



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

5. Name of the Lab : DIGITAL SYSTEMS LABORATORY

Subject Code : CS8382 (ODD SEMESTER)

Regulations: R17

LIST OF EXPERIMENTS:

1. Verification of Boolean Theorems using basic gates.
2. Design and implementation of combinational circuits using basic gates for arbitrary functions, code converters.
3. Design and implement Half/Full Adder and Subtractor.
4. Design and implement combinational circuits using MSI devices:
 - 4 – bit binary adder / subtractor
 - Parity generator / checker
 - Magnitude Comparator
 - Application using multiplexers
5. Design and implement shift-registers.
6. Design and implement synchronous counters.
7. Design and implement asynchronous counters.
8. Coding combinational circuits using HDL.
9. Coding sequential circuits using HDL.
10. Design and implementation of a simple digital system (Mini Project).

CONTENT BEYOND THE SYLLABUS

11. Implementation of SR, D, T, and JK flipflops.
12. Design and Simulation of 8 to 1 Multiplexer circuit using behavioural level modeling.
13. Design and Simulation of up-down counter using behavioural level modeling