

TIME: 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:

- Describe three Ds of security in context of your own home and organization.
- Comment on "The defender has the impossible job of protection than the job of attacker."
- Give the significance of a defense model – Onion model
- Explain the following: E-mail worms, Trojans.
- List and brief the different form of Man-in-the-middle attacks (MITM).
- Discuss three aspects of CIA triad.

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2. Attempt **any three** of the following:

- What is the concept of zoning in the fundamental storage infrastructure? Explain.
- Explain the Certificate based mechanism of Authentication.
- Describe the asymmetric and symmetric key encryption.
- Discuss the concepts of different Database backups.
- Explain the following terms: Hijacking, Phishing
- Summarize the steps of the authentication process of Smart card implementation.

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3. Attempt **any three** of the following:

- Explain the following terms: NAT, PAT.
- Write a short note on the Cisco Hierarchical Internetworking model.
- Describe the concepts of Network hardening.
- What are the mandatory features of Firewall? Explain.
- Explain switches and Hubs.
- Which are the different form of wireless attacks? Explain.

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4. Attempt any three of the following:

- a. Give the significance of IDS.
- b. List and explain the steps of successful IPS deployment plan.
- c. Describe the evolution of modern VoIP Communication with its components.
- d. Explain Network Protocol Attacks.
- e. What are the types of classic security models? Explain.
- f. Write a short note on Access Control List.

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5. Attempt any three of the following:

- a. Explain the classification of corporate physical assets.
- b. Which factors have to be considered in physical security while choosing a site location? Explain..
- c. Write a short note on Custom Remote Administration.
- d. Describe the different phases of Secure Development Life cycle (SSDL).
- e. Give the benefits of Cloud Computing Security services.
- f. What are the general types of attacks in web applications? Explain.

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