



SYNERGY SCHOOL OF ENGINEERING, DHENKANAL
DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

LESSON PLAN

Discipline: Computer Science& Engineering	Semester:6th	Name of the Teaching Faculty: Asmita Pranayani
		Subject Code:Th2
Subject: Internet of Things	No. Of Days/Week Class Allotted: 4	Semester From Date:04/02/2025 To Date: <u>17/05/2025</u> No. Of Weeks :15
Week	Class Day	Theory/Practical Topics
1st	1st	Introduction to Internet of Things: Introduction, Characteristics of IoT, Applications of IoT
	2nd	IoT Categories , IoT Enablers and connectivity layers
	3rd	Baseline Technologies, Sensor
	4th	Actuator
2nd	1st	IoT components and implementation, Challenges for IoT
	2nd	Question Answer Discussion
	3rd	IOT Networking :Terminologies, Gateway Prefix allotment, Impact of mobility on Addressing
	4th	Multihoming
3rd	1st	Deviation from regular Web
	2nd	IoT identification and Data protocols (Cont...)
	3rd	IoT identification and Data protocols
	4th	Question Answer Discussion
4th	1st	ConnectivityTechnologies: Introduction,IEEE802.15.4
	2nd	ZigBee,6LoWPAN
	3rd	RFID ,HART and wireless HART
	4th	NFC , Bluetooth,
5th	1st	Z wave,ISA100.11.A
	2nd	Discussion
	3rd	Wireless Sensor Networks : Introduction, Components of a Sensor node, Mode of Detection
	4th	Challenges in WSN, Sensor Web
6th	1st	Cooperation and Behavior of Nodes in WSN, Self Management of WSN, Social sensing WSN

	2nd	Application of WSN, Wireless Multimedia sensor network, Wireless Nano sensor Networks
	3rd	Under water acoustic sensor networks ,WSN Coverage
	4th	Stationary WSN ,Mobile WSN
7th	1st	M2MCommunication:M2Mcommunication
	2nd	M2MEcosystem
	3rd	M2MservicePlatform
	4th	Interoperability
8th	1st	Question Answer Discussion
	2nd	Monthly Class Test -1
	3rd	Programming with Arduino :Features of Arduino
	4th	Components of Arduino Board
9th	1st	Arduino IDE
	2nd	Case Studies
	3rd	Question Answer Discussion
	4th	Programming with Raspberry Pi : Architecture
10th	1st	Pin Configuration
	2nd	Case studies
	3rd	Case studies
	4th	Implementation of IoT with Raspberry Pi
11th	1st	Software defined Networking: Limitation of current network, Origin of SDN
	2nd	SDN Architecture
	3rd	Rule Placement, Open flow Protocol
	4th	Controller placement ,Security in SDN, Integrating SDN in IoT
12th	1st	Question Answer Discussion
	2nd	Monthly Class Test-2
	3rd	Smart Homes: Origin and example of Smart Home Technologies
	4th	Smart Home Implementation
13th	1st	Home Area Networks (HAN)(cont..)
	2nd	Home Area Networks(HAN),(Smart Home benefits and issues
	3rd	Question Answer Discussion
	4th	Smart Cities: Characteristics of Smart Cities, Smart city Frameworks
14th	1st	Challenges in Smart cities
	2nd	Data Fusion

	3rd	Smart Parking, Energy Management in Smart cities
	4th	Industrial IoT: IIoT requirements, Design considerations
15th	1st	Applications of IIoT, Benefits of IIoT
	2nd	Challenges of IIoT
	3rd	Question Answer Discussion
	4th	Quiz Test

Asmita Poanayani

Prepared By:

Smisha 30/01/25
Verified By: C.T. of H.O.D