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| **University of Kerala** | | |
| Discipline: CHEMISTRY |  | Time:1 Hour 30 Minutes (90 Mins.) |
| Course Code: UK1MDCCHE100 |  | Total Marks: 42 |
| Course Title: FUNDAMENTAL ASPECTS OF ENVIRONMENTAL CHEMISTRY |  |  |
| Type of Course: DSC |  |  |
| Semester:1 |  |  |
| Academic Level:100-199 |  |  |
| Total Credit: 4, Theory: 3 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. | What is the major component of the atmosphere? | Remember | CO-1 |
| 2. | What are primary pollutants? | Remember | CO-2 |
| 3. | Write any two soil pollutants? | Understand | CO-3,4 |
| 4. | Compound responsible for Minamata disease is ------ | Understand | CO-5,6 |
| 5. | Name two major sources of water pollution | Understand | CO-2 |
| 6. | Give any two greenhouse gases. | Understand | CO-3,4 |

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. | What are the different components of an ecosystem? | Understand | CO-1 |
| 8. | Discuss the importance of ozone layer. | Understand | CO-2 |
| 9. | Apply the principle of reverse osmosis in the treatment of waste water. | Apply | CO-3,4 |
| 10. | Epidemic and pandemic are two forms of biological disasters. Explain the differences between them. | Apply | CO-5,6 |

Part C.

28 Marks. Time: 60 Minutes

Long Answer. 7 marks each.

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

(Cognitive Level: Understand/Apply)

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| **Qn.No.** | **Question** | **Cognitive Level** | **Course Outcome (CO)** |
| 11. | a) Explain the roles of producers, consumers, and decomposers in maintaining the balance of an ecosystem.  OR  b) Explain how temperature and atmospheric composition vary across different layers of atmosphere. | Understand | CO-1 |
| 12. | a) Explain the interconnection between pollutants and global warming. Also suggest remedial measures for it.  OR  b) Classify different types of pollutants, provide examples and explain how each type can affect ecosystems and human health. | Understand | CO-2 |
| 13. | a) Explain the effectiveness of different solid waste management techniques. Which method is most sustainable, why?  OR  b) Design a comprehensive water quality management plan for a city facing severe pollution from industrial wastes, agricultural runoff, and sewage. | Apply | CO-3,4 |
| 14 | a) Apply various disaster management strategies and discuss their effectiveness in different disaster scenarios.  OR  b) How the impact of endosulfan affected human health and environment in Kasaragod district in Kerala. | Apply | CO-5,6 |