

# ENGINEERING TRIPOS PART IB 2011-12

## NOTICE TO CANDIDATES

### 1. ORDER OF EXAMINATION

#### Monday 04 June 2012

9 to 11 Paper 1 Mechanics

2 to 4 Paper 2 Structures

#### Tuesday 05 June 2012

9 to 11 Paper 3 Materials

2 to 4 Paper 4 Thermofluid mechanics

#### Wednesday 06 June 2012

2 to 4 Paper 5 Electrical engineering

#### Thursday 07 June 2012

2 to 4 Paper 6 Information engineering

#### Friday 08 June 2012

9 to 11.30 Paper 8 Selected topics

2.30 to 4.30 Paper 7 Mathematical methods

Each paper will be of two hours' duration, except Paper 8. The examination for Paper 8 shall consist of either a written paper of two and a half hours' duration, or a written paper of one and a half hours' duration and the submission of coursework in one foreign language.

The examinations will take place in the Engineering Department.

2. Candidates will be expected to answer four questions on each paper, except for Paper 8.
3. Candidates who are not taking the Foreign Language option will be expected to answer five questions from Paper 8.  
Candidates who are taking the Foreign Language option will be expected to answer three questions from Paper 8.
4. **Paper 1, Mechanics** and **Paper 4, Thermofluid mechanics** will be divided into two sections each of three questions. Candidates will be expected to answer two questions from each. Both sections may contain questions from any part of the course.
5. **Paper 2, Structures**, and **Paper 3, Materials** will be divided into sections. Candidates will be expected to answer four questions in total.
6. **Paper 5, Electrical engineering** will be divided into three sections, and candidates will be expected to answer at least one question from each.  
Section A will consist of two questions on linear circuits and devices,  
Section B will consist of three questions on electrical machines, and  
Section C will consist of two questions on electromagnetic fields and waves.
7. **Paper 6, Information engineering** will be divided into two sections, and candidates will be expected to answer two questions from each.

Section A will consist of three questions on linear systems and control, and  
Section B will consist of three questions on communications, and signal and data analysis.

8. **Paper 7, Mathematical Methods** will be divided into two sections, and candidates will be expected to answer two questions from each.  
Section A will consist of three questions on vector calculus,  
Section B will consist of three questions on linear algebra and probability.
9. **Paper 8, Selected Topics** will be divided into eight sections.  
Section A will consist of two questions on Introductory Business Economics, from which candidates will be expected to answer one only.  
Each of the remaining seven sections will consist of three questions, of which candidates will be expected to answer not more than two. Candidates will be expected to answer questions from two sections only, or, in the case of candidates offering the Foreign Language option, one section only. The seven sections, which correspond to the optional courses to be given during the Easter term, are as follows:
- |           |                                      |
|-----------|--------------------------------------|
| Section B | Civil and structural engineering     |
| Section C | Mechanical engineering               |
| Section D | Aerothermal engineering              |
| Section E | Electrical engineering               |
| Section F | Information engineering              |
| Section G | Biological and medical engineering   |
| Section H | Manufacturing, management and design |
10. All questions in all papers will carry equal weight.
11. The Foreign Language option in Paper 8 will carry equal weight to each of sections B-H on Paper 8.
12. The Examiners will take into account course work produced by candidates (in computing, experimental engineering and design) according to the scheme in the Notice published by the Secretary of the Faculty Board (September 2011).
13. Candidates are reminded that any paper in the Part IB examination may contain questions on course work associated with the subjects examined in that paper.
14. A booklet of standard data books will be available at all examinations. Where the Examiners consider a particular data book to be useful for a particular paper, it will be placed on each candidate's desk before the start of the examination for that paper.
15. Candidates will be allowed to take into the Examination Room only officially marked calculators as explained in the notice concerning Calculators published by the Faculty Board (July 2011).
16. In the working of all questions, and in the evaluation of numerical quantities, candidates should show a sufficient number of steps for the Examiners to make a proper assessment of their answers.

P A Davidson, Chairman of Examiners  
Michaelmas 2011