

Time: 2.30Hrs

Marks: 75

Please check if you have got the right question paper.

N.B:

1. All questions are compulsory.
2. Make suitable assumptions wherever necessary and state the assumptions made.
3. Answer to the same question must be written together.
4. Numbers to the right indicate marks.
5. Draw neat, labelled diagram whenever necessary.
6. Use of Non-Programmable calculator is allowed.

1. Attempt any three of the following [15]

- a. Explain Onion & Lollipop Defense Model with diagram.
- b. Describe 3D's (Défense, Detection, and Deterrence) of security.
- c. Write a short note on CIA Triad Model with reference to Security in Computing.
- d. Differentiate w.r.t security Government perimeter blockade model & Academic world.
- e. Define Virus. Explain its type.
- f. Explain various Application-layer attacks.

2. Attempt any three of the following [15]

- a. Explain Certificate Based authentication with diagram.
- b. Describe Biometric authentication.
- c. Explain risk remediation for confidentiality risk.
- d. What are database auditing and monitoring?
- e. Describe various Database Security layers.
- f. Explain Database Backup and recovery.

3. Attempt any three of the following [15]

- a. Explain different layers of OSI Model.
- b. Describe switch and routers.
- c. Define Firewall. Write its strengths & weaknesses.
- d. Describe the Firewall capabilities.
- e. Explain Network Address Translation (NAT).
- f. Write a short note on Wireless Vulnerabilities and Mitigations.

4. Attempt any three of the following [15]

- a. Define IDS. Write its features.
- b. Explain host & network-based IDS.
- c. Describe Anomaly Detection Model.
- d. Explain the different components of VoIP.
- e. Write a short note on Private Branch Exchange (PBX).
- f. Differentiate Mandatory Access Control & Discretionary Access Control.

5. Attempt any three of the following [15]

- a. Explain the types of cloud services.
- b. Elaborate on the benefits of Cloud computing.
- c. What are Virtual Machines (VM)? What are the security requirements for a VM?
- d. Describe Securing Assets: Locks and Entry Controls.
- e. Explain Physical Vulnerability assessment.
- f. Write a short note on Physical Intrusion Detection.
