Total No. of Printed Pages: 2

PRN No.	

PAPER CODE	U314-232 (ESE)

(AY:2024-25) December 2024 (ENDSEM) EXAM

TY (SEMESTER - I)

COURSE NAME:	BRANCH:	COURSE CODE:
INTERNET OF THINGS	ELECTRONICS AND TELECOMMUNICATION	ETUA 31202

(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) Describe the main characteristics of IoT and explain how they contribute to the interconnection of devices.	[4]	CO1	Understand
	b) Discuss enabling technologies in IoT	[4]	CO1	Understand
	c) Explain the importance of identifiers in IoT and summarize how they ensure unique communication between devices.	[4]	CO1	Understand
Q2	a) Describe two important things used in WSN architecture.	[4]	CO2	Understand
	b) Describe any two types of wireless sensors and explain how they contribute to data collection in IoT applications.	[4]	CO2	Understand
	c) Illustrate the historical development of wireless sensor networks (WSN).	[4]	CO2	Understand
Q3	a) Choose the commonly used IoT standard for MAC.	[2]	CO3	Apply
	OR			
	b) Show the Z-wave protocol stack for implementing application.	[2]	CO3	Apply
	c) Illustrate ZigBee- Main application areas	[4]	CO3	Apply

Q4	a) Distinguish the key differences between 6LoWPAN and traditional IP protocols for IoT connectivity.	[2]	CO4	Analyze
	OR			
	b) Differentiate the key features of MQTT and CoAP in terms of their suitability for IoT applications.	[2]	CO4	Analyze
	c) Analyze why IPv6 deployed in IoT? Illustrate the features of IPv6 in IoT.	[4]	CO4	Analyze
Q.5	a) State and examine the characteristics of Big Data.	[2]	CO5	Apply
	OR			
	b) Examine the differences between predictive, and prescriptive analytics and analyze their applications in real-world scenarios.	[2]	CO5	Apply
	c) Demonstrate the application of statistical models to predict outcomes in a dataset and evaluate their accuracy.	[4]	CO5	Apply
Q.6	a) Examine the key components that contribute to the success of smart city initiatives.	[2]	CO6	Analyze
	OR			
	b) Analyze the challenges faced by IoT applications in healthcare.	[2]	CO6	Analyze
	c) Illustrate the various steps to improve the quality of life and enable economic growth using IoT applications for smart cities.	[4]	CO6	Analyze