

***B. Tech Degree VIII Semester (Supplementary)  
Examination, September 2006***

**CS 801 SECURITY IN COMPUTING  
(2002 Admissions)**

Time : 3 Hours

Maximum Marks : 100

- I. (a) Draw a block diagram representing model of conventional cryptosystem. (12)  
Explain all components. (8)  
(b) Briefly define the Caesar Cipher. (8)
- OR**
- II. (a) What is one-time pad? Explain using an example. (8)  
(b) Explain the DES encryption algorithm. (12)
- III. Explain different types of software threats. (20)
- OR**
- IV. What are viruses? Explain various types of viruses. (20)
- V. (a) Explain memory and address protection schemes. (10)  
(b) What are trusted operating systems? Explain. (10)
- OR**
- VI. (a) Explain different types of file protection mechanisms. (10)  
(b) What is authentication? Explain user authentications schemes. (10)
- VII. (a) Describe security in multilevel databases. (12)  
(b) What is 2 – phase update technique? What problem does it solve? (8)
- OR**
- VIII. (a) Outline different design techniques for multilevel secure databases. (12)  
(b) Explain :  
(i) Sensitive data (ii) Reliability  
(iii) Inference (iv) Integrity. (8)
- IX. (a) What is a firewall? List techniques used by firewalls to control access and enforce a security policy. (10)  
(b) What is an IDS system? Explain. (10)
- OR**
- X. (a) Describe various threats in networks. (10)  
(b) What is a gateway? Explain application – level and circuit – level gateways. (10)

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