B.E. Sem 8 (Rev.) I.T. Information Security 19/12/08

VT Oct 08-287

Con. 5643–08. (REVISED COURSE) RC–7752

(3 Hours) [Total Marks : 100

N.B. : (1) Question No. **1** is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.
(3) **All** questions carry **equal** marks.
(4) Draw neat **diagrams** wherever **necessary**.

1. (a) What is access control ? How different is it from vulnerability. 5
   (b) Explain how fence register is used for relocating a user's program. 5
   (c) Can a database contain two identical records without a negative effect on the integrity of database ? Why or why not ? 5
   (d) What is the Denial of Service (DOS) attack ? 5

2. (a) Explain in detail the steps in risk analysis. 10
   (b) Discuss the similarities and differences between signature based IDS and heuristic based IDS. What are limitations of IDS ? 10

3. (a) Compare the two encryption strategies link and end-to-end encryption used as tools for network security from different point of views. 10
   (b) Explain the role of kerberos for supporting authentication in distributed systems. 10

4. (a) Explain why asynchronous I/O activity is a problem with many memory protection schemes, including base/bounds and paging. Suggest a solution to the problem. 10
   (b) Explain how every covert timing channel can be transformed into an equivalent covert storage channel. 10

5. (a) List the control against program threats. Explain developmental and administrative control in detail. 10
   (b) List major security threats dealt with each level of OSI protocol stack. 10

6. (a) List the characteristics of a good firewall implementation and its types. What are the limitations of firewall ? 10
   (b) What are the possible attacks on passwords ? 10

7. Write short notes on (any **two**) :– 20
   (a) VPN
   (b) Secure E-mail
   (c) Ethical Issues in Computer Society
   (d) Contents of a Security Plan.

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