

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V EXAMINATION – SUMMER 2025

Subject Code:3150714

Date:13-05-2025

Subject Name:Cyber Security

Time:02:30 PM TO 05:00 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

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|------------|-----|---|-----------|
| Q.1 | (a) | List three vulnerability scanning tools commonly used in penetration testing. | 03 |
| | (b) | Differentiate between Netcat and Socat in the context of network | 04 |
| | (c) | Evaluate the effectiveness of Metasploit in vulnerability scanning and | 07 |
| Q.2 | (a) | What is the difference between stateless and stateful firewalls? | 03 |
| | (b) | How does Snort function as an intrusion detection system? | 04 |
| | (c) | Evaluate the role of Network Address Translation (NAT) in enhancing network security. | 07 |
| OR | | | |
| | (c) | Assess the role of firewalls and packet filters in defending against modern cyber threats. | 07 |
| Q.3 | (a) | List any three password cracking tools and it's use. | 03 |
| | (b) | How does the Zed Attack Proxy (ZAP) help in web application testing? | 04 |
| | (c) | Evaluate the use of Curl and OpenSSL in testing the security of web applications. | 07 |
| OR | | | |
| Q.3 | (a) | What is the DVWA platform used for? | 03 |
| | (b) | Explain how W3af can help in web application vulnerability assessment. | 04 |
| | (c) | Discuss the role of SQLmap in detecting SQL injection vulnerabilities and how it contributes to web application security. | 07 |
| Q.4 | (a) | What does the Indian IT Act, 2000 focus on? | 03 |
| | (b) | Explain the concept of cyberspace and its connection to criminal behavior. | 04 |
| | (c) | Evaluate the role of digital forensics in cybercrime investigations. | 07 |
| OR | | | |
| Q.4 | (a) | List any three types of cybercrime in brief. | 03 |
| | (b) | Describe the process of incident response in the context of a cyber attack. | 04 |
| | (c) | Analyze the various attack vectors commonly used in cybercrime and discuss how organizations can defend against them. | 07 |
| Q.5 | (a) | Differentiate between a virus, trojans and a worm in terms of their spread and behavior. | 03 |
| | (b) | How does a SQL injection attack compromise a web application's database? | 04 |

- (c) Discuss the methods and impacts of a DDOS attack on an organization's network infrastructure. **07**

OR

- Q.5** (a) Explain keylogger and its types in brief. **03**
(b) Differentiate spyware and adware. **04**
(c) Analyze the security threats posed by attacks on wireless networks, such as WEP/WPA cracking, and how organizations can defend against them. **07**
