TEMPLATE 5

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| University of Kerala | | |
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| Discipline: BIOTECHNOLOGY |  | Time: 1 Hour 30 Minutes (90 Mins.) |
| Course Code: UK1DSCBIT104 |  | Total Marks: 42 |
| Course Title: FOOD AND NUTRITION |  |  |
| Type of Course: DSC |  |  |
| Semester: 1 |  |  |
| Academic Level: 100-199 |  |  |
| Total Credit: 3, Theory: 3 Credit  (Applicable for 4 Credit Course with 1 Credit Practical Also) |  |  |

Part A. 6 Marks. Time: 6 Minutes

Objective Type. 1 Mark Each. Answer All Questions (Cognitive Level: Remember/Understand)

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| **Qn.**  **No.** | **Question** | **Cognitive**  **Level** | **Course Outcome (CO)** |
| 1. | Give two examples for fat-soluble vitamins | Remember | CO-1 |
| 2. | Expand the acronym LC-MS | Remember | CO-3 |
| 3. | What is food science? | Understand | CO-1 |
| 4. | Mention the main function of starch in food products? | Understand | CO-3 |
| 5. | Give two common measurements taken during growth assessments? | Understand | CO-4 |
| 6. | Identify one fermented soybean product | Understand | CO-7 |

Part B. 8 Marks. Time: 24 Minutes

Short Answer. 2 Marks Each. Answer All Questions (Cognitive Level: Understand/Apply)

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| **Qn.**  **No.** | **Question** | **Cognitive Level** | **Course Outcome (CO)** |
| 7. | Explain the role of dietary fiber in nutrition | Understand | CO-1 |
| 8. | Explain recommended dietary allowance | Understand | CO-4 |
| 9. | Why do semi-perishable foods have longer shelf lives than perishable foods? | Apply | CO-2 |
| 10. | Describe the impact of fermentation on food properties | Apply | CO-6 |

Part C. 28 Marks. Time: 60 Minutes

Long Answer. 7 marks each. Answer all 4 Questions, choosing among options within each question.

(Cognitive Level: Apply/Analyse/Evaluate/Create)

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| **Qn.**  **No.** | **Question** | **Cognitive**  **Level** | **Course Outcome (CO)** |
| 11. | 1. How can you store perishable, semi-perishable, and non-perishable foods?   **OR**   1. How would you plan a balanced diet for a family, ensuring the use of all three types of foods—perishable, semi-perishable, and non-perishable? | Apply | CO-2 |
| 12. | 1. Discuss the physicochemical properties of food. How they affect food quality and shelf life   **OR**   1. Explain how factors such as fat content, water activity, and protein structure influence food texture. | Analyze | CO-3 |
| 13. | 1. Evaluate the role of key nutrients to prevent growth faltering   **OR**   1. Assess the significance of energy balance in human nutrition | Evaluate | CO-5 |
| 14. | 1. Identify specific types of foods that are semi-perishable and suggest how they could be fermented into nutritionally enriched food products with increased shelf life.   OR   1. Create a protocol for the preparation of a nutrient-rich fermented food targeted at individuals with gut health issues | Create | CO-7 |

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| **Cognitive Level** | **Marks** | **Percentage** |
| Remember | 2 | 4.8 |
| Understand | 8 | 19.0 |
| Apply | 11 | 26.2 |
| Analyse | 7 | 16.7 |
| Evaluate | 7 | 16.7 |
| Create | 7 | 16.7 |
| **TOTAL** | **42** | **100** |

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| **Course Outcomes** | **Marks** | **Percentage** |
| CO-1 | 4 | 9.5 |
| CO-2 | 9 | 21.4 |
| CO-3 | 9 | 21.4 |
| CO-4 | 3 | 7.1 |
| CO-5 | 7 | 16.7 |
| CO-6 | 2 | 4.7 |
| CO-7 | 8 | 19.0 |
| **TOTAL** | **42** | **100** |