CBCS SCHEME

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BETCKH205/BETCK205H

Second Semester B.E./B.Tech. Degree Examination, June/July 2023
Introduction of 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 broad categories of computer networks based on network reachability.	7	L2	CO2
	b.	Explain various networking components of IoT.	7	L2	CO2
	c.	Differentiate between IoT and M2M.	6	L2	CO1
		OR			
Q.2	a.	Explain communication between two hosts following TCP/IP suite with neat block diagram.	7	L2	CO2
	b.	Discuss different IoT planes along with various enabling technologies of IoT.	7	L2	CO3
	c.	Classify network types based on physical topology with example.	6	L2	CO3
		Module – 2			
Q.3	a.	Outline simple sensing operation in IoT node with its functional blocks.	8	L2	CO2
	b.	Define sensor and explain characteristics of sensor.	6	L2	CO1
	c.	Compare mechanical, soft and shape memory based actuators.	6	L2	CO2
		OR			
Q.4	a.	Explain different categories of sensors based on sensing environment.	8	L2	CO2
	b.	Outline basic difference between transducer, sensor and an actuator.	6	L2	CO2
	c.	With neat diagram, explain working mechanism of actuator.	6	L2	CO3
		Module – 3			
Q.5	a.	Differentiate between structured and unstructured data with examples.	5	L2	CO2
	b.	Explain different data offloading strategies with locations and decision making.	10	L2	CO2
	c.	Discuss with neat diagram, event detection using offsite Remote processing topology.	5	L2	CO2
		OR			
Q.6	a.	With neat diagram, explain onsite processing topology.	5	L2	CO2
	b.	Discuss various processing topologies.	10	L2	CO2
	c.	Discuss the importance of data processing in IoT and offload decision making approaches.	5	L2	CO2

Module – 4					
Q.7	**a.**	What is virtualization and explain its different types?	**6**	**L2**	**CO2**
	b.	Differentiate between Network based computing and cloud computing.	**6**	**L2**	**CO1**
	c.	Explain the architecture of sensor cloud platform.	**8**	**L2**	**CO1**
OR					
Q.8	**a.**	Explain components of Agricultural IoT.	**6**	**L2**	**CO2**
	b.	What is Service Level Agreement (SLA), explain its importance and metrics used while defining SLA.	**6**	**L2**	**CO2**
	c.	Explain how agricultural IoT help in efficient distribution of water in agricultural field.	**8**	**L2**	**CO2**
Module – 5					
Q.9	**a.**	Explain fog framework for intelligent public safety in vehicular environment FISVER with block diagram.	**10**	**L2**	**CO2**
	b.	Discuss the advantages and risks associated with health care IoT.	**5**	**L2**	**CO2**
	c.	With neat diagram, explain types of machine learning.	**5**	**L2**	**CO2**
OR					
Q.10	**a.**	Explain the hardware components and front end design features of Ambusense system.	**10**	**L2**	**CO2**
	b.	Explain the challenges in using machine learning.	**5**	**L2**	**CO2**
	c.	Why privacy and security are important in health care IoT? Explain.	**5**	**L2**	**CO2**

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