Product Name :	**Product Code :**
Experiments for VLSI Design Lab for Vocational Training and Didactic Labs	NPLT-EC033

Description :

Equipment for Education, Engineering and Vocational Training - Logic Gates
- Design of Gates
- Design of AND gate
- Design of OR gate
- Design of XOR gate
- Design of XOR gate using other basic gates
- Design of 2:1 Mux using other basic gates
- Design of 2 to 4 Decoder
- Design of Half-Adder, Full Adder, Half Subtractor, Full Subtractor
- Design of 3:8 Decoder
- Design of 8:3 Priority Encoder
- Design of 4 Bit Binary to Grey code Converter
- Design of 4 Bit Binary to BCD Converter using sequential statement
- Design an 8 Bit parity generator (with for loop and Generic statements)
- Design of 2,s Complementor for 8-bit Binary number using Generate statements
Sequential Design Exercises
- Design of all type of Flip-Flops using (if-then-else) Sequential Constructs
- Design of 8-Bit Shift Register with shift Right, Rshift Left, Load and Synchronous reset.
- Design of Synchronous 8-bit Johnson Counter.
- Design of Synchronous 8-Bit universal shift register (parallel-in, parallel-out) with 3- state output (IC 74299)
- Design of 4 Bit Binary to BCD Converter using sequential statement.
- Design
- a) Mod 3 Counter
- b) Mod 5 Counter
- c) Mod 7 Counter
- d) Mod 8 Counter
- e) Mod 16 counter
- f) 4 Bit Johnson counter
- Design a decimal up/down counter that counts up from 00 to 99 or down from 99 to 00.
- Design 3-line to 8-line decoder with address latch
- Design of ALU 55
- Lab Project/Case Studies: 2 Nos.

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