

Con. 5158-09.

(REVISED COURSE)

SP-6863

(Lib)

System Security

(3 Hours)

[Total Marks : 100]

8/12/09

N. B. : (1) Question No. 1 is **compulsory**.(2) Attempt any **four** questions out of remaining **six** questions.(3) Figures to the **right** indicate **full** marks.(4) Answer to the questions should be **grouped** and written **together**.(5) Assume any **suitable** data wherever **required** but justify the **same**.

1. (a) Distinguish among vulnerability, threat and control. 5
- (b) Explain threat precursors with example. 5
- (c) Does a PKI use symmetric or asymmetric encryption ? Explain your answer. 5
- (d) Does VPN use Link or End to End encryption ? Justify your answer. 5
2. (a) What is the difference between a digital signature and digital certificate ? How one can decide whether to trust that or not, upon reception of a digital certificate? 10
- (b) Write a note on Data Encryption Standard (DES). 5
- (c) Compare between DES, AES and RSA encryption algorithms. 5
3. (a) How memory and address protection is done by different methods as fence, relocation and Base and Bound register ? 10
- (b) Explain nonmalicious program errors with examples. 10
4. (a) How is multilevel security provided to database ? Explain in terms of separation, encryption, integrity lock, sensitivity lock. 10
- (b) Explain denial of service or DOS attack in networks. 10
5. (a) List functions of Intrusion Detection System. Explain and differentiate signature based and anomaly based IDS. 10
- (b) List and explain the issues of security plan for administrative security. 10
6. (a) Write a note on Kerberos system that supports authentication in distributed system. 10
- (b) What is file protection mechanism ? List and explain basic forms of protection. 10
7. (a) How risk analysis is done to provide effective security planning ? Present examples of risk analysis methods. 10
- (b) Define the term Ethics. What is the difference between Laws and Ethics ? What is IEEE code for Ethics ? 10