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

~~May-June 20~~ / Nov – Dec 2025 ~~July-Aug 20~~ / ~~Feb– March 20~~
(B. Tech / M. Tech.) Program: B.Tech Scheme I/II/IIB/III:III
Regular/Supplementary Examination: TY Semester: V
Course Code: ITC503and Course Name: Cyber Security

Date of Exam: 28/11/2025	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)	Explain the CIA Triad with one example for each component also its relevance in cyber security.		CO1	U
b)	Discuss the various types of credit card frauds.		CO3	U
c)	Explain the three major Cloud Service Models (IaaS, PaaS, SaaS) with example.		CO5	Ap
Q 2	Solve any **two** questions out of three: (05 marks each)	10		
a)	Define Cyber Stalking? Explain the different types of cyber stalking.		CO2	U
b)	Evaluate the challenges involved in preserving volatile evidence compared to non-volatile evidence in digital forensics.		CO4	U
c)	Explain the role of Machine Learning (ML) in detecting and responding to cyber threats with example.		CO6	Ap
Q.3	Solve any **two** questions out of three. (10 marks each)	20		
a)	i. Discuss stage wise Cyber Kill Chain model. ii. Explain how AI is used for Malware detection.		CO2 CO6	U
b)	Discuss Phishing also explain Different types of Phishing with example.		CO3	U
c)	Discuss how data packets captured at various OSI layers can help trace cyber incidents.		CO5	U
Q.4	Solve any **two** questions out of three. (10 marks each)	20		
a)	A bank's online system was hacked using zero-day vulnerability. Explain the possible threats, attack methods, and preventive measures.		CO1	U
b)	Explain the different phases of the digital forensic investigation process.		CO4	U
c)	Discuss in detail the following Bluetooth attacks: a. Bluejacking b. Bluesnarfing c. Bluebugging d. Car Whisperer		CO3	U

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