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: 15

a.   Describe three Ds of security in context of your own home and organization.

b.   Comment on "The defender has the impossible job of protection than the job of attacker."

c.   Give the significance of a defense model – Onion model

d.   Explain the following: E-mail worms, Trojans.

e.   List and brief the different form of Man-in the- middle attacks (MITM).

f.   Discuss three aspects of CIA triad.

2.   Attempt *any three* of the following: 15

a.   What is the concept of zoning in the fundamental storage infrastructure? Explain.

b.   Explain the Certificate based mechanism of Authentication.

c.   Describe the asymmetric and symmetric key encryption.

d.   Discuss the concepts of different Database backups.

e.   Explain the following terms: Hijacking, Phishing

f.   Summarize the steps of the authentication process of Smart card implementation.

3.   Attempt *any three* of the following: 15

a.   Explain the following terms: NAT, PAT.

b.   Write a short note on the Cisco Hierarchical Internetworking model.

c.   Describe the concepts of Network hardening.

d.   What are the mandatory features of Firewall? Explain.

e.   Explain switches and Hubs.

f.   Which are the different form of wireless attacks? Explain.

4. Attempt *any three* of the following: 15

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.

5. Attempt *any three* of the following: 15

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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