GUJARAT TECHNOLOGICAL UNIVERSITY
Bachelor of Engineering - SEMESTER - VII EXAMINATION - WINTER 2025

Subject Code: 3174802 **Date: 15-11-2025**

Subject Name: Ethical Hacking

Time: 10:30 AM TO 01:00 PM **Total Marks: 70**

Instructions
1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

			Marks
Q.1	(a)	Differentiate between hackers, crackers, and ethical hackers.	03
	(b)	Explain security fundamentals.	04
	(c)	Describe the phases of an ethical hacking process.	07
Q.2	(a)	What is footprinting? Explain active and passive footprinting with examples.	03
	(b)	Explain different scanning techniques used in network reconnaissance.	04
	(c)	Demostrate the information gathering tool Maltego in detail.	07
		OR	
	(c)	Demonstrate how OS fingerprinting is performed using tools like Nmap.	07
Q.3	(a)	Define enumeration and list various enumeration techniques.	03
	(b)	Explain the attacker's methodology in information gathering.	04
	(c)	Explain DoS and DDoS attacks with examples.	07
		OR	
	(a)	What is vulnerability assessment? Explain risk mitigation in vulnerability assessment.	03
	(b)	Explain the steps involved in penetration testing.	04
	(c)	Analyze a real-world case study of penetration testing and identify key findings.	07
Q.4	(a)	Explain the importance of risk mitigation in penetration testing.	03
	(b)	Define malware and classify different types.	04
	(c)	Explain the working of keyloggers and spyware in detail.	07
		OR	
	(a)	Explain SQL Injection and Cross-Site Scripting (XSS) with examples.	03
	(b)	Discuss the techniques used in web server and application attacks.	04
	(c)	Evaluate the impact of malware threats and suggest preventive measures.	07
Q.5	(a)	What is an Intrusion Detection System (IDS)?	03

(b) Explain types of firewalls with examples. **04**

(c) Describe the role and working of honeypots in network security. **07**

OR

(a) Explain two vulnerabilities of WLANs. **03**

(b) Explain web session hijacking. **04**

(c) Elaborate session hijacking Process in detail. **07**

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