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| **Digital Electronics Lab** |

**Subject Code : 18CS3SP03L**

**Credits : 01 L-T-P: 0-0-2**

**List of Experiments:**

1. **Digital Signals**

* Interface Compare analog and digital electronics systems (Tutorial)

1. **Realization of Basic Gates**
   * Realization of basic and universal logic gates using ICS 7400, 7432, 7402, 7408, 7486, 7404.
2. **Universal logic gates**
   * Interface Realization of universal logic gates using ICS 7400, 7432, 7402, 7408, 7486, 7404.
3. **Derived Basic gate using NAND and NOR Gate**

* Realization of NOT, OR, AND, NOR, XOR, XNOR using NAND gate.
* Realization of NOT, OR, AND, NAND, XOR, XNOR using NOR gate.

1. **Demorgan’s theorem**

* Verification of Demorgan’s theorem.

1. **Multiplexer and De-multiplexer**

* Develop Verification of Truth Table of 4:1 mux using IC’s.
* Develop Verification of Truth Table 1:4 demux using IC’s.

1. **Flip Flops**
2. Verification of Truth Table of flip flops
3. Clocked RS FF using NAND gate
4. JK FF using IC 7476
5. D- FF
6. T-FF using JK Flip-flop
7. **Shift resistors**
8. Verification of Truth Table of shift resistors (7495)
   1. SISO
   2. SIPO
   3. PISO
   4. PIPO
9. **Asynchronous mod-10 (decade) counter**

* Verification of 4-bit Asynchronous mod-10 (decade) counter (IC 7490)

1. **Synchronous up/down counter**

* Verification of 4-bit synchronous up/down counter ( (IC 74193)

1. **Ring counter**

* Verification of 4-bit Ring counter

1. **7-Segment display Decoder**