CEH Exam Blueprint v3.0

Microtek LEARNING

Domains	Sub Domain	Description	Number of Questions	Weightage
1. Background	Network and Communication Technologies	• Networking technologies (e.g., hardware, infrastructure) • Web technologies (e.g., web 2.0, skype) • Systems technologies • Communication protocols • Telecommunication technologies • Mobile technologies (e.g., smartphones) • Wireless terminologies • Cloud computing • Cloud deployment models	10	21.79%
	Information Security Threats and Attack Vectors	• Malware (e.g., Trojan, virus, backdoor, worms) • Malware operations • Information security threats and attack vectors • Attacks on a system (e.g., DoS, DDoS, session hijacking, webserver and web application attacks, SQL injection, wireless threats) • Botnet • Cloud computing threats and attacks • Mobile platform attack vectors • Cryptography attacks	9	
	Information Security Technologies	• Information security elements • Information security management (e.g. IA, Defense-in-Depth, incident management) • Security trends • Hacking and ethical hacking • Vulnerability assessment and penetration testing • Cryptography • Encryption algorithms • Wireless encryption • Bring Your Own Device (BYOD) • Backups and archiving (e.g., local, network) • IDS, firewalls, and honeypots	8	
2. Analysis / Assessment	Information Security Assessment and Analysis	• Data analysis • Systems analysis • Risk assessments • Vulnerability assessment and penetration testing • Technical assessment methods • Network sniffing • Malware analysis	8	12.73%

	Information Security Assessment Process	• Footprinting • Scanning (e.g., Port scanning, banner grabbing, vulnerability scanning, network discovery, proxy chaining, IP spoofing) • Enumeration • System hacking (e.g., password cracking, privilege escalation, executing applications, hiding files, covering tracks)	8	
3. Security	Information Security Controls	• Systems security controls • Application/file server • IDS • Firewalls • Cryptography • Disk Encryption • Network security • Physical security • Threat modeling • Biometrics • Wireless access technology (e.g., networking, RFID, Bluetooth) • Trusted networks • Privacy/confidentiality (with regard to engagement)	15	23.73%
	Information Security Attack Detection	• Security policy implications • Vulnerability detection • IP Spoofing detection • Verification procedures (e.g., false positive/negative validation) • Social engineering (human factors manipulation) • Vulnerability scanning • Malware detection • Sniffer detection • DoS and DDoS detection • Detect and block rogue AP • Evading IDS (e.g., evasion, fragmentation) • Evading Firewall (e.g., firewalking, tunneling) • Honeypot detection • Steganalysis	9	
	Information Security Attack Prevention	• Defend against webserver attacks • Patch management • Encoding schemes for web application • Defend against web application attacks • Defend against SQL injection attacks • Defend against wireless and Bluetooth attacks • Mobile platforms security • Mobile Device Management (MDM) • BYOD Security • Cloud computing security	6	

4. Tools / Systems / Programs	Information Security Systems	• Network/host based intrusion • Boundary protection appliances • Access control mechanisms (e.g., smart cards) • Cryptography techniques (e.g., IPSec, SSL, PGP) • Domain name system (DNS) • Network topologies • Subnetting • Routers / modems / switches • Security models • Database structures	7	28.91%
	Information Security Programs	• Operating environments (e.g., Linux, Windows, Mac) • Anti-malware systems and programs (e.g., anti-keylogger, anti-spyware, anti-rootkit, anti-trojan, anti-virus) • Wireless IPS deployment • Programming languages (e.g. C++, Java, C#, C) • Scripting languages (e.g., PHP, Javascript)	5	
	Information Security Tools	• Network/wireless sniffers (e.g., Wireshark, Airsnort) • Port scanning tools (e.g., Nmap, Hping) • Vulnerability scanner (e.g., Nessus, Qualys, Retina) • Vulnerability management and protection systems (e.g., Founds tone, Ecora) • Log analysis tools • Exploitation tools • Footprinting tools (e.g., Maltego, FOCA, Recon-ng) • Network discovery tools (e.g., Network Topology Mapper) • Enumeration tools (e.g., SuperScan, Hyena, NetScanTools Pro) • Steganography detection tools • Malware detection tools • DoS/DDoS protection tools • Patch management tool (e.g., MBSA) • Webserver security tools • Web application security tools (e.g., Acunetix WVS) • Web application firewall (e.g., dotDefender) • SQL injection detection tools (e.g., IBM Security AppScan) • Wireless and Bluetooth security tools • Android, iOS, Windows Phone OS, and BlackBerry device security tools • MDM Solutions	24	

		• Mobile Protection Tools • Intrusion Detection Tools (e.g., Snort) • Hardware and software firewalls (e.g., Comodo Firewall) • Honeypot tools (e.g., KFSenser) • IDS/Firewall evasion tools (e.g., Traffic IQ Professional) • Packet fragment generators • Honeypot Detection Tools • Cloud security tools (e.g., Core CloudInspect) • Cryptography tools (e.g., Advanced Encryption Package) • Cryptography toolkit (e.g., OpenSSL) • Disk encryption tools • Cryptanalysis tool (e.g., CrypTool)		
5. Procedures / Methodology	Information Security Procedures	• Cryptography • Public key infrastructure (PKI) • Digital signature and Pretty Good Privacy (PGP) • Security Architecture (SA) • Service oriented architecture • Information security incident • N-tier application design • TCP/IP networking (e.g., network routing) • Security testing methodology	5	8.77%
	Information Security Assessment Methodologies	• Web server attack methodology • Web application hacking methodology • SQL injection methodology and evasion techniques • SQL injection evasion techniques • Wireless and Bluetooth hacking methodology • Mobile platform (Android, iOS, Windows Phone OS, and BlackBerry) hacking methodology • Mobile Rooting and Jailbreaking	6	
6. Regulation / Policy	Information Security Policies/ Laws/Acts	• Security policies • Compliance regulations (e.g., PCI-DSS, SOX)	2	1.90%
7. Ethics	Ethics of Information Security	• Professional code of conduct • Appropriateness of hacking	3	2.17%