B.E / B.Tech. PRACTICAL END SEMESTER EXAMINATIONS

Sixth / Seventh Semster

ME8781 MECHATRONICS LABORATORY

(Regulations - 2017)

Time : 3 Hours   Answer any one Question   Max. Marks 100

Aim/Principle/Apparatus required/Procedure	Tabulation/Circuit/Program/Drawing	Calculation & Results	Viva-Voce	Record	Total
20	40	20	10	10	100

1.	NOR logic circuit in a single acting cylinder using electro pneumatic trainer kit with PLC.
2.	NAND logic circuit in a single acting cylinder using electro pneumatic trainer kit with PLC.
3.	Run a DC motor at the given speed using digital PID controller.
4.	Run a stepper motor in clock-wise direction.
5.	Run a stepper motor in Anti-clock-wise direction.
6.	Run a stepper motor in clock-wise direction with different speed.
7.	Run a stepper motor in Anti-clock-wise direction with different speed.
8.	Assemble a circuit for extension and retraction in a single acting cylinder using push button valve pneumatic trainer kit.
9.	Assemble a circuit for extension and retraction in a double acting cylinder using push button valve pneumatic trainer kit.
10.	Design and assemble a circuit for extension and retraction in a single acting cylinder using roller valve pneumatic trainer kit.
11.	Design and assemble a circuit for extension and retraction in a double acting cylinder using roller valve pneumatic trainer kit.

12.	Design and assemble a circuit for extension and retraction in a single acting cylinder using time relay valve pneumatic trainer kit.
13.	Design and assemble a circuit for extension and retraction in a double acting cylinder using time relay valve pneumatic trainer kit.
14.	Extension and Retraction of a hydraulic cylinder using versapro.
15.	Design and assemble a circuit for extension and retraction in a single acting cylinder using electro pneumatic trainer kit.
16.	Design and assemble a circuit for extension and retraction in a double acting cylinder using electro pneumatic trainer kit.
17.	Design and assemble an OR logic circuit for logic function in a single acting spring return cylinder using pneumatic trainer kit.
18.	Design and assemble an AND logic circuit for logic function in a single acting spring return cylinder using pneumatic trainer kit.
19.	Design and assemble a circuit for extension and retraction in a single acting cylinder using hand lever pneumatic trainer kit.
20.	Design and assemble a circuit for extension and retraction in a double acting cylinder using hand lever pneumatic trainer kit.