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

Subject Code: 3154207 **Date: 04-12-2025**

Subject Name: Cyber Security

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)**	What are keyloggers and spyware? Explain their role in cybercrime.	**03**
	(b)	Explain how Trojans and backdoors are used by attackers to compromise systems.	**04**
	(c)	Explain what SQL Injection is. Describe How it works, Describe techniques used to prevent SQL Injection attacks.	**07**
Q.2	**(a)**	What is the purpose of web application vulnerability scanning?	**03**
	(b)	What is OpenSSL? Explain its uses in securing communications.	**04**
	(c)	Explain the working principles of the following tools: John the Ripper, L0phtCrack, Pwdump, and HTC-Hydra.	**07**

OR

	(c)	What is DVWA? Explain its purpose in web security training. Describe any three vulnerabilities featured in DVWA.	**07**
Q.3	**(a)**	Explain the role and importance of SQLMap in Cyber Security.	**03**
	(b)	What are the key characteristics used to filter network traffic in packet filtering firewalls?	**04**
	(c)	What is Network Address Translation (NAT)? Explain its types with suitable diagrams.	**07**

OR

	(a)	What is a Firewall? Explain its types and how it helps in securing a network.	**03**
	(b)	Differentiate between Stateless and Stateful Firewalls.	**04**
	(c)	What is Snort? Explain how Snort works as a Network Intrusion Detection System (NIDS).	**07**
Q.4	**(a)**	Write Features of cyberspace that promote criminal behavior.	**03**
	(b)	Explain various types of cybercrime with suitable examples.	**04**
	(c)	Explain the concept of data contaminants and methods of data destruction in cyberspace. Provide suitable examples.	**07**

OR

(a) Discuss the role of the Information Technology Act, 2000 in combating cybercrime in India. **03**

(b) Define contemporary cybercrimes. Explain their impact on society and legal systems. **04**

(c) Discuss in detail the various realms of the cyber world. **07**

Q.5 (a) Define network sniffer and injection tool with one example each. **03**

(b) What is network reconnaissance? Explain its types and significance in the context of cybersecurity. **04**

(c) Explain SQL injection tools in brief. **07**

OR

(a) What is WinRelay? How does it differ from Fpipe in functionality and usage? **03**

(b) Compare Tcpdump and Windump. **04**

(c) Describe the key components of OpenVAS and their roles. **07**

***