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| Course Number and Name | | | | | | | | | | | |
| BEC3L2 - DIGITAL ELECTRONICS LAB | | | | | | | | | | | |
| Credits and Contact Hours | | | | | | | | | | | |
| 2 & 45 | | | | | | | | | | | |
| Course Coordinator's Name | | | | | | | | | | | |
| Dr.M.Sangeetha | | | | | | | | | | | |
| Text Books and References | | | | | | | | | | | |
| Lab Manual | | | | | | | | | | | |
| Course Description | | | | | | | | | | | |
| <ul style="list-style-type: none"> To know the concepts of Combinational circuits. To understand the concepts of flipflops, registers and counters | | | | | | | | | | | |
| Prerequisites | | | | | | Co-requisites | | | | | |
| Basic Electrical & Electronics Engineering Lab | | | | | | Principle of Digital Electronics | | | | | |
| required, elective, or selected elective (as per Table 5-1) | | | | | | | | | | | |
| required | | | | | | | | | | | |
| Course Outcomes (COs) | | | | | | | | | | | |
| CO1 | Learn the basics of gates. | | | | | | | | | | |
| CO2 | Construct basic combinational circuits and verify their functionalities | | | | | | | | | | |
| CO3 | Apply the design procedures to design basic sequential circuits | | | | | | | | | | |
| CO4 | Learn about counters | | | | | | | | | | |
| CO5 | Learn about Shift registers | | | | | | | | | | |
| CO6 | To understand the basic digital circuits and to verify their operation | | | | | | | | | | |
| Student Outcomes (SOs) from Criterion 3 covered by this Course | | | | | | | | | | | |
| COs/SOs | a | b | c | d | e | f | g | h | i | j | k |
| CO1 | M | | | H | | M | | | M | | |
| CO2 | H | | H | H | | | M | | | M | |
| CO3 | H | | H | H | | | M | | M | M | |
| CO4 | M | M | H | H | H | | | | | | |
| CO5 | M | L | | H | | | | | | | |
| CO6 | H | H | H | H | | H | | | M | | |
| List of Topics Covered | | | | | | | | | | | |
| List of Experiments | | | | | | | | | | | |
| 1.Study of logic gates. | | | | | | | | | | | |
| 2. Design and implementation of adders and subtractors using logic gates. | | | | | | | | | | | |
| 3. Design and implementation of encoder and decoder using logic gates. | | | | | | | | | | | |
| 4. Design and implementation of multiplexer and demultiplexer using logic gates . | | | | | | | | | | | |
| 5. Design and implementation of 2-bit magnitude comparator using logic gates, | | | | | | | | | | | |
| 6. Design and implementation of 16-bit odd/even parity checker. | | | | | | | | | | | |
| 7. Design and implementation of Flipflops using logic gates . | | | | | | | | | | | |
| 8. Design and implementation of code converters using logic gates. | | | | | | | | | | | |
| 9. Design and implementation of counters. | | | | | | | | | | | |
| 10. Design and Implementation of shift registers. | | | | | | | | | | | |