2002 Paper 6 Question 10

Foundations of Functional Programming

Show how to use pure lambda terms to represent

(*a*) truth values and the ability to make tests on them;

(*b*) tuples;

(*c*) something like the effect of the ML
    `datatype blist = empty | node of bool*blist`

(*d*) a fixed-point operator;

(*e*) code to reverse a list of boolean values.

[4 marks each]