LESSONPLAN

Department: CSE		Semester:3rd Name of Faculty: Sri Manoj Kumar Pradhan
Subject: DE & CO(TH-4)	No.ofdays/ week Class allotted: 3	Effective From Date:01.07.2026
		Topic to be Covered:
Week	ClassDay	Theory **UNIT 1: Introduction to Digital Electronics:**
1st	1st	Difference Between Analog and Digital Signals
	2nd	Number Systems: Binary, Octal, Decimal
	3rd	Number Systems: Hexadecimal
2nd	1st	Conversion Between Number Systems
	2nd	Binary Arithmetic
	3rd	Boolean Algebra: Basic Operations, Laws, and Simplification
3rd	1st	Boolean Algebra: Basic Operations, Laws, and Simplification
	2nd	**1. Doubt Clearing class** **2. Quiz test** **3. Assignment**
	3rd	**UNIT 2: Logic Gates and Circuits: Logic Gates:** AND, OR, NOT
4th	1st	NAND, NOR, XOR, XNOR
	2nd	Design and Simplification of Logic Circuits Using Boolean Algebra
	3rd	Karnaugh Maps (K-Maps) for Simplification
5th	1st	Karnaugh Maps (K-Maps) for Simplification
	2nd	Practical Applications of Logic Gates in Real-World Circuits
	3rd	**1. Doubt Clearing class** **2. Quiz test** **3. Assignment**
6th	1st	**UNIT 3: Combinational and Sequential Circuits:** Combinational Circuits: Multiplexers
	2nd	Combinational Circuits: Demultiplexers
	3rd	Encoders, and Decoders
7th	1st	Sequential Circuits: Flip-Flops (SR, JK, D, T)
	2nd	Sequential Circuits: Flip-Flops (SR, JK, D, T) and Their Applications
	3rd	Counters: Synchronous and Asynchronous Counters
8th	1st	Registers and Shift Registers: Types and Uses
	2nd	**1. Doubt Clearing class** **2. Quiz test** **3. Assignment**
	3rd	**UNIT 4: Fundamentals of Computer Organization:** Basic Structure of a Computer: CPU, Memory, Input/Output Devices
9th	1st	Basic Structure of a Computer: CPU, Memory, Input/Output Devices
	2nd	Instruction Cycle: Fetch, Decode, Execute
	3rd	Memory Organization: Types of Memory
10th	1st	(RAM, ROM, Cache, Virtual Memory),
	2nd	Introduction to Buses: Address Bus, Data Bus, and Control Bus
	3rd	Address Bus, Data Bus, and Control Bus

11th	1st	**1. Doubt Clearing class** **2. Quiz test** **3. Assignment**
	2nd	**UNIT 5: Processor Architecture and Control:** Unit Introduction to Microprocessors and Microcontrollers
	3rd	Microprocessors and Microcontrollers
12th	1st	Basics of Arithmetic Logic Unit (ALU) and Control Unit
	2nd	Instruction Set Architecture (ISA):
	3rd	RISC vs CISC Pipelining
13th	1st	and Performance Optimization in Processors
	2nd	**1. Doubt Clearing class** **2. Quiz test** **3. Assignment**
	3rd	**UNIT 6: Input/Output Systems and Advanced Topics:** I/O Devices and Interfaces: Keyboard, Mouse, Printers, and Storage Devices
14th	1st	Interrupts and DMA (Direct Memory Access),
	2nd	Overview of Modern Trends: Multicore Processors
	3rd	GPUs, and Embedded Systems
15th	1st	Mini- Project: Design a Simple Digital Circuit or Simulate a Basic CPU Operation
	2nd	Mini- Project: Design a Simple Digital Circuit or Simulate a Basic CPU Operation
	3rd	**1. Doubt Clearing class** **2. Quiz test** **3. Assignment**

Manoj Kumar Pradhan.

Signature of Faculty

Rasmita Patra

Miss. Rasmita Patra

HOD, CSE (I/C)

Govt. Polytechnic, Kandhamal