

(2½ Hours)

[Total Marks: 75]

- N. B.: (1) **All** questions are **compulsory**.
 (2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
 (3) Answers to the **same question** must be **written together**.
 (4) Numbers to the **right** indicate **marks**.
 (5) Draw **neat labeled diagrams** wherever **necessary**.
 (6) Use of **Non-programmable** calculators is **allowed**.

1. **Attempt any three of the following:** 15
 - a. What are the importance of information protection? Explain with example.
 - b. Explain various components used to build a security program.
 - c. What are the three recognized variants of malicious mobile code? Explain.
 - d. Write a short note on Network-Layer Attack.
 - e. Explain the two most common approaches of security.
 - f. Explain the best practices for network defence.

2. **Attempt any three of the following:** 15
 - a. Define authentication. Explain two parts of authentication.
 - b. Explain the authorization systems.
 - c. Explain public key Cryptography.
 - d. What are the three primary categories of storage infrastructure in modern storage security? Discuss.
 - e. Write a short note on integrity risks.
 - f. Explain Database-Level Security.

3. **Attempt any three of the following:** 15
 - a. Explain the Cisco Hierarchical Internetworking model.
 - b. Explain network availability and security.
 - c. Write a short note on hubs and switches.
 - d. Explain the features of firewall.
 - e. Explain the five different types of wireless attacks.
 - f. What are the countermeasures against the possible abuse of wireless LAN?

4. **Attempt any three of the following:** 15
 - a. Explain intrusion Defense System types and detection models.
 - b. Write a short note on Security Information and Event Management.
 - c. What are components of Voice Over IP? Explain.
 - d. Write a short note on Private Bank Exchange.
 - e. Explain different classic security models.
 - f. Write a short note on trustworthy computing.

5. **Attempt any three of the following:** 15
 - a. Define virtual machine. How is hypervisor responsible for managing all guest OS installations on a VM server?
 - b. What is cloud computing? Explain the types of cloud services.
 - c. Explain the application security practices and decisions that appear in most secure development lifecycle.
 - d. Explain the reasons for remote administration security. What are advantages of web remote administration?
 - e. Explain the security considerations for choosing a secure site location.
 - f. Explain the different factors for securing the assets with physical security devices.