LESSON PLAN:–2024-2025

DISCIPLINE:ETC	SEMESTER:6TH	NAME OF THE TEACHING FACULTY: SRI SUBHEN KUMAR BEHERA
SUBJECT: INTERNET OF THINGS	NO.OF DAYS/PER WEEK CLASS ALLOTTED:4	SEMESTER FROM DATE:04/02/2025 TO DATE:17/05/2025 NO.OF WEEKS:15
WEEK	CLASSDAY	THEORY/PRACTICALTOPICS
1ST	1ST	INTRODUCTION TO IOT
	2ND	IOT DEFINITIONS
	3RD	ARCHITECTURAL OVERVIEW
	4TH	ARCHITECTURAL OVERVIEW
2ND	1ST	DESIGN PRINCIPLES AND NEEDED CAPABILITIES
	2ND	DESIGN PRINCIPLES AND NEEDED CAPABILITIES
	3RD	IOT APPLICATIONS
	4TH	SENSING
3RD	1ST	ACTUATION
	2ND	BASICS OF NETWORKING
	3RD	M2M TECHNOLOGY
	4TH	IOT TECHNOLOGY
4TH	1ST	FUNDAMENTALS ABOUT DEVICES & GATEWAYS
	2ND	FUNDAMENTALS ABOUT DEVICES & GATEWAYS
	3RD	FUNDAMENTALS ABOUT DEVICES & GATEWAYS
	4TH	DATA MANAGEMENT
5TH	1ST	BUSINESS PROCESSES IN IOT
	2ND	EVERYTHING AS A SERVICE (XaaS)
	3RD	EVERYTHING AS A SERVICE (XaaS)
	4TH	ROLE OF CLOUD IN IOT
6TH	1ST	SECURITY ASPECTS IN IOT
	2ND	ELEMENTS OF IOT
	3RD	HARDWARE COMPONENTS
	4TH	COMPUTING (ARDUINO, RASPBERRYPi)
7TH	1ST	COMMUNICATION
	2ND	SENSING
	3RD	ACTUATION
	4TH	I/OINTERFACES
8TH	1ST	SOFTWARE COMPONENTS
	2ND	PROGRAMMING API'S (USINGPYTHON/NODE.JS/ARDUINO) FOR COMMUNICATION.
	3RD	PROTOCOLS
	4TH	MQTT
9TH	1ST	ZIGBEE
	2ND	BLUETOOTH
	3RD	COAP

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	4TH	UDP
10TH	1ST	TCP
	2ND	APPLICATION DEVELOPMENT
	3RD	SOLUTION FRAME WORK FOR IOT APPLICATIONS
	4TH	IMPLEMENTATION OF DEVICE INTEGRATION
11TH	1ST	DATA ACQUISITION & INTEGRATION
	2ND	DATA ACQUISITION & INTEGRATION
	3RD	DEVICE DATA STORAGE
	4TH	UNSTRUCTURED DATA STORAGE ON CLOUD / LOCAL SERVER.
12TH	1ST	AUTHENTICATION, AUTHORIZATION OF DEVICES
	2ND	SMART TECHNOLOGY:UNDERSTANDING THE IOT BIG PICTURE
	3RD	BUILDING THE INTERNET OF THINGS
	4TH	UNDERSTANDING SMART DEVICES, BUILDING BLOCKS
13TH	1ST	UNDERSTANDING NETWORK CONNECTIONS
	2ND	UNDERSTANDING IP ADDRESSES
	3RD	UNDERSTANDING CELLULAR NETWORK & MESH NETWORK.
	4TH	SMART TVS & ITS USE
14TH	1ST	SMART TV INTERIOR STRUCTURE
	2ND	SMART TV FUNCTIONS
	3RD	SMART TV OPERATING SYSTEMS
	4TH	SMART TV SET-TOP DEVICES
15TH	1ST	IOT CASE STUDIES: SMART HOME, SMART CAR
	2ND	SMART CITIES, SMART DRONES
	3RD	INDUSTRIAL AUTOMATION
	4TH	INDUSTRIAL AUTOMATION