CBCS SCHEME

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
Q.1	a.	With necessary sketches, explain the classification of computer networks with respect to the following parameters. i) Type of connections ii) Physical Topology	10	L2	CO1
	b.	Illustrate networked communication between two hosts with a neat diagram. Also explain seven layers of OSI model.	10	L3	CO1
		OR			
Q.2	a.	Explain six broad categories of IOT networking components along with a neat diagram.	10	L2	CO1
	b.	Differentiate between following: i) M2M versus IoT ii) IoT versus CPS iii) IoT versus WoT	10	L3	CO1
		Module – 2			
Q.3	a.	Explain the classification of sensor based on the i) Power requirements ii) Sensor output iii) Property to be measured	10	L2	CO2
	b.	Describe the different sensing types divided in to four different categories.	10	L2	CO2
		OR			
Q.4	a.	Define Actuator and its mechanism. Explain different types of actuators.	10	L2	CO2
	b.	Discuss the major factors that influence the choice of sensors in IOT based sensing solution.	10	L3	CO2
		Module – 3			
Q.5	a.	Explain the types of data involved in IoT systems based on the following parameters. i) Based on data Format ii) Based on processing urgency	10	L2	CO3
	b.	In detail explain the two types processing topologies mentioned below: i) Onsite processing ii) Off site processing	10	L2	CO3
		OR			
Q.6	a.	With a typical outline diagram of an IoT deployment, briefly explain the classification of offload location types.	10	L2	CO3
	b.	Explain the important factors considered for IOT device design and selection considerations.	10	L2	CO3

Module – 4

Q.7	a.	Define virtualization. Discuss the advantages of virtualization from the perspective of end-user and CSP with suitable examples.	10	L3	CO4
	b.	Explain service model and deployment model with respect to cloud model.	10	L2	CO4

OR

Q.8	a.	What is service level agreement? Explain the importance of SLA with its different metrics.	10	L2	CO4
	b.	Write a short note on : i) Cloud Sim ii) Cloud Analyst	10	L2	CO4

Module – 5

Q.9	a.	Explain the architecture of vehicular IOT and its sublayers and components.	10	L2	CO5
	b.	Briefly explain the architectural layers and components of healthcare IoT.	10	L2	CO5

OR

Q.10	a.	Discuss the advantages and challenge of machine learning.	10	L2	CO5
	b.	With a neat sketch, explain the architecture of Ambusens system and its hardware.	10	L2	CO5

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