

THE UNIVERSITY OF AUCKLAND

SECOND SEMESTER, 2004

Campus: City

COMPUTER SCIENCE

Software Security

(Time allowed: TWO hours)

NOTE: Attempt **ALL** questions in the 12-page script book provided, using approximately **25** words to answer each 5-mark question, **50** words to answer each 10-mark question, and approximately **75** words to answer each 15-mark question. Total possible: **100 marks**.

- A. There are three security goals in the common “CIA” taxonomy: Confidentiality, Integrity, Availability. Some authors, including Butler Lampson in his article “Computer Security in the Real World”, include a fourth goal of “Accountability”.
1. Give a brief definition of Accountability. [5 marks]
 2. Name any system or application area that was described in any required reading for COMPSCI 725 this term, and briefly describe an accountability goal that is appropriate for this system. [5 marks]
 3. For the same system or application you used as an example in question 2, briefly describe an appropriate confidentiality goal. [5 marks]
 4. Sometimes accountability comes into conflict with confidentiality. Analyse your two goals from questions 2 and 3, in the context of your chosen system or application, for any conflict that would make it impossible for any implementation to completely achieve both goals (at least in some situations). [5 marks]
- B. (Other questions...). [80 marks]
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