

NSFIMP

~ Dr Lokesh Chouhan Sir

Dear Students Please cover followings important things for your final preparation:

- **Most Important: Cover all ppts/Lecture notes**
- **All Questions in TA-1**
- **All Questions in Mid Semester**
- **All Questions in TA-2**
- **All Questions in Block Exam**

Apart from it, some important things you need to cover (cover each topic of 8-10 Mark atleast):

- Various internetworking devices
- Detailed OSI Model
- Detailed TCP/IP Model
- OSI Security Architecture
- Firewall and its various types/ inbound/outbound rules, etc
- IDS and its types
- IDS/IDPS
- VPN and VLAN
- various servers, DHCP, DNS, Application, Web, mail, etc.
- OSI model and its layer wise properties
- properties and responsibilities of network and transport layer
- Error and Flow Control and its problem related to security
- TCP/IP protocol suite
- Symmetric Key (Private Key) Encryption with possible attacks
- Substitution Cipher/ Transposition Cipher/ Hybrid
- Monoalphabetic Ciphers
- Stream Cipher Vs Block Ciphers
- Playfair and Polynius Square Cipher
- Various cryptographic techniques and its numerical (For Numerical Coverage also)
- RSA
- ECC
- Digital Signature
- Hashing algorithms
- Pen testing
- Port Scanning
- Password hacking and protections
- Tools for network/ port and vulnerability scanning
- Network Pen testing Life-Cycle/ SOP etc.
- Network Enumeration
- OS/Network Fingerprinting
- MAC layer protocols
- Attacks on MAC Protocols
- Various types of Attacks on different layer
- ARP and RARP
- APR Poisoning
- TCP- Syn Attack
- DHCP and its uses
- DNS and its uses
- Attack on DNS
- Various attacks on DHCP
- TCP/UDP
- Attack on TCP/UDP
- Various attacks on network layers
- Penetration testing and its types
- Nmap and its uses
- NOC/ SOC Functionality
- authentication and its type
- Various commands of Pie shark
- Wireless and WiFi Security
- WEP
- WPA/ WPA2 and Handshaking Mechanism
- WLAN
- 802.11 protocols and 802.11 Families with its features
- WEP
- Live forensics
- live Network Enumeration
- OSCAR Methodology in detail
- SIEM Tool Functionality
- CIA Triade
- Some Scenario based questions related to network/Wireless/ cyber security/Pen Test.

All the Best.