

Reg. No.:



Name:

University of Kerala

W7122

Third Semester FYUGP Degree Examination, November 2025

Discipline Specific Elective

CHEMISTRY

UK3DSECHE200 - ENVIRONMENTAL CHEMISTRY - I

Academic Level: 200-299

2024 Admission

Time: 2 Hours(120 Mins)

Max. Marks: 56

**Part A.6 Marks:Time 5 Minutes.(Cognitive Level :Remember(RE)/Understand(UN)) Objective Type.1 mark each,
Answer all questions**

Qn No.	Question	CL	CO
1	Define the term ecology.	RE	2
2	Name the four environmental segments	RE	1
3	What does the term 'sustainability' mean in the context of environmental ethics?	UN	4
4	Name the component of the environment that includes oceans , rivers and lakes.	UN	1
5	What is the significance of the Montreal Protocol ?	UN	4
6	Describe the three main types of fossil fuels.	UN	3

Part B.10 Marks.Time:20 Minutes (Cognitive Level:Understand(UN)/Apply(AP))Two-three sentences.2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Briefly explain the concept of Environmental Audit .	UN	4
8	Explain the role of photosynthesis in the carbon cycle.	UN	1
9	Employ the concept of conservation for land resources.	AP	3
10	Explain how carbon content is maintained in the atmosphere.	AP	1
11	A city experiences rapid population growth. Describe two environmental effects that might result from this increase.	AP	2

Part C.16 Marks.Time:35 Minutes.(Cognitive Level :Apply(AP)/Analyse(AN))Short Answer.4 marks each, Answer all 4 questions,choosing among options * within each question

Qn No.	Question	CL	CO
12	A) Discuss the importance of Nitrogen cycle in maintaining agricultural productivity. OR B) How can environmental perspectives be applied to manage population growth impacts?	AP	1, 1
13	A) A large number of trees are cut down in a forest for urban development. Apply your knowledge of forest ecosystems to predict the impact on soil quality, wildlife habitat and productivity. OR B) Demonstrate how Urbanisation affects ecological balances with examples	AP	2, 2
14	A) Analyse how human activities affect biodiversity and ecosystem stability. OR B) Compare the classification of pollutants based on their source and physical state.	AN	4, 4
15	A) Analyse the concept of sustainable use of resources and the importance of hydrogen fuel for future generation. OR B) Analyse the overuse of land and water resources affects food security.	AN	3, 3

Part D.24 Marks.Time: 60 Minutes.(Cognitive Level :Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer 6 Marks each.Answer all 4 questions choosing among options * within each question

Qn No.	Question	CL	CO
16	A) Distinguish between biotic and abiotic components of environment	AN	1, 4

Qn No.	Question	CL	CO
	OR B) Explain the principles of Rio declaration?		
17	A) Critically evaluate the methods to conserve water resources. OR B) Describe nuclear fuels and fossil fuels are non-renewable energy resources. What are major concerns related to their usage?	EV	3, 3
18	A) Evaluate the importance of Biodiversity for a Sustainable Ecosystem. OR B) If pesticides accumulate at producer level, explain how their conversation changes as energy moves through the ecological pyramid.	EV	2, 2
19	A) Design an alternative energy plan for a country that currently relies heavily on fossil fuels. How would you integrate nuclear energy and reduce environmental harm? OR B) Design a Green Protocol methodology for a small-scale packaging industry to promote sustainable consumption of resources.	CR	3, 3