

## 1998 Paper 7 Question 4

### ECAD Topics

Explain the purpose and principles of fault simulation in electronic CAD. Why is it difficult to implement efficiently? [4 marks]

Describe the following three techniques for fault simulation:

(a) parallel fault simulation [4 marks]

(b) concurrent fault simulation [4 marks]

(c) deductive fault simulation [4 marks]

Which of these schemes would be suitable for higher-level functional units rather than gates? In particular, how would they handle logic blocks with internal state? [4 marks]