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| **University of Kerala** | | |
| Discipline: Environmental Sciences |  | Time: 1 Hour 30 Minutes (90 Mins.) |
| Course Code: UK1DSCENS101 |  | Total Marks: 42 |
| Course Title: Ecology and Ecosystem Dynamics |  |  |
| Type of Course: DSC |  |  |
| Semester: 1 |  |  |
| Academic Level: 100-199 |  |  |
| Total Credit: 4, Theory: 4 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. | List the abiotic components of an ecosystem | Remember | CO1 |
| 2. | What is keystone species | Remember | CO2 |
| 3. | What are the major components of the environment | Understand | CO1 |
| 4. | Define carrying capacity | Understand | CO2 |
| 5. | What is the scope of ecology? | Understand | CO1 |
| 6. | Define restoration ecology | Understand | CO1 |

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 autecology and synecology | Understand | CO1 |
| 8. | What is the significance of population control? | Understand | CO2 |
| 9. | Evaluate the role of keystone species in maintaining ecological balance within a community | Apply | CO3 |
| 10. | Suggest how ecotones and the edge effect influence species diversity in a forest ecosystem | Apply | CO5 |

Part C. 28 Marks. Time: 60 Minutes

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

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

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| **Qn.**  **No.** | **Question** | **Cognitive**  **Level** | **Course**  **Outcome (CO)** |
| 11. | How would you implement revegetation and regeneration techniques in restoring a degraded ecosystem | Apply | CO5 |
| 12. | Critically analyse the relationship between density-dependent and density-independent factors in controlling population growth | Analyze | CO2 |
| 13. | Explain the role of producers, consumers, and decomposers in maintaining the energy flow and nutrient cycling in an aquatic ecosystem | Evaluate | CO2 |
| 14. | Design a comprehensive ecological restoration plan for a degraded forest ecosystem | Create | CO5 |