



Reg. No.:

Name:

University of Kerala

First Semester FYUGP Degree Examination, December 2025

Discipline Specific Core Course

CHEMISTRY

UK1DSCCHE105 - GENERAL CHEMISTRY I

Academic Level: 100-199

2025-Admission onwards

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	State one difference between a theory and a law.	RE	1
2	Name the primary fuel used in domestic cooking gas cylinders.	RE	3
3	Explain the term 'accuracy'.	UN	4
4	Mention the basic role of a propellant in a firecracker.	UN	3
5	The principle that a scientific theory must be testable and capable of being proven wrong is called _____.	UN	1
6	The major discovery of Friedrich Wohler is	UN	2

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	Explain the importance of inductive and deductive reasoning in research.	UN	1
8	Differentiate hard and soft soaps.	UN	3
9	How can the action of indicators be applied in titrations? Explain it by citing out an indicator.	AP	4
10	Describe how Marie Curie's work on radioactivity influenced chemical science.	AP	2

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)	AP	1, 1

Qn No.	Question	CL	CO
	<p>Demonstrate how to formulate a testable hypothesis.</p> <p>OR</p> <p>B)</p> <p>Apply your understanding to show how experimental evidence led to the rejection of earlier beliefs about matter and how the transition helped establish the modern branches of Chemistry. Include at least two historical examples.</p>		
12	<p>A)</p> <p>Evaluate the contributions of women scientists- Rosalind Franklin, Dorothy Hodgkin and Gertrude Elion- in advancing chemical science.</p> <p>OR</p> <p>B)</p> <p>Compare and evaluate the contributions of Priestley, Boyle and Dalton to the understanding of gases and the atomic theory.</p>	AN	2, 2
13	<p>A)</p> <p>Compare the ingredients of different household cleaners and relate their chemical properties to their modes of cleaning action.</p> <p>OR</p> <p>B)</p> <p>Evaluate the role of oxidizers in modern fireworks. Should regulations restrict their use? Support your argument with chemical safety reasoning.</p>	EV	3, 3
14	<p>A)</p> <p>Evaluate the effectiveness of an MSDS as the sole tool for ensuring workplace chemical safety.</p> <p>OR</p> <p>B)</p> <p>Show how you would use molarity, molality, normality, and mole fraction to describe the concentration of solutions.</p>	CR	4, 4