

Year & Sem: E1S2	Lab Code: EC1803	Lab Name: Digital Electronic Circuits	No. of Credits: 2	L 0	T&PS 0	P 2
Experiment-I: Familiarization with logic gate IC's Experiment-II: Design of code converters and comparators (8-bit) Experiment-III: Adder related experiments: Half adder , full adder , half subtractor, full subtractor , ripple carry adder, BCD adder, carry look ahead adder using IC Experiment-IV: Design of a binary multiplier and displaying its inputs and outputs on seven segment display unit Experiment-V: Familiarization with multiplexer, decoder, encoder. Design of Half adder, full adder, magnitude comparator and other examples using above familiarized components Experiment-VI: Bi-stable multi-vibrator design. Design and verification of SR,JK,D,T latch/flip-flops. Verification and elimination of Race Around Condition Experiment-VII: Flip-flop conversions and Design of frequency dividers Experiment-VIII: A. Design of synchronous counters (Up and Down) and displaying result on seven segment display unit, B. Design of Mod $n \leq 2^n$ counter design(total 8 states, design of mod6 and mod7 with clear), C. Design and IC verification of Decade counter, D. Cascading of counters Experiment-IX: Synchronous counter design and displaying result on seven segment display unit, A. Random sequence B. Ring counter/Johnson counter Experiment-X: Verification and analysis of ALU IC Experiment-XI: Design of a digital clock References/ Books: 1. 2.						