

Paper Code(s): ECC-253	L	P	C
Paper: Digital Logic and Computer Design Lab	-	2	1

Marking Scheme: 1. Teachers Continuous Evaluation: 40 marks 2. Term end Theory Examinations: 60 marks
Instructions: 1. The course objectives and course outcomes are identical to that of (Digital Logic and Computer Design) as this is the practical component of the corresponding theory paper. 2. The practical list shall be notified by the teacher in the first week of the class commencement under intimation to the office of the Head of Department / Institution in which the paper is being offered from the list of practicals below. Atleast 10 experiments must be performed by the students, they may be asked to do more. Atleast 5 experiments must be from the given list.

1. Design and implementation of adders and subtractors using logic gates.
2. Design and implementation of 4-bit binary adder/subtractor.
3. Design and implementation of multiplexer and demultiplexer.
4. Design and implementation of encoder and decoder.
5. Construction and verification of 4-bit ripple counter and Mod-10/Mod-12 ripple counter.
6. Design and implementation of 3-bit synchronous up/down counter.
7. Design and computer architecture: Design a processor with minimum number of instructions, so that it can do the basic arithmetic and logic operations.
8. Write an assembly language code in GNUsim8085 to implement data transfer instruction.
9. Write an assembly language code in GNUsim8085 to store numbers in reverse order in memory location.
10. Write an assembly language code in GNUsim8085 to implement arithmetic instruction.
11. Write an assembly language code in GNUsim8085 to add two 8 bit numbers.
12. Write an assembly language code in GNUsim8085 to find the factorial of a number.
13. Write an assembly language code in GNUsim8085 to implement logical instructions.
14. Write an assembly language code in GNUsim8085 to implement stack and branch instructions.