

1996 Paper 1 Question 12

System Design

With modern technology, many pieces of equipment which we would describe as a 'computer' actually contain multiple hardware components, each performing fetch-execute cycles. However not all of these are always intended to be 'seen' by the programmer as part of the programming model. Define or explain the following:

- (a) The term *microprocessor*. [3 marks]
- (b) The term *programming model*. [3 marks]
- (c) The effects (or lack of them) on the programming model of having microprocessors imbedded in peripheral devices of a computer. [6 marks]
- (d) A programming model of an overt multiprocessor machine. [6 marks]
- (e) What type of system in production today is likely to have exactly one microprocessor inside? [2 marks]