

Code: 20ES1402

**II B.Tech - II Semester – Regular / Supplementary Examinations  
MAY - 2023**

**INTERNET OF THINGS  
(COMPUTER SCIENCE & ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

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Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.

2. All parts of Question must be answered in one place.

BL – Blooms Level

CO – Course Outcome

			BL	CO	Max. Marks
<b>UNIT-I</b>					
1	a)	Explain different Evolutionary Phases of the Internet of Things.	L2	CO1	7 M
	b)	List and explain different challenges of IoT.	L2	CO1	7 M
<b>OR</b>					
2	a)	Summarize IoT Impact in the real world.	L2	CO1	7 M
	b)	Differentiate IoTWF and M2M architecture.	L2	CO1	7 M
<b>UNIT-II</b>					
3	a)	Define smart object. Summarize the characteristics of smart objects.	L2	CO2	7 M
	b)	What is Actuators? Relate how Sensors and Actuators Interact with the physical world with diagram.	L3	CO2	7 M
<b>OR</b>					

4	a)	List different topologies for connecting IoT devices and explain with diagram.	L2	CO2	7 M
	b)	Identify Various IOT access technologies and discuss any two technologies with respect to Physical Layer, MAC Layer.	L2	CO2	7 M
<b>UNIT-III</b>					
5	a)	How to choose the right platform for your Internet of Things device. Justify answer with different factors.	L3	CO3	7 M
	b)	What is Integrated Development Environment? Explain the routines used in the language.	L2	CO3	7 M
<b>OR</b>					
6	a)	Illustrate the Microcontrollers in Embedded Computing.	L3	CO3	7 M
	b)	Illustrate with an example a basic structure of the Arduino programming.	L3	CO3	7 M
<b>UNIT-IV</b>					
7	a)	Categorize various layers of TCP/IP protocol suit with a neat diagram.	L4	CO4	7 M
	b)	Explain i) Dynamic IP Address Assignment ii) MAC Addresses	L4	CO4	7 M
<b>OR</b>					
8	a)	Which protocol is used to link all the devices in the IoT? Explain in detail.	L4	CO4	7 M

	b)	Differentiate between TCP and UDP protocol of transport layer in a communication model.	L4	CO4	7 M
<b>UNIT-V</b>					
9	a)	Demonstrate the process for getting started with an API.	L3	CO5	7 M
	b)	Illustrate the concept of Mashing up API, Legalities, Scraping.	L3	CO5	7 M
<b>OR</b>					
10	a)	Explain the most common standards used for implementing the API.	L2	CO5	7 M
	b)	Compare Extensible Messaging and Presence Protocol with Constrained Application Protocol.	L2	CO5	7 M