

## 2001 Paper 6 Question 10

### Foundations of Functional Programming

The following are some concepts that have flourished in the context of functional programming but which have (so far) been less heavily used in main-stream languages even when they have been available:

- (a) polymorphic types
- (b) type reconstruction
- (c) higher-order functions
- (d) lazy evaluation
- (e) continuations

For *each* case give a brief explanation of the facility referred to, suggest a circumstance in which it might be useful and comment on how immediately relevant to non-functional languages it seems.

[4 marks per part]