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| Discipline :-**ELECTRICAL** | Semester:-**4th**  | Name of the Teaching Faculty: -**LINCOLN MOHANTY** |
| Subject:-**DIGITAL ELECTRONICS LAB** **(ETP 421)** | No of Days/per Week Class Allotted :-**05** | Semester From:- **02nd January, 2019** To:- **15th April, 2019**No of Weeks:- **14** |
| **Week** | **Class Day** | **LABORATORY** |
| 1st | 1st | Familiarization of Digital Trainer, Kit, logic Pulse, Logic Probe & Digital ICs i.e., 7400, 7402, 7404, 7408, 7432 & 7486 |
| 2nd | 2nd | Verify truth tables of AND, OR, NOT, NOR, NAND, XOR, XNOR gates. |
| 3rd | 3rd | Implement various gates by using universal properties of NAND & NOR gates and verify truth table. |
| 4th | 4th | Implement half adder and Full adder using logic gates. |
| 5th | 5th | Implement half subtractor and Full subtractor using logic gates.  |
| 6th  | 6th  | Implement a 4-bit Binary to Gray code converter.  |
| 7th  | 7th  | Implement a Single bit digital comparator.  |
| 8th | 8th | Study Multiplexer and demultiplexer |
| 9th  | 9th  | . Study of flip-flops. i) S-R flip flop ii) J-K flip flop iii) flip flop iv) T flip flop  |
| 10th | 10th | Realize a 4-bit asynchronous UP/Down counter with a control for up/down counting.  |
| 11th | 11th | Realize a 4-bit synchronous UP/Down counter with a control for up/down counting.  |
| 12th | 12th | Implement Mode-10 asynchronous counters.  |
| 13th | 13th | 13. Study shift registers.  |
| 14th | 14th | Study 8-bit D/A and A/D conversion.Study display devices, LED, LCD, 7-segment displays |