

# 1997 Paper 8 Question 1

## Specification and Verification I

Outline the main points of *each* of the following topics, using examples where appropriate:

- (a) why different WHILE-rules are needed for partial and total correctness
- (b) verification conditions
- (c) Floyd–Hoare logic as higher-order logic
- (d) soundness and completeness for Floyd–Hoare logic

[5 marks each]