**17EC22P4-PULSE & SWITCHING CIRCUITS LAB**

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| **Course Category:** | Professional core | **Credits:** | 2 |
| **Course Type:** | Laboratory | **Lecture-Tutorial-Practical:** | 0-0-3 |
| **Pre-requisite:** | Basic knowledge on logic circuits & gates, electronic devices. | **Sessional Evaluation:**  **External Exam Evaluation:**  **Total Marks:** | 40  60  100 |

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| **Course Objectives:** | To make the student learn about   1. Basic understanding of concepts logic circuits and gates. 2. Full adder, subtractor, decoder, ripple counter, multiplexer, synchronus counter, RC differtiator and clampers. 3. Multivibrator and Schmitt trigger circuits. | |
| **Course Outcomes:** | After completing the course the student will be able to | |
| CO1 | Implement logic gates using diodes and transistors. |
| CO2 | Design various decoders and implement using multiplexers. |
| CO3 | Find out the uses and applications of synchronous and asynchronous counters. |
| CO4 | Analyze the importance of Pulse and Analog Circuits. |
| CO5 | Demonstrates how various multivibrators can be used to generate non sinusoidal waveforms. |
|  | Minimum of 10 experiments to be conducted out of the following:  **List of Experiments**  1. (a) Logic circuits & logic gates  (b) Realisation of all gates using NAND & NOR gates  2. Full adder & full subtractor  3. Decoder  4. Divided by N- ripple counter  5. Multiplexer  6. Divide by N-synchronus counter  7. RC differentiator and RC integrator  8. Diode clippers and clampers  9. Astable multivibrator   1. Schmitt trigger 2. Encoder 3. Bistable multivibrator | |