

Reg. No.:



Name:

University of Kerala

U8714

Second Semester FYUGP Degree Examination, April 2025

Discipline Specific Core Course

CHEMISTRY

UK2DSCCHE106 - GENERAL CHEMISTRY - II

Academic Level: 100-199

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark Each.Answer all questions

Qn No.	Question	CL	CO
1	Name one non-reducing sugar.	RE	3
2	Soybean is used to replace traditional inks in printer cartridges. Recognize the green chemistry principle involved?	RE	2
3	Give an example for a disaccharide.	UN	3
4	Give an example of a reaction with 100% atom economy.	UN	2
5	Give two examples for greenhouse gas.	UN	4
6	Why does the Lycurgus cup appear different in transmitted and reflected light?	UN	1

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Name a green solvent used as an alternative in chemical synthesis.	UN	2
8	Discuss the advantages of using CNG as a fuel	UN	4
9	Explain how the nanoscale structures contribute to their functionality based on an example of nanosystems found in nature.	AP	1
10	Differentiate between the structures of DNA and RNA.	AP	3

Part C. 28 Marks.Time:60 Minutes (Cognitive Level:Apply(AP)/Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer.7 marks each.Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A) Using an example, explain how enzyme activity can be influenced by various factors.	AP	3, 3

Qn No.	Question	CL	CO
	OR B) Explain the different types of RNA and discuss their functions.		
12	A) Analyze the different types of carbon nanotubes (CNTs). Discuss how their structural variations impact their properties and potential applications. OR B) Investigate the interdisciplinary nature of nanotechnology and analyse its impact on fields such as medicine, electronics and energy	AN	1, 1
13	A) "Green solvents are environmentally friendly alternatives to conventional solvents used in chemical processes". Evaluate the above statement. OR B) Evaluate the scope of principles of green chemistry in the present scenario.	EV	2, 2
14	A) Predict the significance of flash point and pour point in determining the safety and usability of lubricating oils under various conditions. Explain how graphite functions as a solid lubricant and develop a plan to improve the performance of lubricants' using different additives. OR B) Different grades of coal are based on the number of carbon content in them. Is it correct or not? Explain coal and their classification	CR	4, 4