

Programme(UG)/6th/UCSE612

2025

Internet of Things

Full Marks: 100

Time: Three hours

The figures in the margin indicate full marks for the questions.

*Answer **any five** questions.*

1.	a)	Explain the role of sensors and actuators in an IoT system with examples.	10
	b)	Discuss various types of communication models and technologies used in IoT.	10
2	a)	Explain the IoT Reference Architecture with a detailed block diagram.	10
	b)	What are the major constraints affecting IoT architecture design?	10
3	a)	Explain how edge, fog and cloud computing can be used in IoT.	10
	b)	Explain how SDN is different from traditional networks. Discuss how it can be used in IoT.	10
4	a)	Describe a smart irrigation system based on IoT using Raspberry Pi.	10
	b)	How is IoT transforming agriculture? Describe a case study.	10
5	a)	Discuss healthcare applications of IoT with examples.	10
	b)	Explain the application of IoT in predictive maintenance in industries.	10
6	a)	Explain how smart cities can leverage IoT for waste management.	10
	b)	Describe the IoT attack model. Explain major vulnerabilities in each layer.	10
7	a)	Discuss key security and privacy requirements of IoT.	10
	b)	Discuss intrusion detection systems (IDS) for IoT.	10