

Name of Lab: Advanced Control Lab
Floor Area: 66 Sq. m.

S.No.	Items	Specifications	Make	Qty.
1.	Study of linear system simulator trainer	Simulated First, Second & Third order systems, Variable gain amplifier of resolution 1 :1000, Builtin signal source, square wave & triangular wave,Builtin Regulated power supply:220 volt \pm 10%,50 Hz mains operated.	Vijayanta	01
2.	Study of temperature control system	Temperature controller with facilities for PID & relay control blocks,Operating temperature: Ambient to 90°C,seprate controls for PID channel gains, Fast oven fitted with IC temperature sensor, Digital display of set and measure temperature on a 3½ digit built-in DVM, 220 volt \pm 10%,50 Hz mains operated, Builtin Regulated power supply.	Vijayanta	01
3.	Study of steeper motor control trainer	Single stepping & free running mode of operation and variable speed and direction reversal, 360 degree motion servo-potentiometer position pick – up for motor dynamics., Operation through Microprocessor kit with sample control programs, Stepper Motor Specifications : 2.8 Kg-cm Torque, 1.8 degree step angle, Power 12 Volt at 1 Amp. Per phase, 220 volt \pm 10%,50 Hz mains operated, Builtin Regulated power supply.	Vijayanta	01
4.	Study of relay control system trainer	Simulated electronic relay using high speed IC's, Simulated 2 nd order linear plant. Facility for displaying x and x signals, Variable dead zone, Variable hysteresis, Built-in signal sources- sine and square220 volt \pm 10%,50 Hz mains operated, Built-in Regulated power supply.	Vijayanta	01
5.	Study of DC position control system trainer	Position control of a 12V, 1A d.c. gear motor (50 rpm), Provision for positive and negative tachogenerator feedback, Calibrated dials for refrence and output position: resolution 1degree, Servo-potentiometers with full 360 degree rotation, μ p based waveform capture/display card, Built-in 3½ digit DVM for signal measurements, Separate unit for motor in a see-through cabinet, 220 volt \pm 10%,50 Hz mains operated, Builtin Regulated power supply.	Vijayanta	01
6.	Study of speed control system trainer.	Speed Control of a 12 Volt, 4 W permanentmagnet D.C. Motor, Speed Range: 0 – 4,000 R.P.M., 4 Digit Speed Display in R.P.M., Opto interrupter based speed sensing, Electronic Tacho Generator for feedback, 3½ digit DPM, Separate unit for motor in a see through cabinet, Eddy current break, 220 volt \pm 10%,50 Hz mains operated, Builtin Regulated power supply.	Vijayanta	01
7.	Study of PID Controller trainer	Simulated blocks for integrator, time constants, error detector, delay and gain, PID Controller, Configurable as P, PI, PD or PID, Built-in Signal Source, Triangular Wave, Built-in 3½ digit DVM, 220 volt \pm 10%,50 Hz mains operated, Builtin Regulated power supply.	Vijayanta	01

8.	Study of Stroboscope trainer	Non-Contact-type, High intensity XENON flashes – operation possible from a reasonable distance (0.6m) in usual ambient light in a room . Detachable lamp unit with 1.5m cable, 4 Digit speed display in rpm – operating range of 500-9900 rpm, resolution 1rpm. High accuracy crystal controlled LED display, 220 volt \pm 10%,50 Hz mains operated, Builtin Regulated power supply.	Vijayanta	01
9.	Study of microprocessor device controller trainer	Sequence control of 8 LEDs through 8255 port, Control of 2 relays, Operating a 7- segment display, Switch state input through 8255 port, SID/SOD Operation, Builtin Regulated power supply.	Vijayanta	01
10.	Study of DC motor study trainer	Study of a 12 V, 8W d.c. motor, Small generator (2W) for speed pick up and loading, 3-digit time constant display, 3½ digit voltmeter and current meter, Builtin Regulated power supply	Vijayanta	01
11.	Magnetic Amplifier demonstration unit	Set up should demonstrate magnetic amplifier principle.	Vijayanta	01