

(REVISED COURSE)

(3 Hours)

[Total Marks : 100]

N.B. (1) Question No. 1 is compulsory.

(2) Attempt any four questions from remaining questions.

(3) Draw figures wherever needed.

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|----|---|-----------------------------|
| 1. | (a) What are the principles of security and which are the attacks violate these principles ?  | 10                          |
|    | (b) How the network is more vulnerable for attacks ?  | 10                          |
| 2. | (a) What are the controls to achieve security in programs ?                                   | 10                          |
|    | (b) Define covert channel. What are the ways for creating covert channel ?                    | 10                          |
| 3. | (a) Explain use of Integrity lock and Sensitivity locks.                                      | 10                          |
|    | (b) What is inference problem in Database ? Discuss with example.                             | 10                          |
| 4. | (a) Explain Firewalls—Types and its limitations.  | 10                          |
|    | (b) What is Denial of service attack ? What is Ddos ? What can possibly prevent this attack ? | 10                          |
| 5. | (a) What is the solution to achieve non repudiation ? How is this guaranteed ?                | 10                          |
|    | (b) What is Kerberos ? Explain in detail.   | 10                          |
| 6. | (a) What are authentication mechanisms in operating systems ?                                 | 10                          |
|    | (b) Explain all file protection mechanisms.   | 10                          |
| 7. | Write short notes :—  | 20                          |
|    | (a) Ethical issues in computing society   | (c) Secure-Email (PEM, PGP) |
|    | (b) Security planning and risk analysis   | (d) SSL and IPsec.          |