CBCS SCHEME

USN

BETCK205H

Second Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.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
Q.1	a.	Explain different network topologies with their feature, advantages and disadvantages of each topology.	8	L2	CO1
	b.	Explain all the layers of OSI model.	7	L2	CO1
	c.	Explain the evolution of IoT in detail with a diagram.	5	L2	CO1
		OR			
Q.2	a.	Explain networked communication between two hosts following the OSI model.	8	L2	CO1
	b.	Explain all physical network topology with a neat diagram.	6	L2	CO1
	c.	Differentiate between: (i) IoT versus M2M. (ii) IoT versus CPS (iii) IoT versus WoT.	6	L2	CO1
		Module – 2			
Q.3	a.	Explain different sensing parameter considerations in detail.	6	L2	CO4
	b.	Explain different types of sensing.	6	L2	CO2
	c.	Explain Actuator types.	8	L2	CO2
		OR			
Q.4	a.	Explain simple sensing operation with a neat diagram.	5	L2	CO2
	b.	Explain different characteristics of the sensor with sensorial deviations.	5	L2	CO2
	c.	Explain the functional block of a typical sensor node in IoT with a neat diagram.	10	L2	CO2
		Module – 3			
Q.5	a.	Differentiate between structured and unstructured data.	5	L2	CO3
	b.	Explain event detection using On-Site processing topology.	5	L2	CO3
	c.	Explain processing offloading paradigm with a neat diagram.	10	L2	CO3

		OR			
Q.6	a.	Explain different offloading considerations.	5	L2	CO3
	b.	Explain different parameter to be considered for IoT device design.	7	L2	CO3
	c.	Explain different off-site processing techniques.	8	L2	CO3
		Module – 4			
Q.7	a.	Explain the different types of virtualization and advantages of virtualization.	6	L2	CO4
	b.	Explain the types of service model with a neat diagram.	6	L2	CO4
	c.	Explain the components in an openstack with relevant description.	8	L2	CO4
		OR			
Q.8	a.	Describe traditional WSN versus sensor cloud.	8	L2	CO4
	b.	Explain different components of agricultural IoT with a neat diagram.	8	L2	CO4
	c.	Give any 4 advantages of IoT in agriculture.	4	L2	CO4
		Module – 5			
Q.9	a.	Explain the components of Vehicular IoT with a neat diagram.	6	L2	CO5
	b.	Explain the architecture of Fog-FISVER with a neat diagram.	7	L2	CO5
	c.	Explain the components of healthcare IoT with a neat diagram.	7	L2	CO5
		OR			
Q.10	a.	Give the advantages of ML.	6	L2	CO5
	b.	Explain the type of ML.	6	L2	CO5
	c.	Explain layered architecture of Ambulance system with a neat diagram.	8	L2	CO5

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