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| **Course-30 Title: Digital Logic Design Sessional** | |  |
| **Course No.: CCE 222 Credit : 1.5 Contact Hours: 3** | **Total Marks: 100** | |

**11.1 Rationale:**

As a Computer engineer, one needs to apply logic gates and flip-flop in adder, subtractor, encoder, decoder and memory unit.

* 1. **Objectives:**

1. To familiarize with different logic gates and flip-flops.
2. To design combinational and sequential circuits using gate and flip-flops.

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| **11.3**  **Learning Outcomes** | **11.4**  **Course Content** | **11.5**  **Teaching Strategy/ Learning Experience** | **11.6 Assessment Strategy** |
| 1. Identify and demonstrate logic gates. 2. Identify and demonstrate flip-flops. | Familiarization with different logic gates and flip-flops. | Lecture, Demonstration | Short answer, Assignment, Viva, reports |
| 1. Design and analysis different combinational circuits. | Half adder, Full adder, Half Subtractor, Full subtractor, Decoder, Encoder, MUX, DEMUX, | Lecture, Demonstration, Group Discussion | Short answer, Assignment, Viva, reports |
| 1. Design and analysis of different sequential circuits. | Flip-flops, Sequential circuit, Counter | Lecture, Demonstration, Group Discussion | Short answer, Assignment, Viva, reports |

**RECOMMENDED BOOKS AND PERIODICALS**

**Recommended Books**:

1. V.K. Mehta : Principles of Electronics
2. R.L. Boylestad : Electronic Devices and Circuit Theory
3. Millman & Halkias: Electronic Devices and Circuits