

1993 Paper 13 Question 1

Digital Electronics and Computer Design

What is a stack? [4 marks]

Discuss the merits of providing small hardware stacks in a CPU for holding (a) subroutine return addresses and (b) anonymous results that occur during expression evaluation. [8 marks]

Sketch the design of a very fast stack, implemented in hardware, which can be used in a CPU. [8 marks]