CBCS SCHEME

USN | | | | | | | | | | |

22MCA32

Third Semester MCA Degree Examination, June/July 2024
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.	What is IoT? What are the evolutionary process of IoT?	10	L1	CO1
	b.	List and explain a few of the most significant challenges and problems that IoT is currently facing.	10	L1	CO1
		OR			
Q.2	a.	List and explain the requirements driving specific architectural changes for IoT.	10	L2	CO2
	b.	With a neat diagram, explain the M2M IoT standardized architecture.	10	L2	CO1
		Module – 2			
Q.3	a.	Explain the number of ways to group and cluster sensors into different categories.	10	L2	CO2
	b.	How sensors and actuators interact with the physical world? Explain.	10	L1	CO2
		OR			
Q.4	a.	Explain design constraints for wireless smart objects.	10	L2	CO2
	b.	Explain the communications criteria in connecting smart objects in IoT.	10	L1	CO2
		Module – 3			
Q.5	a.	Illustrate with neat diagram, how to optimize IP for IoT using adaption layer.	10	L2	CO3
	b.	Discuss the various methods used in IoT application transport.	10	L1	CO3
		OR			
Q.6	a.	Explain the following with respect to COAP: (i) Message format (ii) COAP reliable transmission	10	L2	CO3
	b.	Explain COAP communication in IoT infrastructures.	10	L2	CO3
		Module – 4			
Q.7	a.	List and explain IoT data analytics challenges.	10	L1	CO4
	b.	Explain edge analytics core functions and illustrate edge analytics processing unit.	10	L2	CO4
		OR			
Q.8	a.	Discuss the common challenges faced IoT with respect to security.	10	L2	CO4
	b.	Illustrate formal risk analysis structures octave and fair.	10	L2	CO4
		Module – 5			
Q.9	a.	With a neat diagram, explain a four layered architecture of a smart city IoT infrastructure.	10	L3	CO5
	b.	Why Arduino? With neat diagram exploring ARDUINO UNO Learning Board.	10	L2	CO5
		OR			
Q.10	a.	With neat diagram explain Raspberry Pi and DS18B20 Temperature Sensor.	10	L2	CO5
	b.	List out the IoT strategies for smarter cities.	10	L3	CO5

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