BTS (C) – VIII – 07 – 006 (B)

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.
     (b) Explain how authentication can be achieved using Kerberus.   (20)

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