1995 Paper 7 Question 1

Specification and Verification I

'A formally verified program is a correct program which will always work as required'.

Discuss the truth or otherwise of this statement with respect to

(*a*) capturing the specification   [4 marks]

(*b*) the verification process   [6 marks]

(*c*) using the program   [8 marks]

In what circumstances might it be impossible formally to verify a program using a Hoare logic?   [2 marks]