

B. TECH. (MINOR) CBCS-2023
B. TECH. (MINOR) Semester-III (Sem-V Level) Cyber Security : WINTER: 2025
SUBJECT: BASICS OF ETHICAL HACKING

Day : Tuesday
 Date : 23/12/2025

W-29445-2025

Time : 02:30 PM-05:30 PM
 Max. Marks : 60

NB :

1. All questions are COMPULSORY.
2. Figures to the right indicate FULL marks.
3. Draw neat labelled diagrams WHEREVER necessary.

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| Q. 1 | Describe the concept and importance of the CIA Triad in securing modern networked systems and provide examples of each component in action. | CO1 BT1 (10) |
| OR | | |
| Q. 1 | Explain different types of security threats and discuss preventive security policies and procedures used to mitigate them. | CO1 BT2 (10) |
| Q. 2 | Analyze the legal responsibilities of an ethical hacker when performing penetration testing within the scope of organizational compliance frameworks. | CO2 BT4 (10) |
| OR | | |
| Q. 2 | Design an ethical penetration testing policy that complies with legal requirements and ensures user privacy protection during assessments. | CO2 BT6 (10) |
| Q. 3 | Evaluate different foot-printing methodologies and justify how they support early-stage attack planning. | CO3 BT5 (10) |
| OR | | |
| Q. 3 | Discuss the significance of vulnerability analysis and post-exploitation in determining the impact of a successful intrusion. | CO3 BT2 (10) |
| Q. 4 | Illustrate the concept of vulnerability assessment and describe how tools like ProRat, iSafe and Wireshark assist in identifying network weaknesses. | CO4 BT2 (10) |
| OR | | |
| Q. 4 | Examine the working of exploitation frameworks and justify their importance in validating security vulnerabilities. | CO4 BT4 (10) |
| Q. 5 | State the major challenges involved in enforcing cybercrime laws across different countries and discuss the importance of international cooperation. | CO5 BT1 (10) |
| OR | | |
| Q. 5 | Assess the impact of violating permission-based testing guidelines on legal, ethical, and operational aspects of an organization. | CO5 BT5 (10) |
| Q. 6 | Explain patch management and system hardening techniques, emphasizing their roles in minimizing attack surfaces. | CO6 BT2 (10) |
| OR | | |
| Q. 6 | Summarize the incident response process and forensic analysis techniques, emphasizing their role in identifying and mitigating security breaches. | CO6 BT2 (10) |

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