# ETHICAL HACKING  SYLLABUS

1. **Introduction:**

   - Introduction to Ethical Hacking
   - Hacking Terminologies
   - Vulnerability assessment &  penetration testing Concepts
   - Ethical Hacking concepts and scope
   - InformationSecurity controls

2. **Footprinting Concepts:**

   - Footprinting concepts &  Objectives
   - Footprinting through Search Engines
   - Website footprinting
   - Email footprinting
   - WHOIS footprinting
   - Network footprinting
   - DNS footprinting
   - Footprinting through social Engineering
   - Countermeasures

3. **Scanning Methodology:**

   - Overview of network scanning
   - Scanning Methodology
   - Check for live system
   - Check for open Ports
   - Banner Grabbing
   - Network diagrams
   - Countermeasures

4. **Enumeration Concepts:**

   - Enumeration concepts
   - NetBIOS Enumeration
   - SNMP Enumeration
   - LDAP Enumeration
   - NTP Enumeration
   - SMTP and DNS Enumeration
   - Countermeasures

5. **Vulnerability Assesments:**

   - Vulnerability Management cycle
   - VulnerabilityAssessment solutions
   - Vulnerability Assessment Scoring System
   - Vulnerability Assessment reports

6. **System Hacking Methodology:**

   - System Hacking Methodology
   - Gain Unauthorized Access
   - Escalating Privileges
   - Executing Applications
   - Hiding files
   - Covering Tracks
   - Countermeasures

7. **Malware:**

   - Introduction to Malware
   - Various malware and threat

8. **Trojan Concepts:**

   - Trojan Concepts
   - Virus
   - Stages of virus and Worms
   - Countermeasures

9. **Sniffing Concepts:**

   - Sniffing Concepts
   - MAC Attacks
   - DHCP Attacks
   - Spoofing Attack
   - ARP poisoning
   - DNS Poisoning
   - Countermeasures

10. **Social Engineering Concepts:**

    - Social Engineering Concepts
    - Social Engineering Techniques
    - Impersonation on social Networking Sites

- ➢ Identify Threat
- ➢ Countermeasures

## 11. Dos/Ddos Concepts:

- ➢ DoS/DDoS Concepts
- ➢ Dos/DDOs Attack Techniques
- ➢ Botnets
- ➢ Countermeasures

## 12. Hijacking Concepts:

- ➢ Session hijacking Concepts
- ➢ Network Level Session Hijacking
- ➢ Application Level Session Hijacking
- ➢ Tools and Countermeasures

## 13. IDS Firewall & Honeypots:

- ➢ IDS Firewall and Honeypot concepts
- ➢ Evading IDS
- ➢ Detecting Honeypots
- ➢ Firewall and Honeypot solutions
- ➢ Countermeasures

## 14. Web Server & Web Application:
- ➢ Web Server Concepts
- ➢ Attack Methodology
- ➢ Web Server Attacks
- ➢ Countermeasures
- ➢ Web Application Concepts
- ➢ Web Application Threat
- ➢ Hacking Methodology
- ➢ Countermeasures

## 15. SQL Injection Concepts:

- ➢ SQL Injection Methodology
- ➢ Types of SQL Injection
- ➢ Evasion Techniques
- ➢ Countermeasures

### 16. Wireless Concepts:

- Wireless  Encryption
- Wireless Threats
- Wireless Hacking Methodology
- Hacking Wireless Networks
- Countermeasures

### 17. Hacking Mobile Platforms:

- Mobile Platform Attack Vectors
- Hacking Mobile Platforms
- Hacking Android OS
- Mobile Device Management
- Mobile Security Guidelines
- Countermeasures

### 18. IOT Concepts:

- IOT Architecture
- IOT Communication model
- IOT Threats
- IOT Hacking Methodology

### 19. Cloud Computing:

- Introduction to cloud Computing
- Cloud Computing Threats
- Cloud Computing Attacks
- Cloud Security
- Cloud Countermeasures

### 20. Dynamic Memory Management

- Cryptography concepts
- Encryption Algorithms
- Disk Encryption
- CryptographyAttacks
- Countermeasures.