

CBCS SCHEME



BETCK205H

Second Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026

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.	Describe how two hosts A and B, communicate over a network using TCP/IP suite, and include a block diagram to illustrate the process.	8	L2	CO1
	b.	Differentiate between IoT and CPS.	4	L2	CO1
	c.	Discuss the various enablers of IoT and their complex interdependencies.	8	L2	CO1
OR					
Q.2	a.	Describe the sequence of technological advancements that have contributed to the development of modern IoT.	8	L2	CO1
	b.	Explain various networking components of IoT.	8	L2	CO2
	c.	Differentiate between point to point and multipoint connection type.	4	L2	CO2
Module - 2					
Q.3	a.	Explain the classification of sensors, based on sensor output and power requirement.	10	L2	CO2
	b.	List and explain the characteristics of sensors.	5	L1	CO1
	c.	Define Actuators. Explain in brief any 2 actuator types.	5	L1	CO1
OR					
Q.4	a.	With neat diagram, explain scalar and multimedia sensing techniques.	6	L2	CO2
	b.	Compare mechanical, soft and shape memory polymer based actuators.	6	L2	CO2
	c.	Define sensor node. Explain the simple sensing operation in IoT node with its functional blocks.	8	L2	CO1
Module - 3					
Q.5	a.	Describe the data offloading strategies : Offload location and Offload decision making.	10	L2	CO2
	b.	Explain in brief the importance of processing in IoT.	7	L2	CO2
	c.	Mention the IoT Device design and selection considerations.	3	L1	CO1

OR					
Q.6	a.	How does collaborative processing differ from remote processing?	10	L2	CO2
	b.	Highlight the pros and cons of onsite-processing.	5	L2	CO1
	c.	Differentiate between structured and unstructured data.	5	L2	CO2
Module – 4					
Q.7	a.	Discuss various cloud service models with examples.	8	L2	CO2
	b.	Define cloud computing. Explain in brief the advantages of virtualization.	6	L2	CO1
	c.	Compare the features of Open Stack and Amazon Web Services (AWS).	6	L2	CO2
OR					
Q.8	a.	With neat diagram, explain the components of Agricultural IoT.	10	L2	CO2
	b.	Discuss the Importance and metrics of Service Level Agreement (SLA) in cloud computing.	7	L2	CO2
	c.	What are the features of Green Cloud?	3	L1	CO1
Module – 5					
Q.9	a.	Explain the architecture of vehicular IoT with neat diagram.	8	L2	CO2
	b.	Explain the advantages and risk of healthcare IoT.	7	L2	CO2
	c.	What are the advantages of IoT in transportation?	5	L1	CO1
OR					
Q.10	a.	Describe the layered architecture of AmbuSen system.	10	L2	CO2
	b.	Define Machine Learning. List and explain the advantages and challenges of machine learning.	7	L1	CO1
	c.	Mention the four categories of machine learning algorithms with the diagram.	3	L1	CO1

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