

**Scheme – E**

**Sample Question Paper**

**Course Code : Diploma in Computer Engineering /Computer Technology**

**Course Code : CO/CM/CD**

**Semester : Fourth for CO/CM and Sixth for CD**

**12177**

**Subject Title : Computer Security**

**Marks : 100**

**Time: 3 Hours**

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**Instructions:** 1] All questions are compulsory.

2] Figures to the right indicate full marks.

3] Assume suitable data wherever necessary.

4] Draw sketches wherever necessary.

**Q.1 (A) Attempt any THREE of the following:**

**12 Marks**

- a) State four principles of security.
- b) Give two examples of denial of service attack.
- c) State four types of problems due to installation of unauthorized software.
- d) Define system security and patch.

**Q.1 (B) Attempt any ONE of the following:**

**06 Marks**

- a) Describe SSL protocol stack with suitable sketch.
- b) Give steps to secure windows operating system.

**Q.2 Attempt any TWO of the following:**

**16 Marks**

- a) What is key distribution? Explain two problems of key distribution with example.
- b) Describe Secure Electronic Transaction process.
- c) Illustrate Diffie - Hellman key exchange algorithm.

**Q.3 Attempt any FOUR of the following:**

**16 Marks**

- a) Define virus and describe the virus spreading mechanism.
- b) State the meaning of Virtual Private Network with suitable sketch.
- c) Describe the finger print mechanism for user authentication.
- d) Give four criterias used for password management.
- e) Explain the working of host based Intrusion Detection System.

**Q.4 (A) Attempt any THREE of the following:**

**12 Marks**

- a) Give four examples of computer intrusion.
- b) Define sniffing and spoofing with suitable example.
- c) What is code injection? How to prevent the same? Suggest two methods.
- d) State eight good practices for software development.

**Q.4 (B) Attempt any ONE of the following:**

**06 Marks**

- a) Give the meaning of the terms hot fix , service pack and patch
- b) Explain the roles of individual in security.

**Q.5 Attempt any TWO of the following:**

**16 Marks**

- a) Describe the working of single homed bastion and screen host gateway type of firewall with suitable sketch.
- b) Explain Rail fence technique with suitable example.
- c) What is IP security? Describe authentication header mode of IP security with suitable sketch.

**Q.6 Attempt any FOUR of the following:**

**16 Marks**

- a) Define Piggybacking and Phishing.
- b) Describe the working of PEM email security.
- c) Give the steps of operating system hardening.
- d) Explain Caesar's Cipher technique with suitable example.
- e) Give the steps for obtaining a digital certificate.