

OLLSCOIL NA hÉIREANN, GAILLIMH
NATIONAL UNIVERSITY OF IRELAND, GALWAY

SEMESTER 1
WINTER EXAMINATIONS 2002

SECOND UNIVERSITY EXAMINATION IN ARTS

CT242

TECHNOLOGICAL FRAMEWORKS 1

Prof. D. Bell
Prof. G. Lyons
Dr. C. Mulvihill

Candidates are required to answer **THREE** questions
All questions carry equal marks
Time allowed: **TWO hours**

- 1 'Paradigm shifts and incremental change are both important for technological progress'. Explore this statement.
- 2 'Many fundamental contributions have been made to computing over the years'. Outline your understanding of the contributions of four of the following people: Jacquard, Babbage, Ludgate, Turing, Hopper, Von Neumann, Shannon.
- 3 'There are several suitable low-level representations available for computing systems'. Discuss this statement, treating of four of the following in the course of your answer: binary, binary-coded decimal, octal, hexadecimal, one's complement, two's complement.
- 4 'A modern programming language has many associated elements'. Discuss this statement, explaining the terms 'API', 'compiler', 'assembler', and 'debugger' in the course of your answer.
- 5 'Electronic books have the potential to be as significant for humanity as the invention of the printing press.' Explore this statement.