1998 Paper 13 Question 7

Comparative Programming Languages

Many languages either forbid explicit pointer arithmetic or restrict its use. What kinds of problem are they seeking to avoid? Why is it allowed (with some restrictions) in C and C++, and commonly used by programmers?   [8 marks]

What are the dangers inherent in allowing memory deallocation to be under the direct control of the programmer? Given these dangers, why has memory deallocation not been automated in standardised C or C++?   [12 marks]