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

May-June : 2025-2026
(B. Tech.) Program: Computer Engineering Scheme: IIB 8I
Regular: LY Semester: VII
Course Code: HCSC701 and Course Name: Security Information Management
Date of Exam: 21/11/2025 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)	Illustrate how administrative and technical measures can work together to protect organizational data.		CO2	Ap
b)	Apply the OCTAVE approach to identify and categorize risks in a small enterprise.		CO3	Ap
c)	Explain the difference between standards and guidelines in information security		CO1	U
Q 2	Solve any **two** questions out of three: (05 marks each)	10		
a)	Apply Role-Based Access Control (RBAC) techniques to secure a university management system.		CO4	Ap
b)	Explain the purpose of using shadow passwords and SUDO privileges in Linux security.		CO6	U
c)	Apply backup strategies to maintain operational continuity during a system outage.		CO5	Ap
Q.3	Solve any **two** questions out of three. (10 marks each)	20		
a)	A server has an MTBF of 1,000 hours and an MTTR of 5 hours. Calculate its availability and interpret what this means for business operations.		CO5	Ap
b)	Explain how certifiable standards enhance accountability in cybersecurity.		CO2	U

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c)	Apply risk assessment and quantification methods to identify high-priority threats in a healthcare system.		CO6	Ap
Q.4	Solve any **two** questions out of three. (10 marks each)	20		
a)	Analyze the impact of weak monitoring mechanisms on increasing an organization's residual risk.		CO3	An
b)	Apply an incident response plan to handle ransomware infection in a corporate environment.		CO5	Ap
c)	Explain how layered access control ensures confidentiality, integrity, and availability.		CO4	U

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