1996 Paper 7 Question 3

Comparative Architectures

Discuss *five* of the following in 100–150 words:

(*a*) delayed loads

(*b*) delayed branches and annulment

(*c*) subword (for example byte) memory access

(*d*) unaligned memory access

(*e*) variable length instructions

(*f*) multi-cycle (for example division) instructions

(*g*) multiple functional units and multiple issue

You may find it useful to discuss these issues with respect to two architectures which differ in the aspect concerned.   [4 marks each]