

**DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

CONTROL SYSTEMS LABORATORY

Control Systems Lab

LIST OF EQUIPMENT

S.No	Name of Equipment	Unit Price	Quantity	Cost
1	Analog oscilloscope 30MHz Make : Falcon Model No :OS-030	13500	4	54000
2	Multimeter Digital Make : Falcon Model No :DMM-10	1000	7	7000
3	Linear system simulator Make : HEM Model No :CE27	11200	1	11200
4	Synchronous transmitter receiver pair Make : HEM Model No :CE6	16600	1	16600
5	DC servo motor speed torque characteristics Make : HEM Model No :CE17	21264	1	21264
6	Transfer function of DC Motor Make : HEM Model No :CE17	21264	1	21264
7	PID Simulator Make : HEM Model No :CE20	12880	1	12880
8	PID Controller(Analog) Make : HEM Model No :CE8	23440	1	23440
9	Study of Compensating networks Make : HEM Model No :CE15	20024	1	20024
10	Magnetic amplifier Make : HEM Model No :CE18	17048	1	17048
11	AC Servo motor speed torque characteristics Make : HEM Model No :CE4	18536	1	18536
12	5kVA Servo stabilizer Make : ITL Model No :SVS 500DD/A1	9303	1	9303
13	PLC Trainer Kit Make : Techno Model No: DVP-14SS2	51428.57	1	51428.57

14	PLC Stepper Motor Make : Total Lab Model No:	9142.86	1	9142.86
15	Potentiometer as Error Detector Make : Tecno Model No: PED-01	16228.57	1	16228.57
16	D.C position Control Systems Make : Total Lab Model No:	21714.29	1	21714.29
17	Function Generator Make: Scientific Serial No: 151019855	9903.99	1	9903.99
Total Cost				340505.67

LIST OF EXPERIMENTS

S No	Name of the Experiment
1	Time response of Second order system
2	Characteristics of Synchros
3	Effect of P, PD, PI, PID Controller on a second order systems
4	Design of Lag and lead compensation – Magnitude and phase plot
5	Transfer function of DC motor
6	Bode Plot, Root locus, Nyquist Plots for the transfer functions of systems up to 5th order using MATLAB
7	Controllability and Observability Test using MAT LAB
8	Temperature controller using PID
9	Characteristics of magnetic amplifiers
10	Characteristics of AC servo motor
11	Characteristics of DC servo motor
12	To study and verify the truth table of logic gates and simple Boolean expressions using PLC.

Signature of Lab Incharge

Signature of HOD

