

2001 Paper 10 Question 7

Computer Design

- (a) Why does pipelining introduce data hazards? [4 marks]
- (b) What mechanism may be used to remove some data hazards? [4 marks]
- (c) Why is it not possible to remove all data hazards? [4 marks]
- (d) What hardware is required to prevent data hazards from infringing the programmer's model of instruction execution? [4 marks]
- (e) What is the difference between a data hazard and a control hazard? [4 marks]