Reg. No. : | | | | | | | | | | | | |

Question Paper Code: U8401

B.E. / B.Tech. DEGREE EXAMINATION, APRIL / MAY 2025

Professional Elective

Computer Science and Engineering

21ITV401 ETHICAL HACKING

(Regulations 2021)

Duration: Three hours | Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1.	Why is ethical hacking necessary?	CO1 -U
2.	List the Six types of flags in TCP Segment?	CO1 -U
3.	Define firewall.	CO1 -U
4.	What are the purpose of port scanning in network security?	CO1 U
5.	Write a short note on DNS Enumeration.	CO1 -U
6.	What is NetBIOS enumeration?	CO1 U
7.	What are the components of web application hacking.	CO1 U
8.	Recall the steps to secure wireless networks.	CO1 -U
9.	What is packet filtering firewall?	CO1 -U
10.	What are the different types of intrusion detection systems?	CO1 -U

PART – B (5 x 16= 80 Marks)

11.	(a)	Discuss the different types of Penetration testing Methodologies in detail?	CO1 -U	(16)
		Or		
	(b)	Describe the Mechanics of SQL Injection Attacks and Provide Prevention Measures.	CO1 -U	(16)

12.	(a)	You have been hired by a company to perform a security assessment on their network. Describe the steps you would take during the foot printing phase to gather information about the company's external-facing assets. Which tools would you use, and what specific information would you be looking to collect?	CO2 -App	(16)
		Or		
	(b)	You have been asked to perform a network scan on a client's internal network to identify potential security vulnerabilities. Describe the steps you would take, the types of scans you would perform. What information would you expect to gather from these scans?	CO2 -App	(16)
13.	(a)	Explain in detail about the Enumeration Concepts?	CO1 -U	(16)
		Or		
	(b)	Explain the purpose and importance of vulnerability assessment?	CO1 -U	(16)
14.	(a)	You are part of an ethical hacking team hired to conduct a penetration test on a government website. During the reconnaissance phase, What are the things you discover that the website is vulnerable to multiple types of web attacks?	CO2 -App	(16)
		Or		
	(b)	You are the Chief Information Security Officer (CISO) at a financial institution that relies heavily on wireless networks for daily operations. Recommend appropriate solution to the company targeted by various wireless attacks.	CO2 -App	(16)
15.	(a)	You are the network security administrator for a mid-sized organization that has recently experienced several security incidents involving unauthorized access attempts through its firewall. Your task is how to enhance the security posture of the firewall and reduce the risk of such incidents.	CO2 -App	(16)
		Or		
	(b)	Apply optimization techniques to an IDS to ensure it can handle high-speed network traffic without compromising detection accuracy.	CO2 -App	(16)