



U7467



Reg. No.: .....

Name:.....

**University of Kerala**

First Semester Degree Examination, November 2024

Four Year Under Graduate Programme

Multi Disciplinary Course

**CHEMISTRY****UK1MDCCHE100- FUNDAMENTAL ASPECTS OF ENVIRONMENTAL CHEMISTRY**

Academic Level: 100-199

**Time: 1½ Hours****Max. Marks: 42****Part A.**

**Answer All Questions, Objective Type. 1 Mark Each.**  
**(Cognitive Level: Remember/Understand)**  
**6 Marks. Time: 6 Minutes**

<b>Qn No.</b>	<b>Question</b>	<b>Cognitive Level</b>	<b>Course Outcome (CO)</b>
1.	Give the percentage of the major components in the atmosphere.	Remember	CO-1
2.	What is the term used to describe harmful substances introduced into the environment?	Remember	CO-2
3.	What is electrodialysis?	Understand	CO-3,4
4.	What is the meaning of disaster?	Understand	CO-5,6
5.	Give example for quaternary consumers.	Understand	CO-1
6.	What is smog?	Understand	CO-2

**Part B.**

**Answer All Questions, Short Answer. 2 Marks Each.**  
**(Cognitive Level: Understand/Apply)**  
**8 Marks. Time: 24 Minutes**

<b>Qn. No.</b>	<b>Question</b>	<b>Cognitive Level</b>	<b>Course Outcome (CO)</b>
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7.	What is the role of atmosphere in maintaining heat balance of earth?	Understand	CO-1
8.	What is acid rain?	Understand	CO-2,6
9.	What is operation blossom spring?	Apply	CO-5
10.	What is dissolved oxygen (DO)? Describe its significance in water pollution.	Apply	CO-3

**Part C.**

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

**Long Answer. 7 marks each.**

**(Cognitive Level: Understand/Apply)**

**28 Marks. Time: 60 Minutes**

<b>Qn. No.</b>	<b>Question</b>	<b>Cognitive Level</b>	<b>Course Outcome (CO)</b>
11.	<p>a) Describe the concept of ecological succession and explain how it impacts the formation and development of food chains within an ecosystem.</p> <p style="text-align: center;"><b>OR</b></p> <p>b) Explain how temperature and atmospheric composition vary across different layers of atmosphere.</p>	Understand	CO-1
12.	<p>a) Discuss the role of carbon dioxide (CO<sub>2</sub>) as a greenhouse gas in the context of global warming and climate change. Explain the relationship between CO<sub>2</sub> emissions from human activities and their impacts on air quality and ecosystem health</p> <p style="text-align: center;"><b>OR</b></p> <p>b) Discuss the importance of the ozone layer. Explain the causes and consequences of ozone depletion. Mention two substances responsible for ozone depletion.</p>	Understand	CO-2,6
13.	<p>a) Investigate the impact of plastics as a non-biodegradable pollutant in marine environments. Suggest remedial measures.</p> <p style="text-align: center;"><b>OR</b></p> <p>b) Apply your knowledge of agricultural practices to explain how the uncontrolled use of fertilizers affects soil fertility.</p>	Apply	CO-3,4

14	<p>a) Apply your knowledge of nuclear safety and disaster management to analyze and compare two major nuclear disasters.</p> <p style="text-align: center;"><b>OR</b></p> <p>b) Define natural and man made disasters and analyze the key differences between the two. Provide examples of each type.</p>	Apply	CO-5
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