Topics for Computer Security

Comprehensive Exam

Posted: September 2009


1. Elementary Cryptography - Substitutions /
   Permutations
2. Elementary Cryptography - Symmetric,
   Assymetric Encryption, DES, Rijndael
3. Elementary Cryptography - Public Key
   Encryption, RSA, Digital Signatures
4. Program Security - Buffer Overflow Attack and
   other nonmalicious program errors
5. Program Security - Viruses, Worms, Trojan
   Horses, Trapdoors, Controls
6. Protection in a General Purpose Operating System
   - Memory and Address Protection, Access Control
7. User Authentication, Passwords
8. Trusted Operating System Design
11. Administering Security - Planning, Risk Analysis
13. Legal, Privacy, Ethical Issues in Computer Security
14. Database and Data Mining Security