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| **University of Kerala** | | |
| Discipline: **BOTANY** |  | Time: 1 Hour 30 Minutes (90 Mins.) |
| Course Code: **UK1DSCBOT102** |  | Total Marks: 42 |
| Course Title: **INTRODUCTORY BOTANY** |  |  |
| 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) |  |  |

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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. | What is the primary component of the plant cell wall? | Remember | CO-1 |
| 2. | What is phyllotaxy? | Remember | CO -3 |
| 3. | Name any two poisonous plants. | Understand | CO-2 |
| 4. | What is the ultimate source of energy for the ecosystems? | Understand | CO -1,2 |
| 5. | Which plastid is responsible for the green color in plants? | Understand | CO - 1 |
| 6. | How does safranine stain plant tissues, and which parts does it primarily color? | Understand | CO -4 |

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. | Why plants are classified as autotrophs? | Understand | CO -1 |
| 8. | Fibrous root and adventitious root | Understand | CO-3 |
| 9. | How do plants add aesthetic value? | Apply | CO-2 |
| 10. | How would you prepare a plant specimen for herbarium preservation? | Apply | CO-4 |

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. | a) With the help of a labeled diagram explain the structure of a typical plant cell.  Or  b) Give an account of the role of plants in climate regulation | Apply | CO-2  CO-2 |
| 12. | a) Differentiate between structural and biochemical defense mechanisms in plants.  Or  b) Differentiate between two cell-organelles that are double membrane-bound. State their functions and draw labeled diagrams of both. | Analyze | CO-2  CO-2 |
| 13. | a) With  diagram describe the special types of inflorescence and give examples of each type.  Or  b) Discuss the application of the Microscope in biological study and mention the functions of any four components. | Evaluate | CO-4  CO-2 |
| 14. | a) Design a fruit classification chart that categorizes different types of fruits with examples.  Or  b) Draw a flow chart and explain the levels of organization in biology. | Create | CO-3  CO-2 |

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| **Cognitive Level** | **Marks** | **Percentage** |  | **Course Outcomes** | **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** |  | **TOTAL** | **56** | **100** |