

LIST OF INSTRUMENTS

LIST FIRST

Pg. No.	Name of Particular	Quantity	
1.	Dual DC Variable Current source	02	
2.	Digital Multimeter	05	
3	Transistor characteristics (CB,CC,CE mode) with three DPM	03	
4	Diode Characteristics with 2 DPM	01	
5	Characteristic of Zener diode and zener regulator with two DPM	01	
6	Study of Emitter Follower/Darlington pair amplifier	01	
7	Study of Single stage RC coupled Amplifier/feedback amplifier	03	
8	Study of Solid state Power supply	02	
9	Half wave rectifier and filters with two DPM	01	
10	Full wave rectifier and filters with two DPM	01	
11	Bridge rectifier and filters with two DPM	01	
12	DC variable Source(Variable Power supply)	05	
13	Project bread board with power supply	70	
14	Transistor Hartley Oscillator	02	
15	Study of A, AB and B push pull Amplifier	03	

16	Voltage Cathode Ray Oscillator	02	
17	Function generator	01	
18	Variable DC current source	05	
19	Audio frequency oscillator	04	
20	Transformer coupled amplifier	02	
21	RC phase shift oscillator	02	
22	Collpitt's oscillator	02	
23	H parameter of transistor	03	
24	AC milli voltmeter	05	
25	JFET and MOSFET	02	
26	UJT characteristic and UJT relaxation Oscillator	02	
27	8 bit Analog and Digital converter	01	
28	4 bit DAC(Counter comparator method)	01	
29	8 bit DAC (Binary weighted Network Method)	01	
30	4 bit DAC (Binary weighted Network Method)	01	
31	OPAMP characteristics	01	
32	OPAMP as Schmitt trigger	01	
33	OPAMP used as Active filters	02	
34	OPAMP amplifier as envelop detector and window comparator	01	
35	OPAMP as V to F and F to V convertor	01	
36	OPAMP as differentiator	01	
37	OPAMP v to I and I to V converter	01	

38	OPAMP as inverting and Non inverting amplifier	01	
39	OPAMP as differential amplifier	01	
40	Multivibrators	01	
41	OPAMP as pulse generator	01	
42	OPAMP application trainer	01	
43	Printer (LASERJET)	01	
44	Printer (HP DESKJET)	01	
45	Printer (HP LASERJET 5 IN 1)	01	
46	UPS 1000VA(APC)	01	
47	UPS1 KVA Numeric off Line	02	
48	UPS 600 VA Numeric	08	
49	ORCAD capture with OP spice (A to D)	01	
50	ORCAD Layout Single user	01	
51	MATLAB	01	
52	Signal processing toolbox	01	
53	Communication toolbox	01	
54	Filter design toolbox	01	
55	Image Processing toolbox	01	
56	Image Acquisition toolbox	01	
57	Mapping toolbox	01	
58	Neural Network toolbox	01	
59	Genetic algorithm and direct search toolbox	01	
60	Notebook PC IBM	02	

61	Samsung color laser printer	01	
62	Samsung MFD 4216	01	
63	Liebert UGXT AV, 1 KVA online UPS system	01	
64	Optimization toolbox	01	
65	2 stage audio amplifier in CE mode	01	
66	Wein Bridge, crystal tuned Oscillator	03	
67	Klystron based microwave test bench	01	
68	Gunn oscillator based microwave test bench	01	
69	Antenna based microwave test bench	01	
70	Dielectric measurement microwave test bench	01	
71	Magic Tee microwave test bench	01	
72	Stabilizer, 5KVA	01	
73	Various microstrip antennas compatible to x band Microwave bench	01	
74	KU band gunn oscillator based microwave test bench	01	
75	Antenna trainer set(FALCON)	01	
76	Fiber optics trainer	01	
78	Doppler radar trainer	01	
79	Microwave power meter	01	
80	Pen drive	05	
81	Switch 8 port D Link	01	
82	Note book (Sony)	01	
83	Computer IBM think centre A -51	39	

84	5KVA Numeric HPS 5000,1KVolt	01	
85	600VA Numeric	02	
86	B2 Spice	01	
87	Magic VLSI layout software	01	
88	Xilinx VHDL software	01	
89	TMS 320C 6713(DSP kit)	01	
90	TMS 320C 5510 (DSP starter kit)	01	
91	Advance microstrip trainer kit	01	
92	GUNN diode for X band	01	
93	GUNN diode for Ku Band	01	
94	Klystron Power supply	01	
95	VSWR meter	01	
96	Fan with Stand	05	
97	Filter Xn band	04	
98	Gunn power supply	01	
99	Xilinx Spartan 3E based processor system	02	
100	Xilinx vertex 4 development board	01	
101	Programmable project board	01	
102	Universal microcontroller development package	01	
103	8051 compiler	01	
104	Xilinx system generator software	01	
105	320 GB External hard disk	02	
106	RAM 2 GB ((DDR-2)	09	

107	RAM 1 GB (DDR-1)	16	
	TOTAL AMOUNT		

LIST SECOND

Se. No.	Name of Particular	Quantity	Cost
1.	Experimental Board on logic gates	02	5800
2.	Study Of Multivibrator	01	1200
3.	Study Of Integrated Circuit Timer	01	1750
4.	RS,D & JK Master Slave Flip Flop	04	6000
5.	Experimental Board On Counter & Shift Registers	02	10100
6.	Half and full adder	02	3000
7.	Multiplexer	01	1400
8.	De Multiplexer	01	1400
9.	Universal PLD Kit	02	61048
10.	DSB/SBB AM transmitter Trainer	01	15250
11.	DSB/SSB AM Receiver Trainer	01	15250
13.	Sampling and Reconstruction Trainer	02	16700
14.	TDM Pulse Amplitude Modulation Demodulation Trainer	02	19300
15.	TDM Pulse Code Modulation /Transmitter Trainer	02	33500
16.	TDM Pulse Code Modulation /Receiver Trainer	02	33500
17.	Delta ,Adaptive delta & delta sigma modulation	01	20700

	/demodulation trainer		
18.	Data formatting and carrier modulation Transmitter Trainer	01	
19.	Carrier demodulation and data reformatting Trainer	01	
20	PAM, PPM, PWM Modulation/Demodulation Trainer	02	
21	Study of AM Modulation /Demodulation	01	
22	Study of FM Modulation /Demodulation	01	
23	CRO 25 MHz	04	
24	2 MHz function pulse Generator	02	
25	2 MHz AM/FM Function Pulse Generator	03	
26	8086/8088 microprocessor training Kit	15	
27	8085 microprocessor training Kit	30	
28	1 GHz Spectrum Analyzer	01	
29	Accessory (advance kit includes amplifier, filter, modulation , mixer, pattern Generator, cable and Experimental Booklet	06	
30	Fourier Synthesis trainer	10	
31	1 GHz Spectrum Analyzer	01	
	TOTAL AMOUNT		

LIST THIRD

Se. No.	Name of Particular	Quantity	
1.	8051 Microcontroller Trainer Kit	04	
2.	2MHz Function pulse generator	05	
3.	20 MHz Dual trac cathode ray oscilloscope	10	
4.	L.C.R.Q bridge	01	
5.	Study of compensation design network trainer	01	
6.	Study of digital control system trainer	01	
7.	IC Tester	01	
8.	Different types of triggering techniques of SCR	02	
9.	Study of SCR phase control circuit	01	
10.	Study of Triac phase control circuit	01	
11.	Study of single phase SCR full bridge converter	02	
12.	Study of voltage commutated DC chopper trainer	02	
13.	Study of current commutated DC chopper trainer	02	
14.	Study of IGBT & MOSFET single phase inverter trainer	02	
15.	DC digital voltmeter 0 to 200 mV DC	05	
16.	DC digital voltmeter 0 to 2 V DC	05	
17.	DC digital voltmeter 0 to 20V DC	05	
18.	DC digital voltmeter 0 to 200 V DC	05	
19.	DC digital Ammeter 0 to 200 μ A DC	05	
20.	DC digital Ammeter 0 to 2 mA DC	05	

21	DC digital Ammeter 0 to 20 mA DC	05	
22	DC digital Ammeter 0 to 2 A DC	05	
23	DC digital Ammeter 0 to 20 A DC	02	
24	Digital Storage Oscilloscope ("Caddo" 200 MHz Color LCD Display)	01	
25	20 MHz dual trace oscilloscope (with built in freq. Counter)	06	
26	30 MHz CRO (with built in freq. generator & freq. counter)	10	
27	Thermocouple demonstration setup (using K-type transducer)	01	
28	Thermocouple demonstration setup (using j-type transducer)	01	
29	RTD demonstration setup (using PT-100 type transducer)	01	
30	Characteristics of strain gauge	01	
31	Study of Linear variable differential Transformer (LVDT)	01	
32	Instrumentation tutor for load cell trainer	01	
33	Instrumentation tutor for pressure measurement trainer	01	
34	Study of acceleration & velocity measurement trainer	01	
35	Study of Angular displacement trainer	01	
36	Study of Speed Measurement trainer (using electromagnetic pickup)	01	
37	Study of Speed Measurement trainer (using optoelectronic pickup)	01	

38	Thermistor demonstration setup	01	
39	Proto Contact PCB artwork film maker	01	
40	Proto Cure 2/PCB curing machine	01	
41	Photo-resist DIP coating machine	01	
42	Double sided UV exposure unit	01	
43	Proto etch etching machine	01	
44	Roller tinning machine	01	
45	PCB drilling machine	01	
46	PCB shearing machine	01	
47	Proto dye / developer (2 in 1 unit)	01	
48	Art table illuminated	01	
49	Study of Linear system simulator	01	
50	TMS 320C 6713 DSP Starter Kit	14	
51	Study of Temperature Control system trainer	01	
52	Study of Stepper Motor control trainer	01	
53	Study of Realy control system trainer	01	
54	Study of DC position control system trainer	01	
55	Study of Speed control system trainer	01	
56	Study of PID controller trainer	01	
57	Study of stroboscope trainer	01	
58	Study of Microprocessor device controller trainer	01	
59	Study of DC motor study trainer	01	
60	Study of Magnetic amplifier demonstration unit capacity 250VA	01	

61	Single phase, variable auto transformer (Variac) capacity 6A.	01	