BETCK105H

USN

First Semester B.E/B.Tech. Degree Examination, June/July 2025
Introduction to Internet of Things (IoT)

Time: 3 hrs.   Max. Marks:100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
1	a.	Briefly explain point to point and point to multi point connections in computer networks.	4	L2	CO1
	b.	Explain the four broad types of computer networks based on their physical topology.	8	L2	CO1
	c.	With a suitable diagram, explain IoT planes of enablers of IoT and their complex interdependencies.	8	L2	CO1
		OR			
2	a.	With schematic diagrams, briefly explain four broad categories of networks based on reachability.	8	L2	CO1
	b.	With a neat diagram, explain the network communication between two hosts following the OSI model.	7	L2	CO1
	c.	Differentiate between OSI model and TCP / IP model.	5	L2	CO1
		Module – 2			
3	a.	With a block diagram, explain the functional blocks of a typical sensor node in IoT.	10	L2	CO2
	b.	Explain the major factors affecting the sensorial deviations.	10	L2	CO2
		OR			
4	a.	Explain the desired characteristics of actuators used in IoT.	10	L2	CO2
	b.	Explain any five classes of actuators.	10	L2	CO2
		Module – 3			
5	a.	With neat diagrams, explain two types of offsite processing topologies.	10	L2	CO3
	b.	Explain the three parts of data offloading.	10	L2	CO3
		OR			

			M	L	C
6	a.	With a neat diagram, explain onsite processing topology. Give its merits and demerits.	10	L2	CO3
	b.	Explain any five IoT device selection considerations.	10	L2	CO3
		Module – 4			
7	a.	What is Virtualization? Explain its advantages for end users and CSP.	10	L2	CO4
	b.	Explain SLA and its metrics in cloud computing.	10	L2	CO4
		OR			
8	a.	Explain cloud service models and deployment models.	10	L2	CO4
	b.	With a diagram, explain the architecture of IoT based smart irrigation management system.	10	L2	CO4
		Module – 5			
9	a.	Briefly explain the components of vehicular IoT.	10	L2	CO5
	b.	Explain the layered architecture of AmbuSens.	10	L2	CO5
		OR			
10	a.	Explain four types of Machine Learning.	10	L2	CO5
	b.	With a neat diagram , explain the layered architecture of healthcare IoT.	10	L2	CO5

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