

2002 Paper 8 Question 10

Comparative Architectures

- (a) Many statically-scheduled super-scalar processors have long pipelines. Explain why this is so. [4 marks]
- (b) What problems do such long pipelines introduce, and what techniques can be employed to reduce the penalty? [6 marks]
- (c) Explain how register score boarding is used to prevent data hazards. [5 marks]
- (d) What special difficulties does providing support for floating point over/underflow exceptions introduce? [5 marks]