

Topic	Sub-Topic	Sub-Sub-Topic
Cyber Laws and Compliances	Cyber Crimes	Crimes against People
		Crimes Against Property
		Crimes Against Government
		Crimes Targeting the Society
		Statistics of Cyber Crime
		World
		India
		Loss due to cyber crime
	Cyber Laws	Penalties, Compensation and Adjudication
		Offenses sections
	Case Studies	Cyber cases listed in IT Act 2000
		Recent Cyber Crimes around the world
		Cyber Crime against Finances
		Cyber Crime against Individuals and Organisations
		Ransomware in Hospitals
		Credit Card Frauds
		Cyber Terrorism
	How to Report Cyber Crimes	
	Recent Initiatives in India	
	Security Compliances	Types of Compliances
		ISO 27001
		ISO 27002
		PCI DSS
		COBIT 5
		NCIIPC
	Cryptography	
Introduction	Definition of terms	
	Encryption	
	Hashing	
	Encoding	
	Obfuscation	
Objectives of Cryptography	Confidentiality	
	Integrity	
	Authenticity	
	Non-repudiation	
	Accountability	

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Cryptography		
	Types of Attacks	
		Passive Attacks
		Active Attacks
	Introduction to Cryptosystems	
	Encryption	
		Terminologies
		Model of Encryption
		Conventions
	Modern Ciphers	
	Cost Benefit Approach	
	Introduction to Symmetric key cryptography	
	Types of Symmetric Key Cryptography	
		DES
		AES
	Asymmetric Key Cryptography	
		RSA
	Public Key Infrastructure	
		Components of PKI
		Methods of Certification
		Applications of PKI
		Issues with PKI
	Hashing	
		Introduction
		Terminologies
		Hash vs Cryptographic Hash
		Classification of Hash functions
		Applications of Hash
		MD5
		SHA
		HMAC
		Digital Signatures
	Cryptographic Protocols	
		Introduction
		Common Protocols: SSL, TLS, PGP
	Cryptographic Tools	
		Encryption
		Hashing
		File Shredders
	Steganography	
	Miscellaneous Tools	
Cryptographic Attacks		
	Brute Force Attack	
	Dictionary Attack	

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Cryptography		Rainbow Table Attack	
		Collision Attack	
		Pre-image Attack	
Spoofing	Objectives of Spoofing		
	Types of Spoofing		
		IP Address Spoofing	
		MAC Address Spoofing	
		Call Spoofing	
		SMS Spoofing	
		URL Spoofing	
		Email Spoofing	
		ARP Spoofing	
		DNS Spoofing	
		Web Spoofing	
		Legitimate use and Impact of spoofing	
Mobile Application Security	Mobile Application Security		
	Need for Mobile Application Security Testing		
	Android Architecture		
		Application framework	
	Interaction with Android Devices		
		Android Emulators and Devices	
		Android Debug Bridge (ADB)	
		Downloading and installing applications w	
	Android Network Analysis		
		Setting Up a Proxy For Android Emulator	
		Setting Up a Proxy For Android Device	
		Data Capturing(MITM Attack)	
		Download And Install CA Certificate	
		SSL Data Capturing(MITM Attack)	
	Android Application Pen-Testing		
		Android APK Reverse Engineering	
		Static Manual Testing with Drozer	
		Automation testing with MobSF	
		OWASP top 10 Mobile Vulnerabilities	
	Rooting of Android Devices		
		Preparing a Device for Rooting	
		Tools used for Rooting	
	Unrooting Android Device		
	Disadvantages Of Rooting		

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Mobile Application Security		Legal norms associated with Rooting	
	Android Remote Admin Tools	Android Device Manager	
		LostAndroid	
		Agastya	
	Android Remote Control Tools	VNC	
		VYSOR	
		Team Viewer	
	Android Security Tool	DroidSheep Guard	
		TrustGo Mobile Security and	
		Sophos Mobile Security	
		360 Security	
		AVL	
		Avira Antivirus Security	
		Malware in Android Devices	Spyware and Adware
			Trojans and Viruses
			Ransomware
	Hijacking malware		
	Bot Processes		
	Rootkits		
	Logic Bombs		
	Backdoors		
	Key Trends in Mobile Security		
	Mobile Security	Threats	
		Consequences	
	iOS Hacking Devices	Apple iOS	
		Jailbreaking iOS	
		Guidelines for Securing iOS Devices	
		iOS Device Tracking Tools	
	Social Engineering	Statistics	
Stages of Social Engineering Attack		Information Gathering	
		Developing Relationship	
		Exploitation	
Execution			
Target Profiling			

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Social Engineering	Types of Social Engineering Attack	Digital Attacks
		Personal Attacks
		Insider Threats
		Impersonation Attacks
		Techno-Personal Attacks
	Common targets of Social Engineering	Support Staff
		Technical Support Staff
		System Administrators
		Vendors of the target organization
	Mitigation Strategies	Training of Stakeholders
		Policy Implementation