



VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

SLOT: 152

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING
CONTINUOUS ASSESSMENT TEST - I
FALL SEMESTER 2025-2026

Programme Name & Branch : B.Tech (CSE & IoT)
Course Code and Course Name : BCSE310L (IoT Architectures and Protocols)
Faculty Name(s) : Srimathi C
Class Number(s) : VL2025260102368
Date of Examination : 23.08.2025
Exam Duration : 90 minutes

Maximum Marks: 50

General instruction(s):

- Answer All Questions
- M - Max mark; CO - Course Outcome; BL - Blooms Taxonomy Level (1 - Remember, 2 - Understand, 3 - Apply, 4 - Analyse, 5 - Evaluate, 6 - Create)
- Course Outcomes: (Type the CO statements covered in this question paper. Use the CO number as per the syllabus copy)

Q. No	Question	M	CO	BL
1.	Imagine controlling the lights of the home remotely through internet to create an impression of you being inside for safety purposes, switching on the living room and kitchen lights from 7:00pm to 9:00 pm in the night. Capturing the people who had pressed your calling bell through the webcam installed in the main door and burglar alarm in mobile phone if any of the windows and doors are damaged. With a neat sketch draw the function of communication function block in an IoT system with reference to TCP/IP model.	10	1	3
2.	Explain the IEEE 802.15.4 standard for Zigbee protocols? Draw and explain the layer architecture of Zigbee with its functionalities and frame structure	10	2	2
3.	a) If you own a modern car with a speaker, wireless headphones, Smart Phone, 2 wearable, medical devices. Discuss in detail the features of Bluetooth, its modes and architecture with various layers	6	2	3
	b) With a neat diagram, discuss in detail the working principle of SCADA	4		
4.	a) Explosion in the number of the internetwork things or number of devices connected to the internet in near future. Justify the above statement with the help of a challenge with respect to IoT deployment	6		



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		4	1	2
	b) Interpret the Level 4 logical design of IoT for VIT Smart Parking System			
5.	Design Smart Irrigation for Precision Agriculture IoT Application with MQTT. Assume necessary components requirements for implementing the following (i) Ascertaining precise soil dampness levels (ii) Irrigation as per schedule (iii) Actions based on Weather forecasting parameters. (iv) Increasing/ Decreasing Water flows.	10	2	4