PC & Network Security
CNET – 250
Fall 2011
Study Guide

1. Discuss the fundamental concepts of computer security.
2. List and discuss the CIA Concepts.
3. Name and explain four things discussed in the class that has become a multibillion dollar problem that involves the misuse of computers.
4. In reference to confidentiality of information, list and discuss tools involved in protecting sensitive information.
5. Explain how backups, checksums and data correcting codes provide data integrity.
6. Discuss physical protections and computational redundancies as they relate to availability.
7. Discuss the AAA concepts.
8. List and discuss the three concepts involved with data assurance.
9. Give a reason why a company may have the need for anonymity of its data. Justify your example.
10. List and explain tools which you can use to publish data in a privacy-preserving fashion.
11. List and discuss the threats and attacks that may compromise the goals of the AAA concepts.
12. List and discuss the 10 security principles listed by Saltzer and Shroeder.
13. Explain advantages and disadvantages of:
    a. Access control matrix
    b. Access control list
    c. Capabilities and
    d. Role-Base Access Control
14. Explain symmetric encryption. (purpose, use and distribution of key)
15. Explain public-key encryption. (purpose, use and distribution of key)
16. Explain digital signatures (process of sending and receiving a message)
17. Explain the man-in-the-middle attack.
18. Explain the cryptographic hash function as it relates to digital signatures.
19. Explain the cryptographic hash function as it relates to authentication.
20. Discuss computer security as it relates to implementation and usability issues.
21. Discuss the directory attack.
22. Discuss techniques that may be used in creating a secure password.