

COMPUTER SCIENCE TRIPOS Part IB – 2012 – Paper 4

8 Security I (MGK)

Briefly explain

- (a) the function of a *salt value* in a password database [3 marks]
- (b) *two* examples of covert channels in a file system protocol that is restricted to read-only operations under a mandatory access-control policy [2 marks]
- (c) *three* types of common software vulnerabilities, with examples [9 marks]
- (d) *two* problems solved by Cipher Block Chaining [2 marks]
- (e) under which conditions will user  $U$  be able to remove a directory  $D$  in Berkeley Unix [4 marks]