

## CHEMICAL ENGINEERING TRIPOS PART IIA Course 2021-22 and Examination 2022

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

All the questions will carry equal marks. The approximate number of marks allocated to each part of a question will be indicated on the examination papers. The rubric for each paper is shown in italics.

**Paper 1**    *Answer all questions.*

Section A will contain three questions on Fluid Mechanics.  
Section B will contain two questions on Equilibrium Thermodynamics.

**Paper 2**    *Answer all questions.*

Section A will contain two questions on Separations.  
Section B will contain two questions on Heterogeneous Reactors.  
Section C will contain one question on Bioprocessing.

**Paper 3**    *Answer all questions.*

Section A will contain two questions on Process Dynamics and Control.  
Section B will contain two questions on Corrosion and Materials.  
Section C will contain one question on Safety, Health and Environment.

**Paper 4**    *Answer all questions.*

The paper will contain one question on each of the following topics:  
Radiative Heat Transfer  
Particle Processing  
Process Synthesis  
Partial Differential Equations  
Statistics

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

All candidates are required to attend the classes on Engineering Ethics and complete the set work to the satisfaction of the Examiners.

The normal allocation of marks is 100 marks for each Paper, 140 marks for the Design Project, and 85 marks for the Exercises.

**R. L. Tuley**

*Secretary of the Chemical Engineering and Biotechnology Syndicate*

*1 October 2021*