

CHEMICAL ENGINEERING TRIPOS PART I
Course 2021-22 and Examination 2022

The examination papers are described below. Each paper will be of three hours' duration. Candidates will be allowed 10 minutes of reading time at the start of each paper.

Paper 1 *Answer all questions.*

Section A will contain two questions on Fluid Mechanics

Section B will contain two questions on Heat and Mass Transfer Fundamentals

Section C will contain one question on Heat and Mass Transfer Operations

Paper 2 *Answer all questions.*

Section A will contain three questions on Process Calculations

Section B will contain one question on Stress Analysis and Pressure Vessels

Section C will contain one question on Introductory Chemical Engineering

Paper 3 *Answer all questions.*

Section A will contain two questions on Separations: Equilibrium Staged Processes

Section B will contain two questions on Biotechnology

Section C will contain one question on Homogeneous Reactors

Paper 4(1) *Answer all questions.*

Section A will contain three questions on Engineering Mathematics

Section B will contain four questions on Mechanical Engineering – this includes Structures, Mechanical Properties of Materials and Dynamics

Paper 4(2) *Answer all questions.*

Section A will contain three questions on Engineering Mathematics

Section B will contain four questions on Introductory Chemistry

Candidates will be provided with the *Chemical Engineering Tripos Data Book* for all papers.

Each question on Papers 1, 2 and 3 will be marked out of 20. Each question on Papers 4(1) and 4(2) will be marked out of 15. The approximate number of marks allocated to each part of a question will be indicated on the examination papers.

The Examiners require candidates for Paper 4(1) to demonstrate proficiency in Engineering Drawing and candidates for Paper 4(2) to demonstrate proficiency in the Physical Chemical Laboratory. All candidates must show proficiency in Computing Skills and attend Professional Skills seminars.

The normal allocation of marks is 100 marks for each Paper, 75 marks for the Chemical Engineering Laboratory, and 75 marks for the Exercises.

R. L. Tuley

*Secretary of the Chemical Engineering and Biotechnology Syndicate
1 October 2021*