

COMPUTER SCIENCE TRIPOS Part IA – 2007 – Paper 1

1 Foundations of Computer Science (LCP)

This question has been translated from Standard ML to OCaml

- (a) Code the OCaml function `merge`, which combines two ordered lists to form an ordered list containing the elements of both. [2 marks]
- (b) Code a top-down merge sort function in OCaml. You may assume that basic functions on lists are given, provided you describe them briefly. [3 marks]
- (c) State the time complexities of merge and merge sort, justifying your answer carefully. [5 marks]