DHABALESWAR INSTITUTE OF POLYTECHNIC
LESSON PLAN

Discipline	Semester 3rd	Name of the Teaching Faculty
Subject Digital Electronics	No.of days per Week Class Alloted 05	Semester from Dt. 01-10-2021 To Dt. 08-01-22 No. of Weeks: 014
Week	Class Day	Theory / Practical Topics
1st (OCTOBER)	1st Day	Number System - Binary, octal, Decim
	2nd	Conversion from one system to another no. system
	3rd	Arithmetic Operation - Addition, Subtraction
	4th	Multiplication, Division, 1's & 2's complement
	5th	Digital Code & its application, Binary, excess-3 Gray code.
2nd	0	
3rd	1st	Logic gates:- AND, OR, NOT, NAND
	2nd	Logic gate:- NOR, Exclusive-OR, X-NOR symbol, function, expression, truth-table
	3rd	Universal Gates & its Realisation
4th	1st	Boolean algebra, Boolean expressions Demorgan's Theorems.
	2nd	Represent logic Expression : SOP & POS forms.
	3rd	karnaugh map (3 Variables)
	4th	k-map (4-Variables)
	5th	~~k-m~~ minimization of logical expression don't care conditions.
5th (NOVEMBER)	1st	Combinational logic Circuits. Half Adder, Full Adder
	2nd	Half Subtractor, Full Subtractor, Serial & Parallel Binary 4 bit adder.

H.O.D. Electronics & Telecomm. Engg
DIP Athgarh

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LESSON PLAN

Discipline	Semester 03	Name of the Teaching Faculty
Subject	No.of days per Week Class Alloted 05	Semester from Dt. 01-10-2021 To Dt. 08-01-22 No. of Weeks: 14
Week	Class Day	Theory / Practical Topics
5th (NOVEMBER)	3rd	Multiplexer (4:1), Demultiplexer (1:4) Decoder, Encoder, Digital comparator
	4th	Seven segment Decoder.
	5th	Sequential logic Circuits
6th	1st	Principle of flip-flop.
	2nd	SR flip flop using NAND Gate
	3rd	Clocked SR flip flop
		Clocked D, JK, T flip flop
	4th	
7th	1st	Master-Slave flip-flop symbol, logic circuit, truth table.
	2nd	Concept of Racing and how it can be avoided.
	3rd	Registers, Memories & PLD
	4th	Shift Register - Serial-in Serial-out
8th	1st	Serial-in Parallel-out
	2nd	Parallel in Serial out
	3rd	Parallel in Parallel, Universal shift register

Sikatha Rath

H.O.D. Electronics & Telecomm. Engg.

DHABALESWAR INSTITUTE OF POLYTECHNIC
LESSON PLAN

Discipline	Semester 3rd	Name of the Teaching Faculty
Subject	No.of days per Week Class Alloted 05	Semester from Dt. 01-08-21 To Dt. 08-01-22 No. of Weeks: 014

Week	Class Day	Theory / Practical Topics
8th (NOVEMBER)	4th	Types of ~~Count~~ Counter & application
	5th	Binary Counter, Asynchronous ripple counter.
9th (NOVEMBER)	1st	Decade counter, Ring Counter
	2nd	Concept of memories - RAM, ROM
(DECEMBER)	3rd	Static RAM, dynamic RAM, PS RAM
	4th	Basic concept of PLD
	5th	Application of PLD
10th (DECEMBER)	1st	Necessity of A/D converter
	2nd	Necessity of D/A converter
	3rd	D/A conversion using weighted resistores methods
	4th	R-2R Ladder networeks
	5th	weighted resistores networks
11th (DECEMBER)	1st	A/D conversion using counter method.
	2nd	A/D conversion using counter method
	3rd	A/D conversion with counter, successive approximation

Signature

H.O.D. Electronics & Telecomm. Engg

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LESSON PLAN

Discipline	Semester 3rd	Name of the Teaching Faculty
Subject	No.of days per Week Class Alloted 05	Semester from Dt. 01-08-21 To Dt. 08-01-2 No. of Weeks: 14
Week	Class Day	Theory / Practical Topics
11th (DECEMBER)	4th	Various logic families
	5th	categories to IC fabrication proc
12th (DECEMBER)	1st	characteristics of Digital ICs
	2nd	Propagation Delay
	3rd	fan-out, fan-in.
	4th	Power Dissipation
	5th	Noise Margin
13th (DECEMBER)	1st	Power Supply requirement
	2nd	Power Supply requirent
	3rd	Speed with Reference to logi families
	4th	Speed with Reference to logic families
14th (JANUARY)	1st	TTL (NAND) Gates, circui operation &
	2nd	CMOS (NAND), circuit operatio
	3rd	CMOS (NOR), Circuit opecut
	4th	various applications of TTL &

Srikanta Das