T.E. I.T.

Computer Network and Security Question Bank

Unit I: Application Layer

1. Discuss the client-server and peer to peer architecture in detail.
2. Explain DNS, FTP and TFTP in detail.
3. Explain HTTP and SMTP protocol in detail.
4. Explain POP, IMAP, MIME protocol in detail.
5. Write a note on DHCP.
6. Explain Telnet protocol in detail.

Unit II: Wireless Standards

1. Explain Electromagnetic Spectrum in detail with Spectrum Allocation and Radio Propagation Mechanism.
2. Explain IEEE 802.11: Architecture
3. Write a note on MAC Sub Layer of IEEE 802.11.
4. What is hidden station and exposed station problem in WLAN?
5. Explain addressing Mechanism of IEEE 802.11.
6. Draw and explain frame format used in WLAN.
7. Explain Bluetooth with architecture and services.
8. Explain IEEE 802.16 WiMax: Services, Architecture, and Layers.
9. Compare IEEE 802.11, Bluetooth and IEEE 802.16.

Unit III: ADHOC and WSN

1. Differentiate between infrastructure and infrastructure-less wireless network.
2. What are the issues while designing wireless network?
3. Explain Adhoc Network MAC Layer with Design Issues, Design Goal and Classification.
4. Explain MACAW protocol in detail.
5. Write a note on issues in Designing a Routing Protocol for Ad-hoc Wireless Networks.
6. Explain DSDV, AODV, DSR protocol in detail.
7. Explain sensor network architecture.
8. Compare sensor network with wireless network.

Unit IV: Introduction to Network Security

1. Differentiate between Active Attacks and Passive Attacks.
2. Explain different security principles and security services.
3. Explain stream ciphers and transposition ciphers with examples.
4. What are the block cipher modes? Explain each in detail.

Unit V: Cryptographic Algorithms

1. What is cryptography?
2. Explain Data Encryption Standard (DES).
3. Explain Advanced Encryption Standard (AES) in detail.
4. Write a note on public key encryption and hash function.
5. Explain RSA digital signature.
6. Explain Diffie-Hellman key exchange algorithm.
7. What is Digital Certificate?

Unit VI: Introduction to Cyber Security

1. Explain basic cyber security concepts.
2. Define and explain Vulnerability, Threat, Malware and Phishing.
3. Explain MIM, DOS and SQL Injection attacks.
4. Write a note on Computer Criminals, Assets and Threats.
5. What are software and hardware attcks?
6. Write a note on Cyber Threats.
7. Define the terms Cyber Crime, Cyber Stalking, Cyber Terrorism and Cyber Espionage.
8. Write a note on Cyber security policy.