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

13.	Design and assemble a circuit for extension and retraction in a double acting cylinder using roller valve pneumatic trainer kit
14.	Design and assemble a circuit for extension and retraction in a single acting cylinder using time relay valve pneumatic trainer kit
15.	Design and assemble a circuit for extension and retraction in a double acting cylinder using time relay valve pneumatic trainer kit
16.	Extension and Retraction of a hydraulic cylinder using versapro
17.	Extension and retraction in a single acting cylinder using electro pneumatic trainer kit
18.	Extension and retraction in a double acting cylinder using electro pneumatic trainer kit
19.	Design and assemble an NOR logic circuit for logic function in a single acting spring return cylinder using pneumatic trainer kit
20.	Design and assemble an NAND logic circuit for logic function in a single acting spring return cylinder using pneumatic trainer kit