

Hall Ticket No 

--	--	--	--	--	--	--	--	--	--

Question Paper Code:ACCC03



# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)  
(Dundigal-500043, Hyderabad)

**B.Tech V SEMESTER END EXAMINATIONS (REGULAR) - DECEMBER 2022**

**Regulation:UG20**

**NETWORK SECURITY**

**(CSE - CYBER SECURITY)**

**Time: 3 Hours**

**Max Marks: 70**

---

**Answer ALL questions in Module I and II**  
**Answer ONE out of two questions in Modules III, IV and V**  
**All Questions Carry Equal Marks**  
**All parts of the question must be answered in one place only**

---

## MODULE – I

1. (a) Discuss about services mechanisms and how security mechanisms are useful in defending the systems. [BL: Understand| CO: 1|Marks: 7]
- (b) Identify various types of distributed denial of service (DDoS) attacks and discuss about the impact of various DDoS attacks in network security. [BL: Apply| CO: 1|Marks: 7]

## MODULE – II

2. (a) Explain about tunnel modes in IPsec and discuss how users connect to an IPsec tunnel. Mention the applications and benefits of IPsec. [BL: Understand| CO: 2|Marks: 7]
- (b) Write short notes on message flow confidentiality and application-level gateways. Identify the benefits and draw backs of application-level gateways. [BL: Apply| CO: 2|Marks: 7]

## MODULE – III

3. (a) List the ICMP parameters and explain various types of internet control message protocol messages. [BL: Understand| CO: 3|Marks: 7]
- (b) What is ICMP packet? Draw the structure of the ICMP packet. Discuss about the various types of attacks using ICMP messages [BL: Apply| CO: 3|Marks: 7]
4. (a) Describe about the various types of flood attacks and impact of the flood attacks. [BL: Understand| CO: 4|Marks: 7]
- (b) Briefly write about the firewalk tool. Use firewalk for assessing the security configuration of packet filtering devices in firewall systems. [BL: Apply| CO: 4|Marks: 7]

## MODULE – IV

5. (a) Outline pretty good privacy (PGP) message reception. Explain the importance of PGP as a service [BL: Understand| CO: 5|Marks: 7]
- (b) List various cryptographic keys and key rings offered by PGP. Make use of trust mechanism and certificates for PGP and S/MIME. [BL: Apply| CO: 5|Marks: 7]
6. (a) Explain message authentication requirements and what are the attacks related to message communication? [BL: Understand| CO: 5|Marks: 7]
- (b) Write general format of PGP message with a pictorial representation and explain. How PGP used for E-mail security? [BL: Apply| CO: 5|Marks: 7]

## MODULE – V

7. (a) Illustrate about the transport layer security and its alert codes What are the disadvantages of transport layer security? [BL: Understand| CO: 6|Marks: 7]
- (b) Describe the functionalities of internet key exchange protocol. Write about security constraints during inter-branch payment transactions?. [BL: Apply| CO: 6|Marks: 7]
8. (a) What is secure socket layer (SSL)? Explain about SSL record protocol format. Enumerate the functionalities of secure shell. [BL: Understand| CO: 6|Marks: 7]
- (b) Is it possible in SSL for the receiver to recorder SSL record block that arrive out of order? If so, explain how it can be done. If not, why not? [BL: Apply| CO: 6|Marks: 7]

– ○ ○ ○ ○ –