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

Sixth/Seventh Semester

ME8781 MECHATRONICS LABORATORY

(Regulation 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.	Design and assemble a circuit for extension and retraction in a single acting cylinder using electro pneumatic trainer kit
2.	Design and assemble a circuit for extension and retraction in a double acting cylinder using electro pneumatic trainer kit
3.	Design and assemble an OR logic circuit for logic function in a single acting spring return cylinder using pneumatic trainer kit
4.	Design and assemble an AND logic circuit for logic function in a single acting spring return cylinder using pneumatic trainer kit
5.	Design and assemble a circuit for extension and retraction in a single acting cylinder using hand lever pneumatic trainer kit
6.	Design and assemble a circuit for extension and retraction in a double acting cylinder using hand lever pneumatic trainer kit
7.	Design and assemble an OR logic circuit in a single acting cylinder using electro pneumatic trainer kit with PLC
8.	Design and assemble an AND logic circuit in a single acting cylinder using electro pneumatic trainer kit with PLC
9.	To run a DC motor at the given speed using digital PID controller
10.	To run a stepper motor in clock-wise direction
11.	To run a stepper motor in Anti-clock-wise direction

12.	To run a stepper motor in clock-wise direction with different speed
13.	To run a stepper motor in Anti-clock-wise direction with different speed
14.	Design and assemble a circuit for extension and retraction in a single acting cylinder using push button valve pneumatic trainer kit
15.	Design and assemble a circuit for extension and retraction in a double acting cylinder using push button valve pneumatic trainer kit
16.	Design and assemble a circuit for extension and retraction in a single acting cylinder using roller valve pneumatic trainer kit
17.	Design and assemble a circuit for extension and retraction in a double acting cylinder using roller valve pneumatic trainer kit
18.	Design and assemble a circuit for extension and retraction in a single acting cylinder using time relay valve pneumatic trainer kit
19.	Design and assemble a circuit for extension and retraction in a double acting cylinder using time relay valve pneumatic trainer kit
20.	Extension and Retraction of a hydraulic cylinder using versapro