

B. Tech Degree VIII Semester Examination, April 2007

CS 801 SECURITY IN COMPUTING
(2002 Admissions Onwards)

Time : 3 Hours

Maximum Marks : 100

- I. (a) Explain the operations of AES and DES encryption algorithms. (12)
(b) Write short notes on :
(i) Substitution Ciphers (ii) Transpositions (8)
OR
- II. (a) Describe public key encryption and the uses of encryption. (8)
(b) Explain the main vulnerabilities of a computer system. (12)
- III. (a) What are viruses and other malicious code? Which are the different methods by which a virus gets attached and invoked? (15)
(b) Briefly describe secure programs. (5)
OR
- IV. (a) What are non-malicious program errors? Explain with an example *any one* non-malicious program error. (10)
(b) Explain briefly how can you control the different program threats. (10)
- V. (a) Write short notes on :
(i) Access Control List (ii) Capability. (6)
(b) Describe trusted Operating System Design in detail. (14)
OR
- VI. (a) Explain briefly the typical operating system flaws. (10)
(b) Discuss about the different methods by which passwords get attacked. (10)
- VII. (a) What are multilevel databases? How can they ensure differentiated security? (5)
(b) Describe the different proposals for multilevel security. (15)
OR
- VIII. (a) Explain the features that should be taken care of for monitoring the security of a database. (10)
(b) Briefly explain reliability and integrity with respect to database. (10)
- IX. (a) What is a firewall? Explain the types of firewall and design of firewalls. (12)
(b) Briefly explain :
(i) Spoofing (ii) Denial of service. (8)
OR
- X. (a) What is an intrusion detection system? Explain the various functions of Intrusion Detection Systems. (10)
(b) Explain how authentication can be achieved using Kerberos. (20)