

LESSON PLAN

DISCIPLINE: Electronics and Telecommunication Engineering		SEMESTER: 3 rd	NAME OF THE TEACHING FACULTY: Er. Priyambika Sahoo	
SUBJECT: Th. 3 - Digital Electronics		NO. OF DAYS/ PERIODS PER WEEK CLASS ALLOTTED: 4	Semester From Date: 15.09.2022 To Date: 22.12.2022 No. of Weeks: 15	
WEEK	CLASS DAY	UNIT/ CHAPTER	TOPIC	
1st	1st	BASICS OF DIGITAL ELECTRICS	Digital electronics fundamentals	
	2nd		Number system binary, octal, decimal and hexadecimal	
	3rd		Conversion from one system to other	
	4th		Arithmetic operation addition, subtraction, multiplication etc	
2nd	1st		1s and 2s complement of binary numbers	
	2nd		Digital codes and its application	
	3rd		Logic gates	
	4th		Universal gates and its realization	
3rd	1st		Demorgans theorem	
	2nd		SOP and POS form	
	3rd		3 variable karnaugh map	
	4th		4 variable karnaugh map	
4th	1st		COMBINATIONAL LOGIC CIRCUITS	Half adder and full adder
	2nd			Half subtractor
	3rd			Multiplexer 4*1
	4th			Multiplexer 4*1
5th	1st	Seven segment decoder		
	2nd	Concept of full subtractor		
	3rd	concept of full subtractor		
	4th	Concept of encoder		

6th	1st		Digital comparator
	2nd		Application of seven segment decoder
	3rd		Application of seven segment decoder
	4th		Serial to parallel converter
7th	1st	SEQUENTIAL LOGIC CIRCUITS	Principles of flip flop operation
	2nd		SR flip flop using NAND latch
	3rd		SR flip flop using NOR latch
	4th		Concept of SR flipflop
8th	1st		Concept of JKflip flop
	2nd		Concept of Masterslave flip flop
	3rd		Logic circuit and truth table of T flip flop
	4th		Logic circuit and truth table of D flip flop
9th	1st		Application of master slave flip flop
	2nd		Concept of racing
	3rd		How racing can be avoided
	4th		How racing can be avoided
10th	1st	REGISTERS	Shift registers
10th	2nd	REGISTERS, MEMORIES & PLD	Universal shift registers
	3rd		Application of shift registers
	4th		Type of counters
11th	1st		Binary counter and asynchronous ripple counter
	2nd	Ring counter	
	3rd	Concept of RAM, ROM, SRAM etc	
	4th	Concept of PLD and application	
12th	1st	A/D & D/A CONVERTERS	Necessity of A/D and D/ A converter
	2nd		D/A converter using weighted register
	3rd		D/A conversion using R 2R ladder
	4th		A/ D conversion using counter method

13th	1st	LOGIC FAMILIES	A/D conversion using counter method
	2nd		Successive approximate method
	3rd		Successive approximate method
	4th		Various logic families
14th	1st		IC fabrication process
	2nd		Characteristics of digital ics
	3rd		propagation delay, fan in, fan out
	4th		Power dissipation and noise marginand power supply
15th	1st		Speed with reference to logic families
	2nd		Features of TTL
	3rd		Features of CMOS(NAND and NOR)
	4th		Features of CMOS(NAND and NOR)