

## Process Automation Lab



### List of Equipments

1. Multi Process Trainer
2. Pressure Control Trainer
3. Pneumatic Trainer
4. Hydraulic Trainer
5. I to P Converter
6. P to I converter
7. Control Valve Trainer
8. Valve Positioner
9. Differential Pressure Transmitter
10. Square Root Extractor
11. Process Switches
12. Temperature Transmitter



### List of Experiments

1. Study of various pneumatic and hydraulic system components.
2. Development, implementation and testing of pneumatic circuits.
3. Study of operation and calibration of 2-wire DP transmitter for flow and level control.
4. Design of a two-wire temperature transmitter.
5. Calibration of I to P and P to I converters.
6. Study of control valve Flow characteristics.
7. To study ON/OFF controller.
8. To study Proportional (P) control mode.
9. To study Composite (PI, PD and PID) control mode.
10. Tuning of PID controller by Open loop method (Process reaction curve method)
11. Tuning of PID controller by Closed loop method (Ultimate Gain method).
12. Study of specifications and wiring of an electronic PID controller with alarm annunciator.
13. Study of feedback feed forward controller.
14. Study of Cascade control
15. Study of split range control
16. Study of Ratio control