

2005 Paper 7 Question 7

Specification and Verification II

- (a) What is *model checking*? [4 marks]
- (b) Distinguish between *explicit state* and *symbolic* model checking. [4 marks]
- (c) Describe briefly the *state explosion problem* in formal verification. [4 marks]
- (d) How might theorem proving help with the state explosion problem? [4 marks]
- (e) How might abstraction help with the state explosion problem? [4 marks]