18/05/2024

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

May-June 2024
(B.Tech) Program: Artificial Intelligence and Data Science Scheme II
Regular Examination: **LY** Semester: **VIII**
Course Code: **AIDLC8033** and Course Name: **Threat Analysis and Modeling**

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

		Max. Marks	CO	BT level
Q 1	Solve any six questions out of eight:	12		
i)	How to add trust boundaries to a whiteboard diagram . Explain with an example.	2	1	U
ii)	How to validate Diagrams in Threat modeling	2	1	U
iii)	Explain Repudiation threat .	2	2	U
iv)	Write down the order with respect threat & mitigation	2	4	U
v)	How can website administrators detect and respond to suspicious activities or unauthorized access attempts?	2	5	U
vi)	Explain the human viewable representation of an attack tree	2	3	U
vii)	List down the primitives for addressing information disclosures	2	6	U
viii)	Explain symmetric and asymmetric cryptographic primitives.	2	6	U
Q.2	Solve any four questions out of six.	16		
i)	While considering threat modeling, which four key questions must be considered mainly?	4	1	U
ii)	Explain how to address the Tampering threat with mitigation technique	4	2	U
iii)	What are the basic steps involved in representing an attack tree	4	3	U
iv)	How to track threats in the form of Tables and list	4	4	U
v)	Describe the open source tools in Threat modeling	4	5	U

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vi)	Explain attacks against cryptosystems.	4	6	U
Q.3	Solve any two questions out of three.	16		
i)	Illustrate about the different Brain storming variants	8	1	U
ii)	How to do API Threat Modeling? Explain with an example	8	4	U
iii)	Write a short note on mobile threats	8	5	U
Q.4	Solve any two questions out of three.	16		
i)	Explain how the STRIDE model can be utilized in the context of both traditional software applications and modern micro services architectures.	8	2	U
ii)	Explain properties of attack libraries	8	3	U
iii)	What are the privacy primitives of cryptographic systems?	8	6	U

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