

PRN No.	
---------	--

PAPER CODE	U315-2104C (ESE)
---------------	------------------

(AY: 2025-26) December 2025 (ENDSEM) EXAM

TY (SEMESTER - I)

COURSE NAME:
INTERNET OF
THINGS

Branch: INFORMATION TECHNOLOGY

COURSE CODE:
IT31234C

(T.Y Pattern ²⁰²³)

Time: [1Hr 30 Min]

[Max. Marks: 40]

Instructions to candidates:

- 1) Figures to the right indicate full marks. Use of scientific calculator is allowed.
- 2) Use suitable data wherever required
- 3) All questions are compulsory. Solve any two sub question each from Questions 1 and 2
- 4) Solve any one sub question (2 marks) from Questions 3, 4, 5 and 6 and sub question of 4 marks is compulsory from questions 3, 4, 5, and 6

Q. No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) List and explain any four technical building blocks of IoT.	[4]	1	1
	b) What are the emerging trends in IoT? Give two technical and two social trends.	[4]	1	1
	c) Differentiate between IoT protocols and traditional networking protocols	[4]	1	2
Q2	a) Define IoT platforms. Explain their role in connecting devices, managing data, and enabling IoT applications.	[4]	2	2
	b) What are the main communication criteria when connecting smart objects? Explain any two in detail	[4]	2	2
	c) Compare IEEE 802.15.4 with Wi-Fi in terms of power consumption, range, and scalability for IoT use	[4]	2	2
Q3	a) State two issues in IoT standardization. OR	[2]	3	2
	b) What is the difference between M2M communication and IoT communication?	[2]	3	1
	c) Compare Wi-Fi and ZigBee in terms of range, data rate, and power consumption for IoT deployments	[4]	3	2

Q4	a) Define an endpoint device in IoT. Give one example OR	[2]	4	1
	b)Mention any two limitations of traditional M2M systems compared to IoT.	[2]	4	1
	c) Draw and explain the basic building blocks of an IoT device.	[4]	4	2
Q.5	a) What is the significance of cloud middleware in IoT? OR	[2]	5	1
	b)State one difference between Grid Computing and Cloud Computing	[2]	5	2
	c) Explain with examples the major vulnerabilities in IoT systems and how they impact users	[4]	5	2
Q.6	a) Give one healthcare application of IoT wearable devices. OR	[2]	6	1
	b) State sensors used in a home intrusion detection system.	[2]	6	2
	c) Compare the architecture and applications of Arduino and Raspberry Pi in IoT projects.	[4]	6	2

BT Levels:

[1] Remembering [2] Understanding [3] Applying [4] Analyzing [5] Evaluating [6] Creating