

LESSON PLAN

DEPARTMENT OF ELECTRICAL ENGINEERING, ITT, CHOUDWAR

SUBJECT: PE and PLC LAB

Periods: 3per week

SEMESTER: 5TH

NAME OF FACULTY: T.R.SAHOO & S.PATTANAIK

No. of weeks: 15

Week	Class Day	Theory / Practical Topics
1 st	1 st	Verify truth tables of AND, OR, NOT, NOR, NAND, XOR, XNOR gates.
2 nd	1 st	Implement various gates by using universal properties of NAND & NOR gates and verify truth table.
3 rd	1 st	Implement half adder and Full adder using logic gates.
4 th	1 st	Implement half subtractor and full subtractor using logic gates.
5 th	1 st	Implement a 4-bit Binary to Gray code converter.
6 th	1 st	Implement a Single bit digital comparator.
7 th	1 st	Study Multiplexer and demultiplexer. Study of flip-flops. i) S-R flip flop ii) J-K flip flop iii) flip flop iv) T flip flop
8 th	1 st	Realize a 4-bit synchronous UP/Down counter with a control for up/down counting. Realize a 4- bit asynchronous UP/DOWN counter with a control for UP/DOWN counting.
9 th	1 st	Implement Mode-10 asynchronous counters
10 th	1 st	Study shift registers.
11 th	1 st	1'S Complement. b. 2'S Complement.
12 th	1 st	Addition of 8-bit number. b. Subtraction of 8-bit number resulting 8/16 bit number.
13 th	1 st	Decimal Addition 8-bit number. b. Decimal Subtraction 8-bit number
14 th	1 st	Compare between two numbers. b. Find the largest in an Array
15 th	1 st	Block Transfer ,Traffic light control using 8255,Generation of square wave using 8255