PCET LIBRARY BANGALORE-49

CBCS SCHEME

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

BCS701

Seventh Semester B.E./B.Tech. Degree Examination, June/July 2026
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 are the characteristics of IoT and application of IoT?	10	L1	CO1
	b.	Summarize the IoT Protocols.	10	L2	CO1
		OR			
Q.2	a.	Describe the functional blocks of an IoT system and communication model.	10	L2	CO1
	b.	Discuss a Level – 6 IoT systems for weather monitoring with diagram.	10	L2	CO1
		Module – 2			
Q.3	a.	Outline the End – to – End Architecture for M2M systems with diagram.	10	L2	CO2
	b.	What is NFV (Network Function Virtualization)? How NFV can be used to Virtualized the Home Gateway.	10	L2	CO2
		OR			
Q.4	a.	What is the need for IoT System Management?	10	L1	CO2
	b.	Explain the Generic approach for IoT device management with NETCONF-YANG.	10	L2	CO2
		Module – 3			
Q.5	a.	What are the steps involved in IoT system design methodology?	10	L1	CO3
	b.	Explain the Information model for the weather monitoring IoT system.	10	L2	CO3
		OR			
Q.6	a.	Explain the characteristics of Lists, Typles, Dictionaries and sets with suitable examples.	10	L2	CO3
	b.	Differentiate between Operator overloading and Function overriding with examples.	10	L2	CO3
		Module – 4			
Q.7	a.	Explain the basic building blocks of an IoT device.	10	L2	CO4
	b.	List and explain the Rasberry Pi frequently used commands.	10	L2	CO4
		OR			

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Q.8	**a.**	Discuss the benefits of using cloud based system for Data collection and Analysis in a smart irrigation setup.	**10**	**L2**	**CO4**
	b.	Describe the deployment design of the Home Automation IoT system.	**10**	**L2**	**CO4**
		Module – 5			
Q.9	**a.**	Explain the MapReduce job execution workflow for Hadoop MapReduce frame work with diagram.	**10**	**L2**	**CO5**
	b.	Explain a Hadoop MapReduce workflow for batch analysis of IoT data with diagram.	**10**	**L2**	**CO5**
		OR			
Q.10	**a.**	Explain Hadoop YARN job execution with a diagram.	**10**	**L2**	**CO5**
	b.	Write a short note on Apache Oozie , Apache Spark and Apache Storm.	**10**	**L1**	**CO5**

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