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

Nov – Dec 2023
(B.Tech / ~~M.Tech~~.) Program: **Artificial Intelligence and Data Science** Scheme I/II/IIB/III: II
Examination: LY   Semester: VII
Course Code: AIDLC7032 and Course Name: Internet of Everything
Date of Exam: 4/12/2023   Duration: 2.5 Hours   Max. Marks: 60

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)	Write the main objectives of the Industrial Internet Consortium	2	CO1	U
ii)	List any Four features of sustainability in manufacturing industries.	2	CO1	U
iii)	Explain the various sensors characteristics.	2	CO2	U
iv)	List the various IIoT Networking protocols.	2	CO2	R
v)	What are the Benefits of Data Analytics in IoT	2	CO3	U
vi)	Explain the various classes of attackers.	2	CO4	U
vii)	Explain the security in healthcare IoT.	2	CO5	U
viii)	Write Implementation steps for Plant Safety and Security in IIoT	2	CO6	R
Q.2	**Solve any four questions out of six.**	**16**		
i)	Define a Smart Business Perspective Model. What are the various units of a business model?	4	CO1	U
ii)	Explain in detail MQTT Protocol	4	CO2	U
iii)	Draw SDN architecture and explain.	4	CO3	U
iv)	Justify the need of IIoT Security. Explain the various basic security goals	4	CO4	An
v)	Explain the trust flow in IIoT system along with trust functionalities.	4	CO5	U
vi)	Explain IoT Architecture for Transportation.	4	CO6	U

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Q.3	Solve any two questions out of three.	16		
i)	Describe the design requirements of Industry 4.0. Write the differences between IoT and IIoT.	8	CO1	U
ii)	Draw the diagram for IIoT security building blocks. Explain it in detail.	8	CO4	U
iii)	How do industrial automation control protocols contribute to the efficiency of industrial systems?	8	CO5	An
Q.4	Solve any two questions out of three.	16		
i)	Write design philosophy of IIoT for Industrial Processes	8	CO2	U
ii)	Justify the importance of data visualization techniques. Discuss the various data visualization techniques in IoT.	8	CO3	An
iii)	Explain in detail IIoT case study -Inventory Management & Quality Control	8	CO6	U

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