Marks: 100</b>	
<b>Instructions: Read all the questions carefully.</b>			
<b>S. No.</b>	<b>Section A</b> <b>Short answer questions/ MCQ/T&amp;F</b> <b>(20Qx1.5M= 30 Marks)</b>	<b>Marks</b>	<b>COs</b>
<b>Q 1</b>	Why are growth charts used to track growth over time?	<b>1.5</b>	<b>CO1</b>
<b>Q 2</b>	What do you understand by low birth weight?	<b>1.5</b>	<b>CO2</b>
<b>Q 3</b>	What is the significance of kangaroo mother care?	<b>1.5</b>	<b>CO2</b>
<b>Q 4</b>	What is a common psychological characteristic observed in individuals with anorexia nervosa that contributes to their refusal to maintain a healthy body weight? a. Intense fear of gaining weight b. Increased appetite c. Lack of physical activity d. Strong craving for high-calorie foods	<b>1.5</b>	<b>CO3</b>
<b>Q 5</b>	State whether the statement is TRUE or FALSE.  By the end of pregnancy, there is an increase in blood volume and decrease in hemoglobin concentration to enable the circulation of larger amounts of blood.	<b>1.5</b>	<b>CO2</b>
<b>Q 6</b>	What roles do nature and nurture play in growth and development?	<b>1.5</b>	<b>CO3</b>
<b>Q 7</b>	With the increase in length of infants, the proportion of _____ changes with the length of body.	<b>1.5</b>	<b>CO1</b>
<b>Q 8</b>	Water is particularly crucial for infants because they have _____. a. less body surface area per pound of body weight than adults b. a slow metabolic rate c. very efficient kidneys d. proportionately more body water than adults	<b>1.5</b>	<b>CO3</b>
<b>Q 9</b>	State in one line the impact of high protein intake on kidney function in older age.	<b>1.5</b>	<b>CO3</b>
<b>Q 10</b>	Daily protein needs in infancy are _____ of body weight daily to support their rapid rate of tissue synthesis.	<b>1.5</b>	<b>CO2</b>
<b>Q 11</b>	What do you understand by reflexes?	<b>1.5</b>	<b>CO1</b>
<b>Q 12</b>	What is Apgar scale?	<b>1.5</b>	<b>CO1</b>

<b>Q 13</b>	Why is bonding between mother and the baby critical for optimal development of a preterm infant?	<b>1.5</b>	<b>CO3</b>
<b>Q 14</b>	Children are likely experiencing wasting if their _____. a. length-for-age falls below the 5th percentile. b. BMI-for-age falls above the 25th percentile. c. weight-for-length rises below the 75th percentile. d. head circumference-for-age exceeds the 95th percentile.	<b>1.5</b>	<b>CO3</b>
<b>Q 15</b>	How restricted diets lead to amenorrhea in young women, particularly athletes?	<b>1.5</b>	<b>CO3</b>
<b>Q 16</b>	During adulthood, nutrients are used primarily for growth and development of the body. a. true b. false	<b>1.5</b>	<b>CO1</b>
<b>Q 17</b>	Define geophagia.	<b>1.5</b>	<b>CO3</b>
<b>Q 18</b>	What is morning sickness, and under what circumstances does it become severe enough to require hospitalization?	<b>1.5</b>	<b>CO3</b>
<b>Q 19</b>	What are cephalocaudal and proximodistal patterns?	<b>1.5</b>	<b>CO2</b>
<b>Q 20</b>	A baby is born prematurely at 30 weeks of gestation. At the baby's 8-month post-birth checkup, the healthcare provider wants to calculate the baby's gestation-adjusted age to assess developmental milestones.  Calculate the baby's gestation-adjusted age with step-wise calculation.	<b>1.5</b>	<b>CO4</b>
<b>Section B (4Qx5M=20 Marks)</b>			
<b>Q 1</b>	What is fetal programming? Discuss the importance of critical window of opportunity.	<b>5</b>	<b>CO1</b>
<b>Q 2</b>	a. Explore the consequences of alcoholism on fetal health. b. What do you understand by food allergies?	<b>5</b>	<b>CO3</b>
<b>Q 3</b>	Discuss using a clear diagram, how the embryo receives its nutrition from the mother's body.	<b>5</b>	<b>CO3</b>
<b>Q 4</b>	Explain the hormonal and physiological mechanisms underlying milk production and ejection during breastfeeding. State the factors that can disrupt this process.	<b>5</b>	<b>CO2</b>
<b>Section C (2Qx15M=30 Marks)</b>			
<b>Q 1</b>	a. Why is weaning important, and what nutritional considerations should be kept in mind while planning complementary feeding for infants? (7.5 marks) b. Describe the composition and functional differences between colostrum, transitional milk, and mature milk. How do these variations meet the changing nutritional and immunological needs of an infant in the initial stages of life? (7.5 marks)	<b>15</b>	<b>CO3</b>
<b>Q 2</b>	Mrs. Verma is a 72-year-old retired school teacher who has been experiencing fatigue, joint pain, and occasional digestive discomfort. She reports that she feels weaker than she used to, has lost some muscle mass, and has noticed an increase in body fat despite no significant change in her diet. She also	<b>15</b>	<b>CO4</b>

	<p>experiences frequent urination at night and finds it harder to climb stairs due to breathlessness.</p> <p>a. Why does Mrs. Verma experience a loss of muscle mass and an increase in body fat as she ages? How can this impact her overall health? (3 marks)</p> <p>b. What age-related changes in the digestive system might contribute to Mrs. Verma's slower motility and occasional digestive discomfort? (3 marks)</p> <p>c. How does aging affect kidney filtration efficiency? (3 marks)</p> <p>d. What physiological changes in the skeletal system are responsible for Mrs. Verma's reduced bone density and joint degeneration? (3 marks)</p> <p>e. How does reduced cardiac output and lung capacity contribute to Mrs. Verma's difficulty climbing stairs and breathlessness? (3 marks)</p>		
<p><b>Section D</b> <b>(2Qx10M=20 Marks)</b></p>			
<b>Q 1</b>	<p>A 30-year-old woman in her early pregnancy, asks for guidance on which nutrients are most important for foetal cell development and growth.</p> <p>a. As a healthcare provider, explain the significance of adequate folate, vitamin B12 and zinc intake before and during pregnancy. (5 marks)</p> <p>b. Discuss, at what stage does neural tube development occur, and how does it happen? What are the consequences of defective neural tube development? (5 marks)</p>	<b>10</b>	<b>CO2</b>
<b>Q 2</b>	<p>a. What physiological changes occur during menarche and how do they contribute to the development of sexual growth in females? (5 marks)</p> <p>b. Discuss different birth strategies. (5 marks)</p>	<b>10</b>	<b>CO3</b>