

(3 Hours)

(Total Marks: 80)

N.B. :

- (a) Question No.1 is compulsory.
- (b) Total 4 questions need to be solved.
- (c) Attempt any three questions from remaining five questions.
- (d) Assume suitable data wherever necessary, justify the same.

- 1.a Differentiate between Security Operations Center (SOC) and Network operations Center (NOC). [5]
- 1.b Define and Classify the following attacks as active and passive: Release of Message Contents, Masquerade and Denial of Service, Traffic Analysis and Replay. [5]
- 1.c Differentiate between Digital Signature and Digital Certificate. [5]
- 1.d Explain different forms of Intellectual Property. [5]

- 2.a Explain in brief the three widely used Virtual Private Network (VPN) Protocols. [10]
- 2.b Describe the Key generation/expansion processes of Data Encryption standard (DES) and Advanced Encryption standard (AES). [10]

- 3.a Explain how Authentication header (AH) and Encapsulating Security Payload (ESP) protocols provides authentication and/or encryption for packets at the IP level. [10]
- 3.b Explain Firewall deployment and its limitations. Also compare the various types of Firewalls. [10]

- 4.a What is 'Ethical hacking'? What do 'Ethical hackers' do and why does need for hacking ethically arise? [10]
- 4.b What is Risk management and Risk Analysis?. Explain why it is important to identify both the threat and the vulnerability when determining risk. [10]

- 5.a What is the need for Digital Forensics? Explain the different Phases in Digital Forensics. [10]
- 5.b Explain the different types Intrusion detection systems (IDS)? List out the limitations of IDS. [10]

- 6.a Explain the process of a successful e-commerce transaction using Secure Electronic Transaction (SET) protocol [10]
- 6.b Differentiate between Biometric Identification and Biometric Authentication. Discuss any one Biometric technique in detail. [10]