FACULTY OF INFORMATICS

B.E. IV/IV Year (IT) I Semester (Main) Examination, December 2010

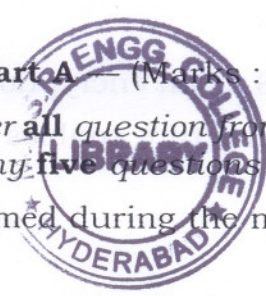### INFORMATION SECURITY

(Elective - II)

Time : 3 Hours]　　　　　　　　　　　　　　　　　　　　　　[Max. Marks : 75

Part A — (Marks : 25)

Answer all question from Part A.
Answer any five questions from Part B.

1. What are the activities performed during the maintenance phase of the Sec SOLC?　　3

2. List the components of an Information System.　　2

3. Differentiate with an example between a law and ethic.　　2

4. Enumerate the conditions under which a policy can be enforced.　　3

5. In the context of information security, explain the significance of a DMZ.　　3

6. How does the use of a proxy server enhance the level of security protection to a network?　　2

7. Differentiate between a monoalphabetic & Polyalphabetic substitution ciphers.　2

8. Discuss the implementation of digital signatures.　　3

9. What is a message digest?　　2

10. How is SSL used to enhance the level of security of Internet communications?　3

Part B — (Marks :50)

11. (a) Discuss the various types of deliberate software attacks designed to damage, destroy, or deny service to target systems?　　6

　　(b) How can the threats proved by social engineering to information security be overcome.　　4

12. Discuss the various risk control strategies in an organization.　　10

13. (a) With the help of a diagram discuss the security architecture of an organization that incorporates defence in depth.　　6

　　(b) Discuss the use of intrusion detection systems to enhance the level of information security protection.　　4

14. Explain in detail the RSA algorithm and its working.   1

15. (a) How does SET provide protection?

    (b) Explain the operation of SHA-1 algorithm in the implementation of a message desert.

16. (a) Explain the inadequacy of DES as an encryption algorithm.

    (b) Discuss how Public Key infrastructure enables the protection of information assets.

17. Write short notes on (any **two**):   1

    (a) AES

    (b) Firewalls

    (c) Balancing of Security of Information access.