

**ALL INDIA SHRI SHIVAJI MEMORIAL SOCIETY'S
Institute of Information Technology,
Near R.T.O. Kennedy Road ,Pune -01**

Dept :- Electrical Engg Dept

1) List of Laboratories with cost of equipment in each Laboratory

Sr. No.	Laboratory	Total costing in Rs.
01	Electrical Machines& Industrial Drives & Control	1655951.30
02	Power System & Protection	565591.20
03	Measurement& Instrumentation	431650.00
05	Microprocessor & Control system	335513.26
06	Project	169095.00
Total Amount		3157800.76

2) Total cost of equipment in the Department including software

Sr. No.	Details	Total cost in Rs.
01	Total cost of equipments	3157800.76
02	MATLAB	1571900.00
	Total	47,29,700.76

2) Laboratory wise list of equipments

Electrical Machines Lab :

- a. Electrical Machines – I
- b. Electrical Machines – II

Sr. No	Item/Description	Qty
1	Distribution board panel	01
2	Rectifier panel	01
3	Motor generator set Compound m/c. coupled to series m/c.	01

4	Motor generator set squirrel cage I. M. m/c. coupled to shunt m/c.	02
5	Motor generator set slip ring I. M. m/c. coupled to Compound m/c.	02
6	Motor generator set shunt m/c coupled to alternator.	01
Sr. No	Item/Description	Qty
7	D.C. shunt m/c with brake arrangement.	02
10	Motor generator set shunt m/c coupled to alternator.	02
13	3point Starter	02
14	3point Starter	03
15	4point Starter	01
16	Rotor resistance Starter	01
17	Star delta Starter	01
18	Rotor resistance Starter	01
19	Star delta Starter	01
20	Static excitation unit	02
21	1ph.Transformer	
21.a	Pri.: 0-115-199.8-230V Sec.: 0-57.5-99.59-115V	02
21.b	Pri.: 0-115-199.8-230V Sec.: 0-57.5-99.59-115V	01
22	Tachometer (Digital)	01
	Tachometer (Non-contact Type)	01
23	Voltmeter	
	D.C. 0-150-300 V.	04
	D.C. 0-75-150 V.	02
	A.C. 0-75-150 V.	03
	A.C. 0-300-600 V.	04
	A.C. 0-150-300 V.	05
24	Wattmeter	
	5-10A, 0-150-300 -600 V	06
	10-20A, 300-600V	03
	2.5-5A, 0-150-300 V	03

25	Ammeter	
	A.C. 5-10 A	02
	A.C. 2.5-5 A	01
	A.C. 1-2 A	03
Sr. No	Item/Description	Qty
	A.C. 10-20 A	02
	A.C. 5-10 A	09
27	Frequency meter AS/WCOE/ELECT/FM	01
28	Lamp bank 440v, 10A.	01
28	Lamp bank 440v, 20A.	01
29	Dimmerstat	
	1ph., 230v, 5A	05
	3ph., 440v, 10A	05
30	Clip on Multimeter	01
31	Multimeter	02
32	Stroboscope	01
33	Drill m/c. (K 19.56)	01
34	Soldering gun	01
37	Reluctance Motor	01
38	Hysteresis Motor	01
39	Linear Induction Motor	01
40	Repulsion Motor	01
41	A.C.Series Motor	01
42	Motor Generator set Single Phase Induction Motor (CSCR) coupled to D.C. Shunt Generator	01
43	1 ϕ Induction Motor Capacitor start 1KW, 230V, 1500RPM with DOL Starter	01
42	Toshniwal Make - Model PL13.01 2½" x 20" , 750 Ω , 1.2 A	03
43	Toshniwal Make - Model PL13.01 2½" x 20" , 300 Ω , 1.7 A	02
44	Toshniwal Make - Model PL13.01 2½" x 20" , 1750 Ω , 0.6 A	02

45	Toshniwal Make - Model PL13.01 2½" x 20" , 1500Ω , 1.2 A	02
46	Motor-Generator set -Motor: 3-Ph, Auto Synchronous motor, 5HP, 415Volts, 1500RPM, 50Hz,Salient pole -Generator : 3kW, 220Volts, 13.6Amp, 1500RPM, Compound wound -Control panel for M-G set -Non- contact type digital indicator	01- Set
47	Single phase transformer 1kVA, 230/115Volts with 25%, 50%, 75% tapping on both the windings	02
48	Single phase transformer 1kVA, 230Volts primary 115Volts , 7.5Volts, 7.5Volts with three secondaries enclosed in cabinet	03
49	Three phase transformer 3kVA, 415/230 volts, all six terminals are taken out on primary as well as on secondary side.	02
50	Resistive load bank 3-phase, 415volts, 15Amp, wheels provided for varying of load. Trolley mounted provided with indicating meters switches and caster wheel for easy handling.	01
51	Wattmeter (0-1-)A,150V/300VMI	02
52	Ammeter (0-1-2)A, MI	02
53	Autotransformer3 phase,0-470V, Input 415 V AC, 10 A, closed type	01
54	Autotransformer 1 phase,0-470V, Input 415 V AC, 10 A, closed type	03
55	Non Contact type Tachometer 0-10000 rpm	01
56	Digital Tachometer 0-10000 rpm	01
57	Analog Tachometer 0-10000 rpm	02

- **Power System Protection Lab**

Sr. No	Item/Description	Quantity
1	MCCB (Moulded Case Circuit Breaker) 3 Pole, 415 V, 63 Amp, 25 kA With Shunt Release (L&T Make)	02
2	Thermal Overload Relay 6 – 12 Amp (L&T Make)	03
3	Contactors 3 Pole, 415 V, 12 Amp (230 V AC Coil) (L&T Mk)	03
4	MCB 6 Amp, Single Pole 10 Amp, Single Pole 16 Amp, Single Pole (MDS Make)	02 02 02
5	MCB10 Amp, Double Pole (For DC) (MDS Make)	01
6	MCB16 Amp, Triple Pole (MDS Make)	02
7	MCB16 Amp, Triple Pole + Neutral(MDS Make)	02
8	Add on Contacts 1 NO + 1 NC	01
9	Control / Auxiliary Contactor – 7.5 A, 230 V (L&T Make)	01
10	ELMCB(Earth Leakage MCB) 4 Pole, 415 V, 25 Amp, 30 mA (L&T Make)	01
11	Load Break Switch – Changeover 4 Pole, 415 V, 63 Amp (L&T Make)	01
12	SFU 4 Pole, 415 V, 32 Amp (L&T Make)	01
13	Fuse Puller	01
14	Single Phase Preventor (SPP) Voltage Sensing	01
15	Material for Contactor Starter Panel ON Push button (NO) OFF Push Button (NC) Green Lamp Red Lamp(L&T Make)	01 01 01 01
16	HRC Fuses (Cartridge Type) 16 Amp, 415 Volts 32 Amp HRC Fuse base	05 01
17	Transparent MCB	01
18	Insulators pin type with hardware	01

19	11kv disk Insulators with hardware	01
20	11kv pin Insulators with hardware	01
21	Shackle type with hardware	01
22	Stray type	01
23	Kits KAT FUSE	04
24	Both side Plastic Laminated (Rolling Type) charts	10
25	Wall mounted Poster type charts	19
26	ACB (Air Circuit Breaker)3 Φ , 415 V, 400 Amp,Manual Fixed Type With Shunt release, Under voltage release (L&T Make)	01
27	Switchgear Testing Kit (MDE Make Specification)	02
28	Merz-Price Protection Kit for Transformer (With solid state % Differential relay) (MDE Make Specification)	1
29	Distance Protection Kit for Transmission Line (MDE Mk)	1
30	μ P Based Over Current Protection Kit including CT/PT & panel board terminals.	1
31	Kit Kat (Rewirable Fuses) 16 Amp With 32 Amp Base 32 Amp With 64 Amp Base (Standard ISI Mark Make)	02 02
32	Fuse Wire 5 Amp 10 Amp 16 Amp	2 Roll each
33	Synchronous Timer 240 Volts, 0 - 60 Sec <i>GIC Make</i>	1
34	Ammeter AC (0 - 25 - 50) Amp (Portable - Table Top) (<i>Agronic</i>)	2
35	Transmission line model for medium line	01
36	Transmission line model for Long line	01
37	Capacitor 1 Ph, 230 Volts, 2 A	01
38	Inductance Bank 1 Ph, 230 Volts, 2 A	01
39	Ammeter M I AC 0-1/2 A	05
40	Voltmeter M I AC 0-150/300 V	05

41	Wattmeter Dynamometer Type 1/2 A ,150/300V	05
42	Autotransformer 1 Φ , 0-270V ,10 A	05
43	Phase Shifter Input 3 Φ , 415 V Output 415V ,2A	01

- **Measurements & Instrumentation Lab**

Sr. No	Item/Description	Quantity
1	RTD Probe (Digital)(With heating process)	01
2	Thermistor (Digital) (With heating process)	01
3	Thermo Couple (Digital) (With heating process)	01
4	Pressure Transducer (Digital)	01
5	Energy Meter 3 phase, 440V, 20A, 2 element with enclosure	01
6	Digital Multimeter	12
7	Energy meter 1ph., 230v, 5A	01
8	Earth tester	01
9	Transformer P.T. 230v, 15VA.	03
10	Transformer C.T. 5/1A, 15VA.	04
11	Stop watch	01
12	Ammeter	
	A.C. 5-10 A	09
	A.C. 1-2 A	03
13	Wattmeter	
	5-10A, 0-150-300 -600 V	03
14	Voltmeter	
	A.C. 0-300-600 V.	04
15	Dimmerstat	
	1ph., 230v, 5A	02
	3ph., 440v, 10A	03
16	Multimeter	01

17	Epstien Square	01
18	Phase Shifter	01
19	Current Transformer 0-5 A/0-5 A	03
20	Lamp Bank,3 Ph,415V,20A	03
21	Standard Resistance,0.1Ohm	01
22	Kelvin's Double Bridge	01
23	Spot Galvanometer230V,1Ph	01
24	Voltage Ratio Box230V,1Ph	01
25	DC Power Supply 0-30 V ,0-5A , dual type	02
26	Anderson's Bridge with all accessories	01
27	Schering Bridge with all Accessories	01
28	Campbell's Frequency Bridge	01
29	Earth Tester	01
30	Strain gauge for Strain measurement (Cantilever Type)	01

- **Drives & Power Electronics Lab**

Sr. No	Item/Description	Quantity
1	C.R.O.	01
2	Variable D.C. power supply 0-30 v.	01
3	SCR Firing Circuit using R, RC, UJT & IC Chip	01
4	SCR Series Inverter	01
5	Jones Chopper with Lamp Load Bank	01
6	IGBT characteristics with DMM	01
7	DIAC Characteristics with DMM	01
9	Single Phase with Half/Full Bridge Converter with Motor	01
10	V/F Control unit MOSFET Based PWM Inverter with Motor	01
11	Duel D.C. Power Supply Unit	06
12	Three Phase Series Inverter with Motor	01

13	Three Phase Bridge Converter with Motor	01
14	Single phase converter fed separately excited D.C. motor R-RL-Motor load 1hp.	01
15	Three phase dual converter fed separately excited D.C. Motor R-RL-Motor load 1hp	01
Sr. No	Item/Description	Qty
16	Chopper fed DC series Motor. Transistorized DC Chopper Firing unit (230 V/5 A) suitable to drive Universal Motor load,also RL load.	01
17	VSI Fed three phase Induction Motor to drive 3 phase 1 hp Induction motor from voltage source inverter fed from 3 ph AC supply through suitable convert	01
18	Firing circuit of 3 phase converter & Converter unit of 3KW to drive variable speed D.C. motor of 5HP Make:Kashtronika	1
19	Kits to Study Characteristic of SCR,	1
20	Kits to Study Characteristic of IGBT	1
21	1Phase Half & Full Controlled Converter	1

- **Microprocessor & Control System Lab**

Sr. No	Item/Description	Quantity
1	8085 Kit Model cub Microprocessor Trainer Kit	05
2	8086 Kit with 8 digit seven segment display, SMPS, 101 Key PC AT Keyboard. RS 232 Serial link /cable & PC up/down software & Cross assembler on floppy Connector set for NDP8087.	04

3	8051 Microcontroller Kit with 8 digit seven segment display, SMPS, 101 Key PC AT Keyboard. RS 232 Serial link /cable & PC up/down software & Cross assembler on floppy	03
4	8255 interfacing card suitable with 8085 with power supply.	05
5	8259 interfacing card suitable with 8085 with power supply	01
6	8279 interfacing card suitable with 8085 with power supply	01
Sr. No	Item/Description	Qty
7	Stepper Motor & 12 V D.C. Motor card. Interfacing card with motors mounted in it to illustrate speed & direction control.	01
8	8253 interfacing card suitable with 8085 with power supply	05
9	Analog to digital Converter ADC interface using 12 bit 7109	01
10	Digital to Analog Converter 8 bit DAC	01
11	P4, 1.6 MHz, 128 MB Ram Computer	01
12	C.V.T. 1 KVA	01
13	89C51 Microcontroller Kit	01
14	8 bit ADC interface with 89C51	01
15	8 bit DAC interface with 89C51	01
16	Analog to Digital Converter using 8 bit 0809	01
17	Digital to Analog Converter using 8 bit 0800	01
18	DC Motor Control by 89C51	01
19	Stepper motor control by 89C51	01
20	8085 Microprocessor kit	02
21	89C51 Microcontroller kit	05

- **Project / Core Lab**

Sr. No	Item/Description	Quantity
1	Superposition & reciprocity with components.	02
2	Kits thevenin theorem with components.	02
3	Resonance characteristics with components.	02
4	Two-port network. with components.	04
5	Step Resonance of R-L-C, R-L, R-C. with components.	04
6	Multimeter	01
7	Fluorescent Tube Kit TMC 15/120 Copper Star (Copper) 20 W Champion	01
8	Sodium Vapour Lamp Kit 250 W SON Choke 250 W SON Lamp	01
9	Mercury Vapor Lamp Kit. 12 W HPL Choke 12 W HPL Lamp (BC)	01
10	SON Igniter Philips SN58 For 150 W, / 250 W / 400 W Sodium vapor lamp.	01
11	Boards for FE Lab	--
12	LCD Projector	01
13	(0-500mA). Ammeter Moving coil	03
14	(0-30/60V) D.C. Voltmeter	04
15	(0-100mA) D.C. Ammeter	04
16	(0-500mA) D.C. Ammeter	04
17	(0-100/200mA) D.C. Ammeter	04
18	(0-1.5 /3 /7.5) D.C. Voltmeter	04
19	(0-15V) D.C. Voltmeter	04
20	Analog and Digital Trainer kit XPO CT (as per our specifications)	10
21	Mag.Elect mag. & Trafo Kit – P1	02
22	DC/AC wave shaping ckt – P2	03
23	Semiconductor, power semiconductor kit –P3	02

24	Sensor and transducer panel- P4	02
25	Voltage regulator kit-P6	02
26	Project module – P10	02
27	Digital logic gate kit-P12	02
28	Flip Flop ,Counter kit –P13	02
29	Multiplexer, decoder panel-P14	02
30	Half/Full adder kit –P15	02
31	Op-amp kit –P16	05
32	Advanced Op-amp kit – P17	05
33	Op- amp application panel-P18	03
34	ADC/DAC kit – P26	02
35	Logic gate specification –P28	02
36	IC, breadboards etc	

- **High voltage Engineering**

Sr. No	Item/Description	Quantity
01	Micro ohm meter 10 $\mu\Omega$ to 20k Ω in 8 decade steps	01
02	Milli mega ham meter I.R. Tester 100,250,500, 1W 1 Mega ohm to 10 ⁹ Mega ohm in 6 ranges	01
03	Oil Testing Kit	01
04	Different sets of Electrodes	--

c)Departmental Library:-

Department is having separate library consisting highly specialized reference literature like various seminars, project reports, proceedings of national & international seminars & conferences on various technical topics.

Library also have transactions of various national & international journals & technical magazines like electrical- power review, EEMA journal. It also includes number of reference books required frequently & more popularly by for staff and student.

d) Audio Visual Aids :- Department is having separate OHP(Over Head Projector),LCD (Liquid Crystal Display) & set of different set of CD's of different manufacturing processes, world leading companies like Siemens, L & T, AREVA etc. which help to focus on practical aspect to aid the theory knowledge gained by the students. Faculty of Department take help of this resource in their theory lectures & impart teaching with the help of modern teaching aids. Separate files of transparencies, Power Point Presentations for different subjects are also available in the Department.