**NSF IMP**

~ 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.**