PNS SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Branch: CS Engg.	Semester: 3rd	Name of the Lecturer: **Aditya Narayan Jena**	
Subject: DECO	Classes Alloted in a Week: 4	Duration of Semester: 14.07.2025 - 15.11.2025	
Week	**Class Day**	**Theory / Practical Topic**	
1st	1	**INTRODUCTION TO DIGITAL ELECTRONICS:** Analog signal,Digital signal	
	2	Binary,Octal,Decimal,Hexadecimal number system	
	3	Number system conversion	
	4	Number system conversion	
2nd	1	Number system conversion	
	2	Binary Arithemtic	
	3	Boolean Algebra	
	4	Simplfication using Laws and basic operations	
3rd	1	**LOGIC GATES & CIRCUITS:** AND,OR,NOT gates	
	2	NAND,NOR,XOR,XNOR Gates	
	3	Design and Simplification of logic circuits using Boolean Algebra	
	4	K-Map	
4th	1	K-Map	
	2	K-Map	
	3	Practical applications of logic gates in Real world	
	4	**COMBINATIONAL & SEQUENTIAL LOGIC CIRCUITS:** MUX,DMUX	
5th	1	Encoder	
	2	Decoder	
	3	SR-FF	
	4	JK FF	
6th	1	D FF,T FF	
	2	Synchronous and Asynchronous counter	
	3	Register	
	4	Shift Register	
7th	1	Shift Register	
	2	**FUNDAMENTALS OF COMPUTER ORGANIZATION:** Basic structure of a computer,CPU,Memory,Input/Output devices	
	3	Fetch,Decode,Instruction cycle	
	4	Types of Memory	
8th	1	Bus structure(A-bus,D-bus,C-bus)	
	2	**PROCESSOR ARCHITECTURE & CONTROL:** Microprocessor and Microcontroller	
	3	Basics of ALU	
	4	Control Unit	
9th	1	Instruction Set Architecture	
	2	RISC vs CISC	
	3	Performance optimization in Processor	
	4	**I/O SYSTEMS and ADVANCED TOPICS:** I/O devices and Interfaces	

10th	1	I/O devices and Storage devices	
	2	Interrupts	
	3	DMA Technique	
	4	Multicore Processor,GPUs	
11th	1	Embedded Systems	
	2	Revision	
	3	Revision	
	4	Revision	

**Signature of the
Lecturer**

**Signature of the
H.O.D.**

**Signature of the
Principal**