

## 2003 Paper 6 Question 10

### Foundations of Functional Programming

Explain

- (a) a technique that you could use to implement a pure functional programming language using applicative order (eager) evaluation; [6 marks]
- (b) a technique suitable if your implementation must use some form of lazy or normal-order evaluation. [6 marks]

Comment on whether the behaviour of your implementation (b) is strictly and exactly the same as normal order evaluation in lambda-calculus. [3 marks]

Comment about similarities and differences between your two techniques and any predictions you can make about their relative simplicity, performance or convenience. [5 marks]