1993 Paper 7 Question 4

Comparative Architectures

Compare and contrast possible implementations of instructions which

(*a*) load a single byte from memory   [8 marks]

(*b*) store a single byte in memory   [4 marks]

(*c*) move a sequence of n bytes from one address to another   [8 marks]

For each implementation, indicate briefly whether it conforms to the RISC philosophy, its effect on pipelining, and its likely efficiency compared with any alternatives.