

**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) |
| <b>OR</b> |   |              |
| 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) |
| <b>OR</b> |   |              |
| 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) |
| <b>OR</b> |   |              |
| 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) |
| <b>OR</b> |   |              |
| 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) |
| <b>OR</b> |   |              |
| 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) |
| <b>OR</b> |   |              |
| 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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