

SOLUTION NOTES

Introduction to Functional Programming 2003 Paper 13 Question 10 (AD)

1. Bookwork.

[5 marks]

2. Give the type of each of the following five expressions:

(a) $K : 'a \rightarrow 'b \rightarrow 'a$

(b) $K\ I : 'a \rightarrow 'b \rightarrow 'b$

(c) $S : ('a \rightarrow 'b \rightarrow 'c) \rightarrow ('a \rightarrow 'b) \rightarrow 'a \rightarrow 'c$

(d) $S\ (K\ S) : ('a \rightarrow 'b \rightarrow 'c \rightarrow 'd) \rightarrow 'a \rightarrow ('b \rightarrow 'c) \rightarrow 'b \rightarrow 'd$

(e) $S\ S\ (K\ I) : ('a \rightarrow 'a \rightarrow 'b) \rightarrow 'a \rightarrow 'b$

[15 marks]