

Total No. of Questions: 06

Total No. of Printed Pages: 02

PRN No.	
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PAPER CODE	U214-235 (PSE)
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(AY: 2024-25) DECEMBER 2024 (ENDSEM) EXAM
TY (SEMESTER - I)

COURSE NAME:
PROFESSIONAL ELECTIVE-I
INTERNET OF THINGS

**BRANCH: COMPUTER
ENGINEERING**

COURSE CODE: CSUA31205C

(T.Y PATTERN 2020)

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) Identify and explain different gateways in building blocks of IoT.	[4]	1	UNDERSTAND
	b) Discuss various challenges of Internet of things based Traffic Monitoring project.	[4]	1	UNDERSTAND
	c) Describe different capabilities and future of Internet of Things.	[4]	1	UNDERSTAND
Q2	a) Distinguish Internet Protocol suite and Smart Objects Protocol suite with respect to protocols used in layers.	[4]	2	UNDERSTAND
	b) Outline message transmission parameters of COAP protocol of IoT.	[4]	2	UNDERSTAND
	c) Explain 6LoWPAN protocol of Internet of Things.	[4]	2	UNDERSTAND
Q3	a) Illustrate usage of IIoT in real time application development.	[2]	3	APPLY
	OR b) Show transformation of M2M to IoT with respect to protocol usage.	[2]	3	APPLY
	c) Demonstrate M2M architecture with different domains and highlights various activities of device domain in it.	[4]	3	APPLY

Q4	a) Use and explain appropriate IoT characteristics to overcome Design Fault as potential security weakness.	[2]	4	APPLY
	OR			
	b) Demonstrate best practices in IoT security for any online device based application.	[2]	4	APPLY
	c) Show relation between device level vulnerability, threat, and security control for healthcare application.	[4]	4	APPLY
Q.5	a) Outline and criticize open issues of fog computing while its integration with the IoT.	[2]	5	ANALYZE
	OR			
	b) Analyze cloud computing applications with middleware and without middleware.	[2]	5	ANALYZE
	c) Organize the capabilities of middleware in layers for cloud computing.	[4]	5	ANALYZE
Q.6	a) Sequence various activities in flowchart of project setup of smart home system.	[2]	6	ANALYZE
	OR			
	b) Distinguish sensors used in Air Quality Monitoring System based on accuracy.	[2]	6	ANALYZE
	c) Organize and demonstrate various components of IoT based Smart Irrigation System.	[4]	6	ANALYZE