CBCS SCHEME

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BETCK105H/BETCKH105

First Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024
Introduction to Internet of Things

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.	Differentiate between point to point and point to multipoint connection type.	5	L1	CO1
	b.	Discuss the advantages and disadvantages of the following network topologies: (i) Star (ii) Ring (iii) Bus (iv) Mesh, with neat diagram.	5	L2	CO1
	c.	Explain OSI model with the help of neat diagram.	10	L2	CO1
		OR			
Q.2	a.	Explain communication protocol for TCP/IP suite with considering host A and host B with the help of diagram.	8	L2	CO1
	b.	Differentiate between IoT and M2M.	4	L1	CO1
	c.	Explain various networking components of IoT.	8	L2	CO1
		Module – 2			
Q.3	a.	Define a sensor node. Explain simple sensing operation in IoT node with its functional blocks.	8	L2	CO2
	b.	Briefly list and explain characteristics of sensor.	5	L1	CO2
	c.	Define actuators. Explain briefly the actuators type.	7	L2	CO2
		OR			
Q.4	a.	Explain sensorial deviation's with respect to analog and digital sensors.	6	L2	CO2
	b.	Explain different sensors based on sensing environment and physical sensors.	8	L2	CO2
	c.	Explain different characteristics of actuators.	6	L2	CO2
		Module – 3			
Q.5	a.	What are the different data formats found in IoT network? Explain briefly.	6	L2	CO3
	b.	What are the types of IoT processing topologies? Explain them briefly.	10	L2	CO3
	c.	Explain the importance of processing in IoT.	4	L2	CO3
		OR			

Q.6	a.	Explain IoT device design and selection considerations.	10	L2	CO3
	b.	What is processing off-loading? Infer the different data off-loading method.	10	L2	CO3
		Module – 4			
Q.7	a.	Define cloud computing. Describe the advantages of cloud computing.	7	L2	CO4
	b.	Define virtualization. Contrast the advantages of virtualization in detail.	7	L2	CO4
	c.	Explain different types of virtualization in detail.	6	L2	CO4
		OR			
Q.8	a.	Illustrate the types of cloud simulation and explain briefly.	8	L3	CO4
	b.	Define Service Level Agreement (SLA). Explain its importance and metrics used while defining SLA.	6	L2	CO4
	c.	List the components used in agriculture IoT and explain with neat diagram.	6	L2	CO4
		Module – 5			
Q.9	a.	Explain the architecture of vehicular IoT with the help of neat diagram.	8	L3	CO5
	b.	Describe the components of vehicular IoT with the help of neat diagram.	8	L2	CO5
	c.	List the applications of IoT in transportation.	4	L1	CO5
		OR			
Q.10	a.	With a neat diagram, explain the architecture of healthcare IoT.	10	L2	CO5
	b.	Define machine learning? List out the advantages of machine learning along with the diagram and explain with description.	10	L2	CO5

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