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| **University of Kerala** |
| |  |  |  | | --- | --- | --- | | Discipline: Food Technology |  | Time: 1 Hour 30 Minutes (90 Mins. ) | | Course Code: UK1DSCFDT100 |  | Total Marks:42 | | Course Title: Basics of Food Science and Technology |  |  | | Type of Course: DSC |  |  | | Semester: 1 |  |  | | Academic Level: 100 - 199 |  |  | | Total Credits: 4, Theory: 3 Credit, Practical: 1 Credit |  |  | |  |  |  | |

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. | Identify the primary nutrient fortified in milk. | Remember | 1 |
| 2. | Name the type of colloid formed when a liquid is dispersed in a gas. | Remember | 1 |
| 3. | Give an example of liquid that requires pasteurization. | Understand | 2 |
| 4. | Give an example for food product that uses Modified Atmosphere packaging (MAP). | Understand | 4 |
| 5. | Indicate the chemical compound responsible for the characteristic smell of vanilla. | Understand | 1 |
| 6. | Identify the primary purpose of canning. | Understand | 2 |

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. | Differentiate between organic and conventional farming practices | Understand | 1 |
| 8. | Distinguish between emulsions and suspensions in terms of particle size and dispersion. | Understand | 1 |
| 9. | Explain the role of dehydration in food preservation. | Apply | 3 |
| 10. | Explain the role of volatile compounds in food flavor. | Apply | 4 |

Part C. 28 Marks. Time: 60 Minutes

Long Answer. 7 Marks each. Answer all 4 Questions, choosing among options within each questions

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

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| **Qn. No.** | **Question** | **Cognitive Level** | **Course** **Outcome (CO)** |
| 11.(a)    (b) | Illustrate the Maillard reaction pathway for the formation of a specific flavor compound.  Or  Explain the difference between plant toxins and animal toxins in food. | Apply | 4 |
| 12.(a)  (b) | Distinguish between the challenges of food production and processing in space food versus Earth food.  Or  Examine the role of food fortification in preventing micronutrient deficiencies. | Analyze | 3 |
| 13.(a)    (b) | Criticize the use of colloidal systems in food industry applications.  Or  Explain the relationship between moisture content and food spoilage. | Evaluate | 1 |
| 14.(a)    (b) | Evaluate the effectiveness of HPP in inactivating microorganisms in food products.  Or  Prepare a step- by- step guide for canning fruits and vegetables, including preparation, sterilization, and processing. | Create | 4 |

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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** | **MARKS** |

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| **Course Outcome** | **Marks** | **Percentage** |
| CO1 | 14 | 33.33 |
| CO2 | 2 | 4.76 |
| CO3 | 9 | 21.42 |
| CO4 | 17 | 40.47 |
| **TOTAL** | **42** | **MARKS** |