

(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:**
- What are the importance of information protection? Explain with example.
 - Explain various components used to build a security program.
 - What are the three recognized variants of malicious mobile code? Explain.
 - Write a short note on Network-Layer Attack.
 - Explain the two most common approaches of security.
 - Explain the best practices for network defence.
2. **Attempt any three of the following:** 15
- Define authentication. Explain two parts of authentication.
 - Explain the authorization systems.
 - Explain public key Cryptography.
 - What are the three primary categories of storage infrastructure in modern storage security? Discuss.
 - Write a short note on integrity risks.
 - Explain Database-Level Security.
3. **Attempt any three of the following:** 15
- Explain the Cisco Hierarchical Internetworking model.
 - Explain network availability and security.
 - Write a short note on hubs and switches.
 - Explain the features of firewall.
 - Explain the five different types of wireless attacks.
 - What are the countermeasures against the possible abuse of wireless LAN?
4. **Attempt any three of the following:** 15
- Explain intrusion Defense System types and detection models.
 - Write a short note on Security Information and Event Management.
 - What are components of Voice Over IP? Explain.
 - Write a short note on Private Bank Exchange.
 - Explain different classic security models.
 - Write a short note on trustworthy computing.
5. **Attempt any three of the following:** 15
- Define virtual machine. How is hypervisor responsible for managing all guest OS installations on a VM server?
 - What is cloud computing? Explain the types of cloud services.
 - Explain the application security practices and decisions that appear in most secure development lifecycle.
 - Explain the reasons for remote administration security. What are advantages of web remote administration?
 - Explain the security considerations for choosing a secure site location.
 - Explain the different factors for securing the assets with physical security devices.