K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Nov / Dec 2025-2026
(B. Tech.) Program: Computer Engineering Scheme: IIB / II
Regular: LY Semester: VII
Course Code: CEDLC7033 and Course Name: Ethical Hacking and Security
Date of Exam: 25-11-25 Duration: 02.5 Hours Max. Marks: 60

Instructions:
(1)All questions are compulsory.
(2)Draw neat diagrams wherever applicable.
(3)Assume suitable data, if necessary.

Q. No.	Question	Max. Marks	CO	BT level
Q 1	Solve any two questions out of three: (05 marks each)	10		
a)	Apply smartphone hacking prevention techniques to secure an Android device.		CO2	Ap
b)	Apply website vulnerability scanning techniques to identify flaws in a company's login page.		CO3	Ap
c)	Explain the different phases of a hacking attack with suitable examples.		CO1	U
Q 2	Solve any two questions out of three: (05 marks each)	10		
a)	Apply the social engineering cycle to demonstrate how attackers manipulate users.		CO4	Ap
b)	Explain different types of malware (Trojans, worms, backdoors) found in operating systems.		CO6	U
c)	Apply password-cracking countermeasures to secure a corporate user authentication system.		CO5	Ap
Q.3	Solve any two questions out of three. (10 marks each)	20		
a)	Apply ethical hacking methodology to perform footprinting and reconnaissance on a target system.		CO6	Ap
b)	Explain the Social Engineering Cycle and computer-based social engineering techniques in detail.		CO2	U

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c)	Apply system-hacking techniques to analyze how attackers compromise Windows or UNIX systems and propose countermeasures.		CO6	Ap
Q.4	Solve any two questions out of three. (10 marks each)	20		
a)	Analyze how website vulnerabilities such as directory traversal and default script attacks can lead to full website compromise.		CO3	An
b)	Apply an incident-response approach to mitigate a large-scale Denial-of-Service (DoS) attack on a webserver.		CO5	Ap
c)	Explain how access control and user awareness can reduce the success rate of social engineering attacks.		CO4	U

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