IV B.TECH - II SEMESTER
MECHATRONICS LAB

Course Code: ME8L1 **Credits: 2**
Lecture: - **Internal assessment: 25 Marks**
Lab Practice: 3 Periods/week **Semester end examination: 50 Marks**

Note: 12 experiments must be conducted

COURSE OUTCOMES:

1. Identify the pneumatic, hydraulic and electro-pneumatic components used in automation.
2. Demonstrate the features of various simulation software.
3. Design and execute the pneumatic, hydraulic and electronic circuits for various mechanical applications
4. Apply the knowledge of MATLAB software to write simple programs

List of Experiments:

1. operation of a single and double acting cylinder
2. Sequencing of cylinders
3. **Logic gates using LSM controller package**

a) NOT
b) AND
c) OR
d) NAND
e) XOR
f) Latching
g) Cascade timers
h) Single acting cylinder
i) Double acting cylinder
j) Sequencing of cylinders

4. Sensor Technology Package-using PLC

a) Through Beam Optical Sensor
b) Capacitive sensor
c) Inductive sensor
d) Retro-reflective optical sensor
e) Diffused optical sensor
f) Reed switches

5. Simulation software / (Automation Studio)

a) Robot simulator
b) H-simulator
c) P-simulator
d) PLC simulator

6. MATLAB Programming

a. Sample programmers on MATLAB