Foundations of Functional Programming

(a) Explain how a lambda-term can be converted into a form that uses only the combinators S and K. [4 marks]

(b) Illustrate your method by writing down a lambda term for each of the following functions and then expressing it in terms of just S and K.

(i) fun I x = x

(ii) fun B f g x = f (g x)

(iii) fun C f x y = f y x

(iv) fun A x y = y (x x y) [4 marks each]