LESSON PLAN

SUB: INTERNET OF THINGS
BRANCH:- COMPUTER SCIENCE& ENGG.
SEMESTER:5th
NAME OF FACULTY: LAXMIDHAR SETHY (Sr. Lect.)

GOVERNMENT POLYTECHNIC, BHADRAK

SESSION: 2025-26

Hod, CSE

Academic Co-ordinator

Academic Co-ordinator

Principal
Govt. Polytechnic, Bhadrak

DEPARTMENT OF Computer Science & Engg.

Discipline: Computer Science & Engineering	**Semester: 6th, Summer/2025**	**Name of the Faculty:** Laxmidhar Sethy(Sr.Lect.) **Email ID:** ldsathy@gmail.com
Subject: Internet of Things (Th-2)	**No. of Days/week:** 04	**StartDate:22.12.2025** **EndDate:18.04.2026**

Week	Class Day	Theory 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
	3dr	IoT identification and Data protocols (Cont..)
	4th	Question Answer Discussion
4th	1st	**Connectivity Technologies:** Introduction, IEEE 802.15.4
	2nd	ZigBee, 6LoWPAN
	3dr	RFID, HART and wireless HART
	4th	NFC, Bluetooth,
5th	1st	Z wave, ISA100.11. A
	2nd	Quiz Test
	3rd	**Wireless Sensor Networks:** Introduction, Components of a sensor node, Modes of Detection
	4th	Challenges in WSN, Sensor Web
	1st	Cooperation and Behavior of Nodes in WSN, Self Management of WSN, Social sensing WSN

6th	2nd	Application of WSN, Wireless Multimedia sensor network, Wireless Nano sensor Networks
	3rd	Underwater acoustic sensor networks, WSN Coverage
	4th	Stationary WSN, Mobile WSN
7th	1st	**M2M Communication:** M2M communication
	2nd	M2M Ecosystem
	3rd	M2M service Platform
	4th	Interoperability
8th	1st	Question Answer Discussion
	2nd	**Programming with Arduino:** Features of Arduino
	3rd	Components of Arduino Board
	4th	Arduino IDE
9th	1st	Case Studies
	2nd	Question Answer Discussion
	3rd	**Programming with Raspberry Pi:** Architecture
	4th	Pin Configuration
10th	1st	Case studies
	2nd	Case studies
	3rd	Implementation of IoT with Raspberry Pi
	4th	**Software defined Networking:** Limitation of current network, Origin of SDN
11th	1st	SDN Architecture
	2nd	Rule Placement, Open flow Protocol
	3rd	Controller placement, Security in SDN, Integrating SDN in IoT
	4th	Question Answer Discussion
12th	1st	Quiz Test
	2nd	**Smart Homes:** Origin and example of Smart Home Technologies
	3rd	Smart Home Implementation
	4th	Home Area Networks (HAN)
13th	1st	Home Area Networks (HAN)(Cont..)
	2nd	Smart Home benefits and issues
	3rd	**Smart Cities:** Characteristics of Smart Cities, Smart city Frameworks
	4th	Challenges in Smart cities

14th	1st	Data Fusion
	2nd	Smart Parking, Energy Management in Smart cities
	3rd	**Industrial IoT:** IIoT requirements, Design considerations
	4th	Applications of IIoT , Benefits of IIoT
15th	1st	Challenges of IIoT
	2nd	Question Answer Discussion
	3rd	Previous year Question Answer Discussion
	4th	Previous year Question Answer Discussion

18.12.24

Signature of Faculty