

S D M COLLEGE OF ENGINEERING & TECHNOLOGY, DHARWAD  
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

**TOTAL SPACE AREA**

Sl No	SPACE DETAILS	Carpet Area in Sq Meters	Investment In lakh
01	Analog Electronics Lab	474.58	7.05
02	Digital Electronics Lab		2.78
03	Electrical Machines –I & II Lab		11.57
04	Electrical & Electronics Measurement Lab		5.85
05	Power Electronics Lab		3.56
06	Control Systems Lab		2.97
07	U. G. Simulation Lab (Power System Lab)	50.75	38.10
08	Microcontrollers Lab		6.22
09	Relay & High Voltage Lab	102.78	4.39
10	P.G. Computer Lab (Cellar)	67.09	30.01
11	Electrical Research Lab	34.04	--
12	Store area	32.55	--
13	Lab Circulation area	34.50	--
14	H O D Room	47.94	--
15	Department Office	26.52	--
16	Faculty Area	249.00	--
17	P.G. Class Room	50.75	--
18	Class room No-23	138.7	--
19	Class room No-24	138.7	--
20	Seminar Hall	102.78	--
21	Female staff toilet	10.34	--
22	Male staff toilet	16.42	--
23	Male student toilet	16.42	--
<b>Total Area</b>		<b>1581.34</b>	<b>110.52</b>

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**LABORATORY SPACE AREA**

Sl No	SPACE DETAILS	Carpet Area in Sq Meters	Investment In lakh
01	Analog Electronics Lab	474.58	5.07
02	Digital Electronics Lab		2.78
03	Electrical Machines –I & II Lab		11.57
04	Electrical & Electronics Measurement Lab		5.85
05	Power Electronics Lab		3.56
06	Control Systems Lab		2.97
07	U. G. Simulation Lab (Power System Lab)	50.75	38.10
08	Microcontrollers Lab		6.22
09	Relay & High Voltage Lab	102.78	4.39
10	Electrical Research Lab	34.04	--
11	Seminar Hall	102.78	--
12	Store area	32.55	--
13	Lab Circulation area	34.50	--
<b>Total Area</b>		<b>831.98</b>	<b>110.52</b>

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



**LABORATORY AND WORKSHOP FACILITIES:**

**Department: Electrical & Electronics Engineering**

Sl. No.	Name of Laboratory	Major equipment available	Total investment till date (inRs.)
1	Digital Electronics Lab	Power Supply Range:30V, 01A Make: Measurement Digital IC Trainer Make : HIL, Model :2921 Digital IC Trainer Make : Scientech Model : SDK -8261 Storage Oscilloscope 100 MHz , 02 channel, Make: H P Digital I C Trainer, Make: ALS, Model:PC-DT-OC Desk Top HP Compaq model DX 6100	6,01,100=00
2	Analog Electronics Lab	Stepper Motor & DC Motor I/F NIFC – 57 Temperature Controller I/F, NIFC – 47 DSP Starter Kit, No: TMS 320C6713 DSP Starter Kit , make: TEXAS, No: TMS 320C5416 Pen Display, make: Wacom, model:DTK-1651, 100 MHz Dual Channel Storage Oscilloscope,make:GW Instek Multiwave form Signal Generator, 10 MHz ,Make : Aplab Desk Top HP Compaq model DX 6100	10,97,649=00
3	Electrical & Electronics Measurements Lab	LVDT make: Scientech Spot reflecting Galvanometer, Make : OSAW CAT-28113 1-Φ Dimmerstat range:08A, make: AE 5 dial Decade Capacitance Box Range:50pf to 10 μfd make: Radart 6 dial Decade Capacitance Box Range:2W, 1% accuracy OSAW Kelvin Bridge, Make : OSAW No:94733 Portable Wheatstone Bridge	4,09,338=00
4	Microcontrollers Lab	Microcontroller Trainer Kit make: ALS Model:SDA-51 MEL 8051 CPLD/ FPGA - 01 Microcontroller Kit , Make : ALS Flash Program Evaluation Board 25MHZ, Dual Channel 4 Trace CRO, Aplab 8051 Microcontroller Kits for DSP& Embedded ALS SDA - 51	3,92,154=00
5	Electrical Machines Lab	3- Phase Induction Motor, Range: 5HP,1440rpm, make: NGEF A C Generator, range:3KW ,Make: BENN. No: A 8404. 0125 3-Φ Synchronous Motor, range: 05 HP ,make: BENN A C Generator, range:3KW ,Make: BENN. No: A 8404. 0125 A C Generator (Alternator) range:3KVA, Make: KEC D C Motor range:3 KW, Make: KEC No: 82108-01 Slipring Induction Motor range:4.8 KW,make: Main Motor –Generator Set, A C Motor , Range:20 KW	9,97,720=00
6	Power Electronics Lab	250 Wp Solar Module , 24 V, 72 cells, Kotak 4 dial Decade Capacitance Box Range:11.11mfd make: OSAW 30 MHz ,Powerscope, Make: Scientific Model: SM901, SINo: 1712632 Power scope, 20 MHz , Dual Channel, Aplab Model: 3305 P	7,50,203=00

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



		Inverter Powerone	
7	Sensor,Control System & Simulation Lab	Thyristor Module Converter (TMC)Make: Instruments & Controls Single Phase Firing Circuit (SPFC)Make: Instruments & Controls Mc Murray Inverter Three Phase Firing Circuit,( TPFC)Make: Instruments & Controls G T O Thyristorized ChopperMake: FRAX range:10A, 800V IOT Evaluation Board Raspberry P14 , 8GB Model Bwith HDMI Cable, SD Card	6,47,692=00
8	Power System Simulation Lab ( U.G. Simulation Lab)	Desk Top, HP make,Model:DX-6120 Circuit Maker – 2000 ,Advanced Schematic Mixed Digital & Analog And PCB layout drawing S/W for10 User Licensed 16/32 Channel Pattern Generator,LG 320161, make: ALS Hand Held Oscilloscope,Make: Aligent, SIno: KR46100386	26,18,075=00
9	Relay & High Voltage Lab	Over Voltage Relay, Make: EECo Ltd, No:001, 002 Negative Phase Sequence Over Current Relay,Make: U E 3-Phase Differential Protection Relay, Make: Aluminum Ind Ltd, High Voltage Transformer,100 KV – 10 KVA100 KV – 10 KVA High Voltage Schering Bridge Motorized or Automatic oil test set,Make: Zaran, range: 60 KV	4,32,416=00
10	DSP & Embedded System Lab	KEIL Software PK 51Version 8.0 Communication Module, Tektronics DSP Starter Kit. Fixed Point, TMS 320C5416 Electronic component Tester,MME-ECT-20, E-1452 ALS-SDA 85 ME 8085 $\mu$ p Kits	8,35,087=00
11	Research Lab	<b>Real Time Transmission Simulator</b>	18,35,440=00
12	P. G. Course Power System Simulation Lab Facility	Desk Top, Lenovo make Model:CPU-H61/13-2120, Monitor: TFT D 18.6 wide UPS 600VA EMERSON Mi Power Software package, 9.0 version Cyme power System Software	33,92,810=00

*S. Lakshmi*  
 Head of the Department  
 of Electrical & Electronics Engineering.  
 S.D.M. College of Engg & Technology  
 Dhavalagiri, DHARWAD-520 002

**SDM College of Engineering and Technology, Dharwad**  
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## 1) Digital Electronics Lab

Sl. No	Name of the Equipment & Specifications	Quantity	Cost in Rs.
1	Digital Multimeter, Make: Meco, Model: 9A	4	MR-137
2	Digital Multimeter, Make: Meco, Model: 9A 06 ,	5	5925
3	Digital Multimeter, 4 ½ digit True RMS,Meco Model: 450 TRMS,	1	4815
4	Digital Multimeter, Meco, Model: 9A 06	3	5187
5	Power Supply, Range:30V, 30A Make: Aplab	1	720
6	Power Supply Range:30V, 01AMake: Measurement	10	31360
7	Power Supply,Range:±15V,01A Make:Measurement,	10	30050
8	Power Supply Range:30V,01A,Make: Retrack	2	4981
9	Power Supply , 30V, 01A,Make: ALS	5	19182
10	Dual Power Supply , 30V, 02A,Make: Renoun System,	2	12083
11	Storage Oscilloscope 100 MHz , 02 channel, Make: H P ,	1	74607
12	Oscilloscope, 25 MHz Make: AplabModel: 3802,	1	16000
13	Digital IC Trainer Make : HIL, Model :2921	2	13700
14	Digital IC Trainer Make : Scientech Model : SDK -8261	3	10600
15	Digital IC Trainer Make : Efficient , Model : 15-05	1	1485
16	Digital IC Trainer Make : ALS Model : ALS- DICT	5	26094
17	Digital ICTrainer, Make : PEECE , Model : PC-DT-03	1	3750
18	Digital IC Trainer Make : PEECE	5	MR-125
19	Digital IC Tester Make : Data Processor ,Model : Test Mate DP-20	1	16000
20	Digital IC Tester Make : Mini Max, Model : DIT - 2040	1	15960
21	Digital IC Tester Make : Mini Max, Model : ICT - 20 (DIT - )	1	8201
22	Digital I C Trainer, Make: ALS, Model:PC-DT-OC	5	45260
23	Project Board Make : Vijayanta Model : BB – 12	3	MR-136
24	Bread Board	11	2250
25	Project Board, Make :Retrack No : 1,2,3	3	5400
26	Analog phase Angle Meter Make : Aplab Model : 9616	2	4004
27	Digital phase Angle Meter ,Make : Aplab,Model : 9615	1	6800
28	Frequency Meter Make : Meco , Model :	2	1852
29	Frequency Meter Make : Meco	1	1780
30	Digital Milli Ohm Meter Make : Agronic, Model : 53B	1	3400
31	Digital Milli Ohm Meter Make : Vasavi , Model : VRM 22M	1	2800
32	Bench Micro Ohm Meter , Make : Motawane,Model: LR-2045	1	11500
33	Digital LCR Meter Hand Held Make : Meco , Model : 954	1	4400
34	Digital LCR Meter Make : Pacific, Model : PLCR 84	1	6980
35	30 MHz Oscilloscope, Make: Scientific, Model:SM410,	1	20650
36	Desk Top HP Compaq model DX 6100	2	108550
37	PC-DT – 032 Digital I.C. Trainer 16pin ZIF, 20pin ZIF	10	59906
38	Power Supply 30V, 1A TMI make	02	9676
39	Power Supply ± 12 V	02	5192
		<b>Total Rs.</b>	<b>6,01,100=00</b>

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



## 2) Analog Electronics Lab

Sl	Name of the Equipment & Specifications	Quantity	Cost in Rs.
1	Inter face NIFC - 01A Make ALS	1	MR-152
2	8bit ADC Inter face NIFC – 07A Make ALS	3	MR-152
3	Inter face Study card NIFC – 15-8255 ALS	2	MR-152
4	Inter face Study card NIFC – 21-8251 ALS	2	MR-152
5	Inter face Study card NIFC – 24-8279 ALS	2	MR-152
6	Pen Drive, 01GB make: Transcend	2	4000
7	Pen Drive, 08 GB make: San Disk	3	1496
8	Power Supply, make: Anshuman	2	1400
9	Power Supply, make: Anshuman	4	3200
10	Power Supply, make: ALS	5	4000
11	Power Supply, make: ALS	1	720
12	Power Supply, make: ALS	2	1620
13	Power Supply, make: ALS	5	4820
14	Power Supply, make: Anshuman	9	9350
15	Power Supply, make: Anshuman	2	1000
16	Power Supply, make: ALS	1	964
17	Microprocessor Board make: ALS, Model: 85 MEL	2	MR-151
18	Power Supply, make: ALS	3	MR-151
19	NIFC –4 7 Temperature Measurement I/F	4	6900
20	NIFC – 45 LCD & Key Board I/F	2	3550
21	NIFC – 46 Multiplexed Display & Key Board I/F	3	4950
22	NIFC – 55 DC Motor I/F	2	5000
23	Daughter Board I/F XILINX with NV ROM	1	4350
24	LCD & Key Board I/F NIFC - 45	2	3910
25	Stepper Motor & DC Motor I/F NIFC - 57	2	6990
26	Dual DAC Interface, NIFC-06A	2	2150
27	Temperature Controller I/F, NIFC - 47	2	12100
28	Universal CPLD/FPGA Trainer Kit, T/K 32	1	11434
29	Daughter Board CPLD/FPGA, XC 3S50	1	
30	Video Monitor make: Anshuman	1	4126
31	V-86 Video based Trainer for 8086	1	12500
32	Video Monitor make: Anshuman	1	4126
33	PC-19-OPT-02, 25 Core Cable with termination, Board	1	650
34	PC-12 ADC & Digital I/O ( TTL lines)	1	4975
35	PC-10 Prototype Card for PC/80	1	1125
36	PC-19-ADC/DAC Digital I/O Card	1	5525
37	White Board	1	2475
38	D-Link Adopter	1	4160
39	DSP Starter Kit, No: TMS 320C6713	1	31500
40	DSP Starter make: TEXAS , No: TMS 320C6713 Floating point	2	50400
41	DSP Starter Kit , make: TEXAS, No: TMS 320C5416	2	55915
42	External hard Drive, 02 TB, WID; E18935	1	7399
43	Pen Display, make: Wacom, model: DTK-1651,	1	67052
44	Digital Multimeter, Make: Meco, Model: 9A 09,	5	5575
45	Digital Multimeter, Make: Meco, Model: 9A 06,	5	9664

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



46	Digital Multimeter, Make: Meco, Model: 9A 06,	5	10872
47	Power Supply, Range:30V/10A, Make: Measurement	1	4386
48	Power Supply, Range:30V/1A, Make: Aplab (Dual)	1	3660
49	Power Supply,Range:300V, 300mA, Make: Aplab	1	6099
50	Power Supply Range:30V, 01AMake: Aplab	2	3707
51	Power Supply Range:05V, 10AMake: Measurement	1	2173
52	Power Supply Range:30V—300V/03mA Make: Aplab	1	5758
53	Power Supply Range:15V, 10AMake: Aplab	2	13395
54	Oscilloscope, 30 MHz , 02 Channel, 4 Trace , Make: Scientech	1	14175
55	Oscilloscope, 30 MHz , 02 Channel, 4 Trace , Make: Scientech	1	15298
56	Oscilloscope, 30 MHz , 02 Channel, 4 Trace , Make: Scientech	1	15069
57	50 MHz Digital Storage Oscilloscope , Make: GW InstekSI	1	26586
58	30 MHz , 2 Channel, 4TraceOscilloscope, make: Aplab Model: 3803	2	37664
59	20 MHz , Dual Trace, Oscilloscope, Aplab,Model: 3702,	2	28696
60	100 MHz Dual Channel Storage Oscilloscope,make:GW Instek,	2	60482
61	100 MHz Digital Storage Oscilloscope Make:GW Instek,	2	52876
62	30 MHz , 2 Channel,Oscilloscope, Make: Scientific Model: SM410,	1	18753
63	100 MHz ,Digital Storage Oscilloscope, Make: GW Instek	1	24057
64	Low Distortion Sine/Square Generator, Make: Aplab , model, 2015	2	5948
65	Low Distortion Sine/Square Generator, 20 MHzMake: Aplab	2	10000
66	Function Generator Digital Make : L&T, Model : FC100 ,	3	11610
67	Function Generator, 3 MHz Make : Aplab, Model : FG3MD	1	9000
68	Function Generator, 3 MHz Make : ALS,Model : 815 FG3MD	1	11500
69	Multiwave form Signal Generator, 10 MHz ,Make : Aplab	2	20979
70	1 Hz to 1 MHz Sine/ Square Oscillator, Make: Retrack	2	6281
71	10MHz Sine / Square/ Triangular AFO, Make:J S	1	12603
72	10MHz Sine / Square AFO, AplabModel:2014 D,	2	17218
73	1Mz to 10MHz Sine / Square AFO, Aplab,Model:2014 D,	3	27789
74	10MHz Sine / Square AFO, AplabModel:2014 D,	1	10738
75	Desk Top HP Compaq model DX 6100	2	108550
76	Power Supply, 30V, 01 A	2	5900
77	Firing Circuit	2	13688
78	Fixed frequency firing circuit	1	6844
79	Single Phase Inverter	1	10384
80	2 MHz Signal Generator	02	14160
81	30 MHz Dual Trace Oscilloscope	02	38940
82	30 MHz Dual Trace Oscilloscope	02	50740
<b>Total Rs</b>			<b>10,97,649=00</b>

3)

**Electrical & Electronics Measurements Lab**

**SDM College of Engineering and Technology, Dharwad**  
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Sl. No.	Name of the Equipment & Specifications	Quantity	Cost in Rs.
1	Displacement meter using LVDT	1	7490
2	Photovoltaic Cell	1	8990
3	Mechanical load meter by strain Gauge	1	9990
4	LVDT make: Scientech	1	10427
5	Displacement Meter make: Scientech	1	7140
6	Strain Gauge (load meter)	1	6529
7	Thermocouple	5	5840
8	Thermister Module	1	3317
9	A.C. Milli Volt Meter, Make: Aplab Model:5008 Range:300mV,	2	5663
10	A.C. Milli Volt Meter Make: Meco , (Digital), Mod: SMP-35	2	1479
11	A.C. Milli Volt Meter Make: Meco Mod: SMP-35 Range:199.9mV,	4	2624
12	A.C Voltmeter Make: Meco, Range:15V/30V,	1	341
13	A.C Voltmeter Make: A E Range:15V/30V,	2	682
14	D.C Voltmeter make: A.E, range:15V/30V,	1	402
15	D.C Voltmeter make: A.E, range:15V/30V,	2	804
16	D.C Voltmeter make: Meco, range:15/30/75V,	2	892
17	D.C Voltmeter make: Meco, range:75/150/300V,	1	446
18	D.C Voltmeter make: Meco, range:150/300V,	3	1608
19	D.C Voltmeter make: A E, range:150/300V,	2	804
20	D.C Voltmeter make: Meco,	5	1608
21	A C Milli Ammeter make: Meco,	5	4350
22	A C Milli Ammeter make: Meco,	5	4350
23	A C Milli Ammeter, make: Meco,	4	3480
24	A C Milli Ammeter make: Meco, range:500mA	2	2210
25	Digital A C Milli Ammeter make: GE, Range:500mA,	2	2124
26	D C Micro Ammeter, make: Beemet, range:50 $\mu$ A,	2	950
27	D C Micro Ammeter, make: Beemet range:100 $\mu$ A,	2	300
28	D C Milli Ammeter, make: A E range:5/10 mA,	1	369
29	D C Milli Ammeter, make: A E range:25/50 mA,	1	369
30	D C Milli Ammeter, make: Meco range:50 mA,	2	660
31	D C Milli Ammeter, make: Meco range:100 mA,	5	3325
32	D C Milli Ammeter, make: A E ,range:250/500 mA	1	369
33	D C Milli Ammeter, make: R S range:500 mA	1	190
34	D C Milli Ammeter, make: Meco range:500 mA	2	660
35	D C Milli Ammeter, make: Meco range:250 mA	5	2567
36	D C Ammeter, make: Meco range:01A ,	1	369
37	D C Ammeter, make: Meco range:01/2A,	3	1173
38	D C Ammeter, make: Meco range:01/2A ,	1	391
39	D C Ammeter, make: A E range:1/2A ,	2	782
40	Watt Meter make: Meco,Range:0-5/1A, 75/150/300V,	2	1562
41	Watt Meter make: Meco , Range:01/2 A, 75/150/300V,	3	2343
42	Watt Meter make: A E, Range:1/2 A, 75/150/300V	2	2300
43	Watt Meter , make: Meco, Range:1/2 A, 62.5/125/250V,	2	7700



**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



44	Watt Meter, make: A E, Range: 1/2 A, 75/150/300V,	2	1562
45	Digital UPF Wattmeter, make:Meco , Range:5A, 75V,	2	4720
46	Digital UPF Wattmeter, make:Meco , Range:1A, 250V,	2	4720
47	Galvanometer make: OSAW range:	3	5110
48	Galvanometer No: 1252/8	1	175
49	D C Galvanometer, CAT: 32042 fixed with Wheatstone bridge	2	850
50	Spot reflecting Galvanometer,Make : OSAW CAT-28113,	2	22420
51	1:1 Transformers (Isolation) make: ragileRange:100VA, 230 /230	6	1815
52	1:1 Transformers (Isolation) make: ragileRange:100VA, 230 /230,	2	1070
53	Phase Shifting Transformer Range: Make: Universal	1	9500
54	Loyd Fischer Square make: Universal	1	6180
55	1- $\Phi$ Dimmerstat range:04 A, make: A E	4	5874
56	1- $\Phi$ Dimmerstat range:05 A, make: ARGO ,	2	1482
57	1- $\Phi$ Dimmerstat range:06 A, make: ARGO ,	2	2093
58	1- $\Phi$ Dimmerstat range:08A, make: A E	1	885
59	1- $\Phi$ Dimmerstat range:08A, make: AE	4	10210
60	Rheostat range:800 $\Omega$ , 0.3 A, make: Toshniwal	2	180
61	Rheostat, range:1230 $\Omega$ , 0.3 A, make: Toshniwal	2	168
62	Rheostat, range:1230 $\Omega$ , 0.3 A, make: Toshniwal	3	714
63	Rheostat, range:1200 $\Omega$ , 0.6 A, make: Toshniwal	1	336
64	Rheostat, range:2000 $\Omega$ , 0.3 A, make: Toshniwal	3	1875
65	Rheostat, range:14 $\Omega$ , 8.5 A, make: Toshniwal	3	1656
66	Rheostat, range:38 $\Omega$ , 8.5 A, make: Toshniwal	5	5355
67	Rheostat, range:07 $\Omega$ , 12 A, make: Toshniwal ( 3 fixed in one set)	5	2185
68	Digital Stop watch, Make: Ratna,	2	1300
69	4 Dial Decade Resistance Box Range:1K $\Omega$ to 11.1 K $\Omega$ Make: Balcon	1	750
70	4 Dial Decade Resistance Box Range:1K $\Omega$ to 11.1 K $\Omega$ Make: Balcon	5	8486
71	4 Dial Decade Resistance Box Range:1K $\Omega$ to 11.1 K $\Omega$ Make: OSAW	5	19448
72	6 Dial Decade Resistance Box Range:1 $\Omega$ to 1m $\Omega$ , Make:Radart	5	10261
73	6 Dial Decade Resistance Box Range:1 $\Omega$ to 1.1m $\Omega$ Make: Radart	4	8800
74	7 Dial Decade Resistance Box Range:1 $\Omega$ to 9 m $\Omega$ Make: Radart	1	1830
75	4 dial Decade Capacitance Box Range:0.001 $\mu$ fd to 10 $\mu$ fd	1	732
76	5 dial Decade Capacitance Box Range:50pf to 10 $\mu$ fd make: Radart	4	16100
77	5 dial Decade Capacitance Box Range:50pf to 10 $\mu$ fd make: Radart	5	27456
78	6 dial Decade Capacitance Box Range: make: Retrak	2	2610
79	6 dial Decade Capacitance Box Range:2W, 1% accuracy	6	11400
80	Decade Inductors Range:0.001H to 10 H Make: Radart	1	2860
81	4 Dials Decade Inductors Range:1mH to 10 H Make: AEC	2	4452
82	Decade Inductors Range:0.1mH to 10 H Make: DOT tech model	3	---
83	Decade Inductors Range:0.1mH to 100 H Make: DOT tech model	2	---
84	Standard Resistance Range: 0.1 $\Omega$ , Make:	1	3950
85	Standard Resistance Range: 1 $\Omega$ , Make	3	
86	Standard Resistance Range: 10 $\Omega$ , Make:	1	
87	Standard Resistance Range: 100 $\Omega$ , Make:	1	---
88	Standard Resistance Range: 1000 $\Omega$ , Make:	1	---
89	Standard Resistance Range: 1 $\Omega$ ,Make: OSAW CAT: 29576,	1	2030
90	Standard Capacitors Range: 1000 PF, Make: Balcon	2	400

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



91	Standard Capacitors	Range: 0.01 $\mu$ fd	Make: OSAW	1	95
92	Standard Capacitors	Range: 0.01 $\mu$ fd	Make: Balcon	2	520
93	Standard Capacitors	Range: 0.01 $\mu$ fd	Make: Logics	1	600
94	Standard Capacitors	Range: 0.1 $\mu$ fd	Make: OSAW	1	95
95	Standard Capacitors	Range: 0.1 $\mu$ fd	Make: Balcon	2	760
96	Standard Capacitors	Range: 0.1 $\mu$ fd	Make: Logics	1	600
97	Standard Capacitors	Range: 1 $\mu$ fd	Make: OSAW	1	130
98	Standard Capacitors	Range: 1 $\mu$ fd	Make: Logics	1	600
99	Standard Capacitors	Range: 10 $\mu$ fd	Make: Logics	1	960
100	Standard Cell	Range: 1.0186 V	Make: Toshniwal	1	450
101	Standard Cell	Range:	Make: OSAW	2	5008
102	Standard Cell	Range:	Make: PEMZ	1	1177
103	Standard Cell	Make:		1	500
104	Standard Cell	Range:	Make Toshniwal, Type: SEL-511	1	2062
105	Wheat stone bridge	Make : Techno mark	No:2071	1	---
106	Senior Kelvin Bridge	Make : OSAW,	CAT No:29720	1	7500
107	OSAW Kelvin Bridge	Make : OSAW	No:94733	1	13540
108	Single Phase Energy meter	range:5/10 A,	Make: Remco	1	220
109	Single Phase Energy meter	10/20 A, No: 55907, 55913, 400019		3	660
110	Three Phase Energy meter	range:10 A,	Make: Remco No: 545109	1	750
111	1-phase Digital Energy meter	Make: L&T, Range:5/10 amps		1	2375
112	3- Phase Digital Energy Meter	Make:L&T, SIno:16951946		1	2806
113	1-phase Digital Energy meter	L&T,		1	973
114	Tong Tester	Meco make		2	9034
115	Portable Wheatstone Bridge			1	17110
116	Digital Wattmeter			2	6844
<b>Total Rs.</b>					<b>4,09,338=00</b>

#### 4) Microcontrollers Lab

Sl. No.	Name of the Equipment & Specifications	Quantity	Cost in Rs.
1	Microcontroller Trainer Kit make: ALS Model:SDA-51 MEL 8051	13	84175
2	RS-232 Cable	6	1650
3	Communication Package	2	450
4	Battery Backup in the above kits	13	2925
5	Microcontroller Trainer Board Model : 89S52	2	19125
6	CPLD/ FPGA - 01 Microcontroller Kit , Make : ALS	1	10945

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



7	Universal Programmer Make: Unipro -110U	1	17431
8	MSP 430 Microcontroller, MSP 430 FG4618, Make: TEXAS,	1	15297
9	Universal Base Board, ALS make, FPGA - 04	2	25062
10	Power Supply, ALS make, 5V, 1.5A	2	--
11	Daughter Board – 3, ALS make	2	--
12	Flash Program Evaluation Board	--	45998
13	Two Pin FRC Cable	2	280
14	Cassette Interface	2	1450
15	26 Pin FRC Cables	5	1350
16	26 Pin FRC Cables	2	MR-187
17	RS-232 Cable	2	--
18	50 Core Cable	2	--
19	Communication Package	2	--
20	NIFC – 06 Dual DAC I/F	4	3900
21	NIFC – 17 Elevator I/F	2	1700
22	Storage Oscilloscope, 25 MHz Make: Aplab, model : 26025 D,	1	20281
23	Oscilloscope, 25 MHz , 02 Channel, 4 Trace Make: Aplab	1	15015
24	8051 Microcontroller Kits for DSP& Embedded ALS SDA - 51	5	45420
25	ALS-PIC-02 PIC Microcontroller with Debugger	2	14300
26	Microcontroller Board, Cygnal Trainer Kit	2	29000
27	25MHZ, Dual Channel 4 Trace CRO, Aplab	2	36400
<b>Total Rs</b>			<b>3,92,154=00</b>

## 05) Electrical Machines Lab

Sl. No.	Name of the Equipment & Specifications	Quantity	Cost in Rs.
1	A.C Voltmeter Make: Meco Range:75V/150V/300V,	2	688
2	A.C Voltmeter Make: Meco Range:75V/150V/300V	3	1869
3	A.C Voltmeter Make: Meco range:150V/300V ,	1	341
4	A.C Voltmeter Make: A E range:150/300V ,	3	1023
5	A.C Voltmeter Make: Meco, range: 300V, Panel type,	2	360
6	A.C Voltmeter Make: Meco, range: 500V Panel type,	2	273
7	A.C Voltmeter Make: Meco, range: 500V , Panel type,	2	360
8	A.C Voltmeter Make: Meco range:150/300/600V,	2	745
9	A.C Voltmeter Make: Meco range:300/600V, No:5341	1	347
10	A.C Voltmeter Make: Meco range:150/300/600V,	4	1400
11	A.C Voltmeter Make: Meco range:300/600V, No:11416	1	341
12	A.C Voltmeter Make A.E range:300/600V, No:7/82/12812/30	1	341
13	A C Ammeter make: Meco, range:1/2A, No:9778,9785,9997	3	1265
14	A C Ammeter make: Meco, range:1/2A, No:,9785,9997	2	1353
15	A C Ammeter make: A E, range:1/2A, No:7/82/12812/17,19	2	957
16	A C Ammeter make: Meco,	9	4532
17	A C Ammeter make: EIC Range:2.5A /5A,	2	1800

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



18	A C Ammeter make: Meco, range:5/10A,	2	957
19	A C Ammeter make: A E, range:5/10A,	1	319
20	A C Ammeter make: Meco, range:05/10A,No:31953,	6	1920
21	A C Ammeter make: EIC,	2	1800
22	A C Ammeter make: Meco,	7	2233
23	A C Ammeter make: Meco, range:15/30A,No:38190,38191	2	640
24	A C Ammeter make: Meco,	6	1056
25	D C Ammeter, make: Meco range:2.5/5A,	2	782
26	D C Ammeter, make: Meco range:2.5/5A, No: 16401	1	391
27	D C Ammeter, make: Meco range:5/10 A , No15602	1	391
28	D C Ammeter, make: A E range:5/10A , No: 7/82/128/8, 9	2	782
29	D C Ammeter, make: Meco, range:5/10A , No: 27768,27872	2	1170
30	D C Ammeter, make: Meco range:10/20A ,	4	1564
31	D C Ammeter, make: Meco range:10/20A, No: 15352,16398	2	782
32	D C Ammeter, make: Meco range:10/20A, Portable No: 16059	1	391
33	D C Ammeter, make: Meco range:15/30A No:27062-27063-27064-27065-27067	5	1950
34	D C Ammeter, make: Meco range:150 A	2	320
35	Demonstration type meters 1) A C Volt – Ammeter set make: OSAW Range: 150V,0-1A, 2)D C No:8128/A Ammeter, make: OSAW range:0-1A 3)D C Voltmeter, make: OSAW range:0-100V No:8127/A 4)D C Galvanometer, make: OSAW. No: 8129/A	1 1 1 1	4540
36	Watt Meter make: Meco Range: 5/10 A, 150/300/600V &	4	3124
37	Watt Meter make: Meco Range:5/10 A, 75/150/300V	2	3228
38	Watt Meter make: Meco Range:5/10 A, 62.5/125/250 V	1	1150
39	Watt Meter make: A E Range:5/10 A, 75/150/300 V ,	3	2334
40	Watt Meter make: Meco (Digital) Range:5 A, 300 V ,	1	4236
41	Watt Meter make: Meco Range:5/10 A, 125/250/500 V ,	12	9571
42	Watt Meter make: Meco Range:5/10 A, 250/500 V ,	2	2656
43	Watt Meter make: Meco Range:10/20 A,	1	1992
44	Watt Meter make: Meco Range:10/20 A, 150/300/600V	3	4418
45	Watt Meter make: Meco Range:10/20 A, 150/300/600V	1	1218
46	Watt Meter make: A E Range:5/10 A, 600V	6	12727
47	Step down transformer range:15-0-15Make: T&A Industries	4	2800
48	Step down transformer range:30-0-30Make: T&A Industries	2	2400
49	3 – Phase Transformer Step down , Make: ArgoRange:440/30V,	2	4900
50	1 KVA Transformer ,Range:220/110V, ARGO	12	15939
51	1 KVA Transformer , Make: A.E , Range:440/220V,	1	1325
52	Current Transformer range: multi range, Type: MCTP – 1,	2	1400
53	Current Transformer range: multi range, Type: MCTP – 4,	2	3500
54	Current Transformer range: 10/5 A, 10 VA, Type: 2506, 514-2515	3	1060

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



55	Current Transformer range: 10/5 A, make: Ralif ,	1	260
56	Current Transformer range: 20/5 A, make: Ralif ,	1	260
57	Current Transformer range: 20/5 A, Make : Meco ,	3	1567
58	Potential Transformer Range:440/220/110V, 10 VA Make: A E	3	3220
59	1- $\Phi$ Dimmerstat range:15 A, make: ARGO,	3	4110
60	1- $\Phi$ Dimmerstat range:15 A, make: A E , No: T-1180/14107	1	1404
61	1- $\Phi$ Dimmerstat range:20 A, make: ARGO , No: 24219	1	1634
62	1- $\Phi$ Dimmerstat range:20 A, make: ARGO , No: 036, 037	2	9936
63	1- $\Phi$ Dimmerstat range:23 A, make: ARGO , No: 322, 323	2	11520
64	3- $\Phi$ Dimmerstat range:15 A, make: ARGO , No: 1657, 1658	2	8478
65	3- $\Phi$ Dimmerstat range:15 A, make: A E ,	3	13123
66	3- $\Phi$ Dimmerstat range:15 A, make: ARGO,	4	17022
67	3- $\Phi$ Dimmerstat range:15 A, make: A E No: 198/165	1	13017
68	3- $\Phi$ Dimmerstat range:28 A, make: A E , No: 283/1863	1	7167
69	Rheostat range:2100 $\Omega$ , 0.3 A, make: Toshniwal	3	1600
70	Rheostat, range:2050 $\Omega$ , 0.5 A, make: Toshniwal	2	2730
71	Rheostat , range:360 $\Omega$ , 1.2 A, make: Toshniwal	1	228
72	Rheostat , range:500 $\Omega$ , 1.2 A, make: Toshniwal	7	4861
73	Rheostat , range:500 $\Omega$ , 1.2 A, make: Toshniwal	2	336
74	Rheostat, range:1000 $\Omega$ , 1.2 A, make: Toshniwal	3	1793
75	Rheostat, range:200 $\Omega$ , 1.7A, make: Toshniwal	4	1510
76	Rheostat , range:300 $\Omega$ , 1.7A, make: Toshniwal	3	1431
77	Rheostat, range:100 $\Omega$ , 2.8 A, make: Toshniwal	5	1565
78	Rheostat, range:35 $\Omega$ , 05 A, make: Toshniwal	8	3360
79	Knife Switches, DPDT switch	6	750
80	Knife Switches, TPST switch	4	352
81	Knife Switches, TPDT switch	6	795
82	3 – $\Phi$ Choke (Inductive Load), range: 10 A, Make: Zaran,	1	4950
83	3 – $\Phi$ Choke (Inductive Load), range: 15 A , Make: Zaran,	1	6300
84	1 – $\Phi$ Capacitor Motor, Range:1 HP,750W,230V , 1440 rpm,	1	2415
85	A C/D C Universal Motor Range:1 HP , Make: DEVP,	1	5360
86	A C/D C Universal Motor Range:1 HP , Make: Eltech,	1	6240
87	A C Shaded Pole motor, range: 1/8 HP, 230 V, 50 Hz.	1	3860
88	A C Servomotor range: 230V,60rpm, 50Hz, 40Kg/cm,	1	4337
89	3- Phase Induction Motor, Range: 0.5 HP,440V, Squirrel Cage,	1	3860
90	3- Phase Induction Motor, Range: 3 HP,440V, Foot mounted,	1	6700
91	3- Phase Induction Motor, Range: 5HP,1440rpm, make: NGEF,	2	11504
92	3- Phase Induction Motor, Range: 5HP,1420rpm, 7.6A,	2	----
93	3- Phase Squirrel cage Induction Motor, Range: 3HP, make :GD	1	11800
94	3- $\Phi$ Synchronous Motor, range: 05 HP ,make: BENN	1	18143
95	Compound Generator, range:3.5 KW, Make: BENN,	1	
96	A C Generator, range:3KW ,Make: BENN. No: A 8404. 0125 ,	1	33140
97	D C Shunt Motor range:5 HP, Make: BENN No:8404..1407,	1	
98	Alternator range:3 KW, Make: BENN No: A 8404..0126	1	
99	D C Shunt Motor range:5 HP, Make: BENN No: 8404.1408	1	
100	A C Generator (Alternator) range:3KVA, Make: KEC	1	35484
101	D C Motor (Compound) range:4.5 KW, Make: KEC	1	
102	3- $\Phi$ Induction Motor range:5.5KW, make: KEC	1	25774
103	D C Motor range:3 KW, Make: KEC No: 82106-01	1	
104	D C Generator range:2 KW,Make: KEC No:82107-01	1	

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



105	D C Motor range:3 KW, Make: KEC No: 82108-01	1	27572
106	D C Generator range:2 KW, Make: KEC No: 82109-01	1	
107	D C Motor range:2 KW, Make: KEC No: 82104-01	1	24815
108	D C Generator range:2 KW, Make: KEC No: 82105-01	1	
109	D C Generator range:2 KW, Make: ELMOT, No:83030204	1	11254
110	3- $\Phi$ Induction Motor range:3.7 KW, make: NGEF	1	
111	D C Generator range:2 KW, Make: ELMOT No:83040207,	1	11850
112	3- $\Phi$ Induction Motor range:5 HP, make: NGEF	1	
113	D C Shunt Motor, range:2 KW, Make: ELMOT	1	6560
114	D C Shunt Generator range:2 KW, Make: ELMOT,	1	11254
115	3- $\Phi$ Induction Motor range:5 HP, make: NGEF	1	
116	Slipring Induction Motor range:4.8 KW, make:	1	14224
117	Series Wound D C Machine range:3.7 KW, Make: KEC	1	9780
118	D C Series Generator range:1.5 KW, Make: KEC	1	9760
119	D C Shunt Motor range:0.37 KW, Make: SMI,	1	---
120	D C Shunt Motor range:3 KW, Make: KEC,	1	---
121	Winding Study Motor range:2 HP, Make: PSG	1	14120
122	D C Shunt Motor range:0.25HP, Make: EESSS	1	3460
123	D C Stepper Motor range:40Kg/cm, DSC-51	1	5532
124	0.5 HP D C Motor, range:0.375 KW, Make: MEC	1	8505
125	Drum Machining & balancing ( Fixed with machine)	2	19240
126	Main Motor –Generator Set, A C Motor, Range:20 KW	1	56361
127	D C Generator Range:20 KW, Amps:87A, Make: KEC,	1	
128	Control Panel, range:20 KW Make: KEC	1	44290
129	Slipring Induction Motor range:03HP, Make: Technomatics	1	----
130	Salient Pole Alternator range:3KVA, Make:	1	3484
131	D C Machine Model, Make: OM	1	17909
132	3- $\Phi$ Induction Motor Squirrel cage Model, Make: OM	1	
133	3- $\Phi$ Induction Motor Slipring Model, Make: OM	1	
134	Synchronous Motor Model, Make: OM	1	
135	Shell type transformer Model, Make: OM	1	
136	Core type transformer Model, Make: OM	1	
137	Monoblock Pump Range:01HP, Make: Lubi	1	3600
138	Portable Generator Set Range:500VA, Make: Honda,	1	19500
139	½ HP 1-Phase Motor, 50 Hz, make: Crompton, Model:GF-6464	1	4495
140	¼ HP 1-Phase Motor, 50 Hz, make: Crompton, Model:GF-6779	1	2985
141	Star-Delta Starter Set Range:5HP, Make: L&T, SemiAuto	1	787
142	Star-Delta Starter Set, Range:6 – 10 A, Make: L&T, Semi Auto	3	3805
143	Lamp Bank	8	1440
144	Stroboscope, Make: Lutron, No:2269	1	13213
145	Digital Tachometer Contact type, Make: Systems	4	6215
146	Digital Tachometer Contact type, Make: No:6157,	1	2350
147	Digital Tachometer Contact type, Make: No:1175	1	2875
148	Digital Tachometer Non - Contact type, Make: Systems,	2	3121
149	Digital Tachometer Non – Contact type, Make: Systems	1	2835
150	Digital Tachometer, Contact type, Make: Systems, Model:HTM	2	6412
151	Digital Tachometer, Non-Contact type Make: ,Model:HTM	2	
152	Phase Sequence Indicator, Make : Meco No :260	1	275
153	Phase Sequence Indicator, AE, No : 1/83/1888/1, 1/83/1888/2	2	550
154	Time Interval Meter, Make: Aplab, Model : 9606, No : 983/7	1	2631



**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



155	Synchroscope Make : Universal Model : ALS	2	1466
156	Synchroscope Make : AE Model : 144DFS No: 10/89/1851/1	1	1024
157	Synchroscope Make : AE Model : 144DFS No: 10/89/1851/1	1	1529
158	Tong Tester, Make: Vertech SIno:69819	1	8878
159	LCR Meter, Make: Kusam Meco, Model:306 , SIno: 1686	1	6383
160	Digital Power factor meter, CIE make, SI No18022712	1	4425
161	PMDC Worm Gear Motor, 0.5 HP	1	12882
162	Earth Resistance Tester ,Make:PI,No: 91244	1	1108
163	Bearing Puller	2	318
164	Steel Rule 1 Meter	1	16
165	Drilling Machine, make: Wolf , hand held	1	1738
166	Bench Type Drilling Machine Make : Sudarshan	1	3885
167	Bench Vice	1	630
168	Portable Blower Make: Raliwolf Model : 77750	1	4040
169	Bench Grinder Make: Raliwolf Type – TG-6	1	5256
170	Chisel	2	---
172	Hand Drilling Machine Make : KPT, Model : 563 No: 454.178	1	2856
173	3 – phase Main Stabilizer ( Main), A E	1	29976
174	5 KVA Servo Controlled StabilizerMake: Krykard No:23281,	1	5856
175	3/4" Drilling Machine	2	5000
176	Irradiance Meter PVM 210	1	9841
177	Wireless Microphone,	1	10872
178	Digital TDS Meter	2	
179	Broad band Router, 3400MU	1	
180	Digital Multimeter, 9A06, Meco	5	
181	Outdoor Stands for A C	2	1400
182	Energy Auditor Kit, Meco make	1	60113
183	R – S 485 Converter, Meco make	1	10991
184	Electric Moped	1	Gift
185	Copper rod	1	Gratis
186	LT Tachometer	2	3378
187	1/2 A A C Ammeter	04	3540
188	5/10 A A C Ammeter	04	4012
189	1/2 A D C Ammeter	04	3068
190	5/10 A D C Ammeter	04	3068
<b>Total Rs.</b>			<b>9,97,720=00</b>

## 6) Power Electronics Lab

Sl. No.	Name of the Equipment & Specifications	Quantity	Cost in Rs.
1	Steel Ladder	1	MR-4250
2	Swiveling Stand	1	3120
3	Water Head Meter	1	3120
4	Rheostat , range:06 $\Omega$ , 12 A, make: Toshniwal	2	3010
5	Rheostat, range: 3.3 $\Omega$ , 15 A, make: Toshniwal	1	536

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



6	Rheostat, range: 3.3 $\Omega$ , 15 A, make: Toshniwal	2	762
7	Rheostat, range: 3.3 $\Omega$ , 15 A, make: Toshniwal	2	2800
8	6 Dial Decade Resistance Box Range:1 $\Omega$ to 1.111 m $\Omega$	1	950
9	6 Dial Decade Resistance Box Range:2W	3	10444
10	7 Dial Decade Resistance Box Range:2W Make: Retrak	6	10530
11	6 Dial Decade Resistance Box 2W, 1% accuracy, make: Kamal	6	9405
12	4 dial Decade Capacitance Box Range:100 pf to 1.11 $\mu$ f, make:	5	6200
13	4 dial Decade Capacitance Box Range:11.11mfd make: OSAW	5	21609
14	3- $\Phi$ Capacitors Range: 10 KVAR	1	1300
15	3- $\Phi$ Capacitors Range: 08 KVAR	1	1040
16	3- $\Phi$ Capacitors Range: 06 KVAR	1	780
17	3- $\Phi$ Capacitors Range: 04 KVAR Make : No:1303	1	612
18	Potentiometer Shunt, Range: 1.5 A, 1 $\Omega$ Make : OSAW	1	600
19	Potentiometer Shunt Range: 15 A, 0.1 $\Omega$ Make : OSAW	3	5700
20	Potentiometer Shunt Range: 30 A, 0.05 $\Omega$ , Make : OSAW	3	7540
21	Potentiometer Shunt Range: 150 A, 0.01 $\Omega$ , Make : OSAW	1	2090
22	Potentiometer Shunt Range: 150/5A, Make : MECO	2	364
23	Shunt Resistance Range: 0.1 $\Omega$	1	3494
24	Shunt Resistance Range: 0.05 $\Omega$	1	4258
25	Magnetic amplifier	1	----
26	Portable Potentiometer, Make: Techno mark	1	4150
27	Table lamp	1	275
28	Potential Transformer, 110V, Make: A E	2	760
29	Synchro Transmitter ,Receiver & differential unit	1	2500
30	Closed loop System response for PID Simulator	1	----
31	D C Servo motor Speed torque characteristic	1	
32	Digital Multimeter, 3.5 digit ( LCD) model:9 A Make: Meco,	5	8000
33	Digital Multimeter, 3 $\frac{3}{4}$ digit manual ranging, Mecomodel:801	1	1895
34	Digital Multimeter, 4 $\frac{1}{2}$ digit True RMS , Make: Meco	1	6750
35	Power scope, 20 MHz , Dual Channel, Aplab Model: 3305 P,	1	23625
36	30 MHz ,Powerscope, Make: Scientific Model: SM901, SIno: 1712632	1	27554
37	30 MHz Power Scope, Make: Scientific, Model:SM901,	1	29264
38	30 MHz Power Scope, Scientific make, Model:SM 901,	1	28865
39	250 Wp Solar Module , 24 V, 72 cells, Kotak	8	320000
40	12 V Battery, 120 Ah	8	
41	MMS Bimba Structure for panels	8	
42	Inverter Powerone	1	
43	1012 Solar Module 12Wp	8	8800
44	Customized System Consisting of 30 Wp Module	1	18000
45	30Ah battery	1	
46	10 Amps Cahрге regulator	1	
47	14 W Pedastal fan	1	
48	3.6 w LED Bulbs	2	
49	Cat 6 305 Mtr Cable Box	2	
50	6 U rack With Accessories	1	
51	1'' PVC Conduit /Casing with accessories	455	
52	D- Link DGS – 1210 10P Switch	1	
53	Adhar enabled Biometricx	1	11789



**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



54	EAP-350 Wireless access point	1	10856
55	Solar P V Equipments	1 set	143100
56	1- phase AC centrifugal Pump 230V, 0.5 HP, 50Hz	1	2340
57	LUX Meter	1	1416
<b>Total Rs.</b>			<b>7,50,203=00</b>

### 7) Sensor,Control System & Simulation Lab

Sl. No.	Name of the Equipment & Specifications	Quantity	Cost in Rs.
1	Diode Module fast Recovery	6	8850
2	Diode Module fast Recovery ( DMFR)Make: Instruments & Controls	4	5900
3	Thyrister Module Converter (TMC)Make: Instruments & Controls	6	10410
4	Thyrister Module Converter (TMC)Make: Instruments & Controls	3	5985
5	Thyrister Module Converter, (TMC) Make: Instruments & Controls	6	11826
6	Thyrister Module Inverter ( TMI) Make: Instruments & Controls	2	3690
7	Thyrister Module Inverter (TMI ) Make: Instruments & Controls	8	15840
8	Thyrister Module Inverter (TMI )Make: Instruments & Controls	2	4550
9	Single Phase Firing Circuit (SPFC)Make: Instruments & Controls	6	17110
10	Mc Murray Inverter	1	23200
11	Single Phase Firing Inverter Module( SPFI)	1	8050
12	Three Phase Firing Circuit,( TPFC)Make: Instruments & Controls	4	35670
13	DC to DC ChopperMake: Instruments & Controls	1	6750
14	DC to DC ChopperMake: Sciencetech Systems	1	
15	Chopper Firing Circuit ( Fixed frequency)	2	4300
16	Chopper Firing Circuit ( Variable frequency)	2	4600
17	Three-phase Mc Murray Bed ford Inverter power circuit unit	1	
18	Three-phase Mc Murray Firing Circuit	1	29075
19	Power Mosfet ModuleRange:10 A, 600V, make: FRAX	3	6200
20	Power IGBT Modulemake: FRAX	3	6800
21	Driver Circuit for Mosfet Single Input, make: FRAX	3	5900
22	Driver Circuit for Mosfet Six Input, make: FRAX	1	8700
23	Driver Circuit for IGBT Single Input, make: FRAX	3	6300
24	IGBT Six input	1	9500
25	Characteristic of Mosfet Set Make: VGE No: 230, 445	2	MR-136
26	Diode Assembly, 40 amps	01 set	1188
27	Pulse Amplifier UnitMake: Sciencetech	1	4750
28	R.C. Network Module Make: Instruments & Controls	1	156
29	Transistorized PMW Convertermake: FRAX	1	9740
30	Power Mosfet Choppermake: FRAX	1	6420
31	Power Mosfet Modulesmake: FRAX range:10A, 440V	10	10900
32	L.. C. Commutation unit make: FRAX	3	4425
33	G T O Thyristorized Chopper	1	12680
34	G T O Thyristorized ChopperMake: FRAX range:10A, 800V	6	21590
35	Parallel InverterMake: FRAX No: PI - 225	1	7400
36	Ramp & Pedastal Firing Unit Make: FRAX	1	2500
37	IGBT Study Unit Make: FRAX	1	7000
38	G T O Thyristor study unit	1	3000
39	Series Inverter, Make: FRAX	1	6250
40	Time Interval Meter Make: Aplab, Model : 9606, No : 1090/10	1	2845
41	Frequency Counter , SystronicsModel : 207003 No : 281	1	5200

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



42	Digital Nanometer Make : Model : DNM – 01 No : 272	1	5560
43	Micro Meter Screw Gauge , Make : Mitutoyo , Model :103–129	1	1670
44	Flux Meter Make : Model : FM 11 No: 09/94-95	1	11605
45	Lux Meter Make : Universal Model :	1	2174
46	Mouse , HP make	1	1125
47	Temperature meter	1	2266
48	Wind Speed meter	1	5841
49	IOT Evaluation Board	8	150332
50	Raspberry P14 , 8GB Model Bwith HDMI Cable, SD Card	04	99002
51	8 Bit ADC Interface	02	
52	Stepper Motor Interface	02	
53	Aurduino UNO R3 Board	04	
54	Temperature measurement Interface	03	22867
55	Stepper Motor Interface	03	
56	Dual DAC Interface	02	
57	FRC Cable	06	
Total Rs.			<b>6,47,692=00</b>

### 8) Power System Simulation Lab ( U.G. Simulation Lab)

Sl. No.	Name of the Equipment & Specifications	Quantity	Cost in Rs.
1	Desk Top, HP make, Model:DX-6120	12	432996
2	Desk Top, Lenovo make Model: i5 3570, IC M73, Monitor	04	160360
3	UPS 500 VA, APC make	04	17000
4	UPS 600VA MRO-MKTG	01	---
5	UPS 600VA EMERSON	6	16382
6	UPS 600VA EMERSON	1	---
7	UPS 1.5 KVA, MAKE: APC	4	46420
8	UPS 1.5 KVA, MAKE: APC	2	23300
9	UPS 600 VA, MAKE: APC	3	6585
10	ORCAD EDA Suite consisting of ORCAD Capture, PsPice A/D, ORCAD Express, ORCAD Layout plus, ORCAD Ps Pice Optimiser	1	77000
11	Circuit Maker – 2000 ,Advanced Schematic Mixed Digital & Analog And PCB layout drawing S/W for10 User Licensed ROM Documentation	1 1	189500
12	Windows 2000 Server S/W CD	1	MR-91
13	SPJ C Compiler SC-51 + 9 Licenses	1	72618
14	Desk Top Computer with wireless, Model:DX-2280	1	53582
15	Desk Top Computer without wireless, Model:DX-2280	15	785008
16	PW 5150, 500VA, BIB UPS	3	6900
17	1.5 KVA (APC) UPS	2	25000
18	20 MHZ Dual Channel Power Scope, Make: Aplab	3	81120
19	60 MHZ digital Storage Oscilloscope, make: Techtronic's,	01+1	66560
20	Hand Held Oscilloscope, Make: Aligent, SIno: KR46100386	1	101218
21	Power Supply ( 5V, 1.5 A), ALS	6	5905

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



22	Power Supply ( 5V, 1 A ) , ALS	1	816
23	Power Supply, 5 V, 1.5 A , ALS	2	2600
24	Power Supply, 5 V, 1.5 A , ALS	3	3900
25	Power Supply, 5 V, 1.5 A , ALS	2	2600
26	Power Supply 5V, 1.5A, ALS	5	6650
27	Pen Drive, Transcend,128MB	2	2600
28	16/32 Channel Pattern Generator,LG 320161, make: ALS	1	145600
29	P C Add ON Cards with PCI Bus,ALS-PCI-02	1	11975
30	Additional RAM	4	14000
31	Steel frame Computer table	16	23400
32	Universal VLSI/FPGA/CPLD Trainer Unit, ALS-SDA-01	3	28500
33	Daughter Board XILINX FPGA, Module , ALS-SC- 3S50	2	7600
34	Daughter Board XILINX CPLD, ALS-9572	2	3200
35	Daughter Board ALTERA CYCLONE FPGA	2	11500
36	Daughter Board XILINX FPGA XC XC-400 SPARTAN	2	13650
37	Desk Tops, Dell Make	3	172030
<b>Total Rs.</b>			<b>26,18,075=00</b>

### 9) Relay & High Voltage Lab

Sl. No.	Name of the Equipment & Specifications	Quantity	Cost in Rs.
1	Reverse Power relay,Make: CSR/IDMT No:232001	1	3701
2	Over Current Relay , Inverse type, Make: English Electric Co,	2	5430
3	S P Inverse type , D C Relay, make : U E	1	1870
4	Non-Directional Inverse type D C Relay, make : U E	1	2041
5	S P Inverse type Over Voltage Relay,	1	3190
6	Over Current Relay Static, Non-Directional,Make: TMAS,	1	6079
7	Over Voltage Relay, Make: EECo Ltd, No:001, 002	2	11400
8	Negative Phase Sequence Over Current Relay,Make: U E No: NI+	1	15900
9	3-Phase Differential Protection Relay, Make: Aluminum Ind Ltd,	1	27566
10	Over Current relay + Earth fault Relay, Microprocessor based,	1	MR-12
11	Single Phase Current Injection Kit ,With $\mu$ p based timer , digital	1	MR-27
12	Motor Protection Relay device,Make: L&T No: 42/00/9/027	1	MR-13
13	High Voltage Transformer,100 KV – 10 KVA100 KV – 10 KVA	1	172132
14	15 cms dia Sphere Gap Assembly	1	
15	Rod Gap Assembly	1	
16	Capacitance divider with peak voltmeter	1	
17	Resistance Divider	1	
18	Electrolytic tank with models	1	
19	High Voltage Schering Bridge,	1	102000
	a) STD Air capacitor	1	
	b) 25 KV H V Transformer	1	
	c) Disc Insulator Sample	1	
	d) Control & measuring unit	1	
20	Three terminal Oil Cell,Make: Udey raj & Sons	1	17513
21	Oil Testing Set, Range : 40KV, make: Uday	1	5200

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



22	High Voltage Break down Test Set, Range: 10 KV, make: Udey,	1	6200
23	Motorized or Automatic oil test set, Make: Zaran, range: 60 KV,	1	17976
24	2 KVA Krykard Stabilizer, Krykard	1	5856
25	Rheostat, range: 35 $\Omega$ , 05 A, make: Toshniwal	4	4380
26	Knife Switches, SPST switch	5	419
27	Knife Switches, DPST switch	5	407
28	1- $\Phi$ Dimmerstat range: 10 A, make: ARGO, No: 22013	1	850
29	1- $\Phi$ Dimmerstat range: 10 A, make: ARGO, No: 302	1	2653
30	1- $\Phi$ Dimmerstat range: 10 A, make: A E, No: 886/14178,	2	2640
31	5 KVA Transformer, make: A.E, Range: 440/220V,	2	17013
<b>Total Rs.</b>			<b>4,32,416=00</b>

**10) DSP & EMBEDDED SYSTEM LAB**

Sl. No.	Name of the Equipment & Specifications	Quantity	Cost in Rs.
1	UPS700 VA, MAKE: APC	2	11162
2	UPS700 VA, MAKE: APC	2	11162
3	UPS700 VA, MAKE: APC	2	P-CAD lab
4	Desk Top Computer, Make: HP, Model: XW4400 work Station	2	236808
5	1.5 KVA (APC) UPS	3	30516
6	KEIL Software PK 51 Version 8.0	5	175500
7	ADC/DAC Digital I/O card, PCI-02 Make: ALS	2	24908
8	ARM - 7 Development Board	2	28000
9	Battery back Up, ALS	2	351
10	Communication package, ALS	2	351
11	RS 232 cable	2	460
12	50 Core Cable	2	460
13	26 Core Cable	2	350
14	Communication Module, Tektronics	1	18200
15	Comp. Revolving Chair	32	48800
16	DSP Starter Kit. Floating Point, TMS 320 C6713	1	22000
17	DSP Starter Kit. Fixed Point, TMS 320C5416	1	22000
18	Diss Assembly Pod 8085, IXAMHA20-171	1	24100
19	Diss Assembly Pod 8031, IXAMHA 20-171	1	24100
20	Electronic component Tester, MME-ECT-20, E-1452	1	15300
21	1 MHZ, Sine, Square, Triangle, Signal Generator,	3	39757
22	40 GB Seagate Hard disc	5	13250
23	ALS-NIFC 01 Dual Stepper Motor I/F	1	2784
24	ALS-PIFC-02 Temperature Control	1	4500
25	ALS-PIFC-03 Load Measurement I/F	1	6075
26	ALS-NIFC -11 Traffic Light I/F	1	878
27	ALS-NIFC -12 LCD Interface	1	1209
28	ALS-NIFC -17 Elevator Interface	1	835
29	ALS-NIFC -37 D C Motor Controller	1	4500
30	ALS-NIFC -44 Matrix Key Board	1	872
31	ALS-PIFC-01 Water level Measurement I/F	1	7550
32	ALS-PIFC-03 Load Measurement I/F	1	7325
33	ALS-NIFC -11 Traffic Light I/F	1	975

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



34	ALS-NIFC -44 Matrix Key Board I/F	1	950
35	ALS-NIFC-53 DC Motor Interface	1	6250
36	ALS-PCI-07 48 Lines Digital I/O Card	1	5600
37	Printer Interface, NIFC-144	1	1900
38	R T C Interface, NIFC-19	1	1825
39	ALS-NIFC-45 LCD& Key Board Interface	1	1950
41	ALS-SDA 85 ME 8085 $\mu$ p Kits	4	15198
42	Optional I. C for 8259	4	700
43	ALS-SDA 51 ME 8051 Trainer Kit,with LCD Display	2	12357
44	ALS-PIC-02 PIC Micro Controller Board	1	3319
Total Rs			<b>8,35,087=00</b>

## 11) RESEARCH LAB

Sl. No.	Name of the Equipment & Specifications	Quantity	Cost in Rs.
1	Real Time Transmission Simulator	01 Set ( 03 Cubicles)	18,00,000=00
2	10mm Rubber Matt	06 No's	13,948=00
3	Extension Board	04 No's	
4	Tong Tester	02 No's	9034=00
5	Modern Power System Analysis Book	01 No	3524=00
6	Digital Multimeter, 9A 06	03 No's	8934=00
Total Rs			<b>18,35,440=00</b>

### P.G. Computer Lab

1. Advanced Power System Simulation
2. Modeling and analysis of Electrical Machines

### P. G. COURSE POWER SYSTEM SIMULATION LAB FACILITY

Sl. No.	Name of the Hardware/Software	Quantity	Cost in Rs.
1	Desk Top, Lenovo make Model:CPU-H61/13-2120, Monitor: TFT D 18.6 wide	18	550710
2	UPS 600VA EMERSON	18	41400
3	Mi Power Software package, 9.0 version 1) CD NO : 9121 – 11 2) USB lock No: 39743924 3) Mi power hand book	1 1 1	150000
4	Mi Power Software package, 10.0 version Upgradation of existing licenses of Mipower 11 Users	1	718000

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



	to the latest version & additional 5 license of Mi Power with three year warranty		
5	Cyme power System Software	1	1518000
6	Mi- Power 6.0 Version Software,3974-07126121-06Replaced by 9.0 Version	1	414700
<b>Total Rs</b>			<b>33,92,810=00</b>

**01) Class Room Teaching, faculty rooms & Department Office.**

Sl. No.	Name of the Equipment	Quantity	Cost in Rs.
1	Ink Jet Printer,HP make,model-F-380	1	5025
2	Laser Jet printer, HP make,model:1020plus	1	6812
3	Laser Jet printer, HP make,model:1020plus	1	6290
4	Laser Jet printer, HP make,model:Pro M 202dw	1	13850
5	Printer,Epson make,model: L -565	1	15930
6	Lap Top, Lenovo make	2	63420
7	Lap Top, HP make	1	54900
8	Lap Top, Lenovo Yoga make	2	58,000
9	Lap Top, Lenovo make	1	53599
10	2- Ton split air conditioner	2	59380
11	V-Guard Stabilizer	2	1400
12	LCD Projector W/O camera,Make: Epson,	1	25526
13	LCD Projector With camera,	2	142400
14	LCD Projector , Casio make	2	150000
15	LCD Projector , Epson make	1	37000
16	Over-Head Projector , Make: PHIL SI No: 041002	1	----
17	Projector Screen, mounted on stand	1	1575
18	Wall Mounting Screen	2	5625
19	Interactive Display Board, Make: Hitachi	1	118060
20	Lap Top HP make, Model: HP 500	1	54900
21	Toshiba Projector TDP-SC-35	1	59946
22	Smart Board	1	99000
23	LapTop ,DELL make	1	58315
<b>Total Rs.</b>			<b>10,90,953=00</b>

**Stock Book wise**

**SDM College of Engineering and Technology, Dharwad**  
**Dept. of Electrical & Electronics Engineering**



No	Particulars	Amount
01	Capital Register No:135 & 184 only Desktop, laptop, printer & Software	<b>34,48,472=00</b>
02	Capital Register No:135 other Non-Consumable items	<b>09,21,578=00</b>
03	Capital Register No:184 other Non-Consumable items	<b>57,45,772=00</b>
04	Capital Register No:187 only Desktop, laptop, printer & Software	<b>35,77,960=00</b>
05	Capital Register No:187 other Non-Consumable items	<b>13,32,799=00</b>
06	Furniture & Fixtures	<b>10,41,206=00</b>
<b>Grand Total Rs.</b>		<b>1,60,67,787=00</b>

**Laboratory**

Sl No	Name of the laboratory	Amount
01	Digital Electronics Lab	6,01,100=00
02	Analog Electronics Lab	10,46,909=00
03	Electrical Measurements Lab	4,09,338=00
04	Microcontroller Lab	3,92,154=00
05	Electrical Machines Lab	9,97,720=00
06	Power Electronics Lab	7,50,203=00
07	Sensor, Control System & Simulation Lab	6,47,692=00
08	Power System Simulation Lab	26,18,075=00
09	Relay & High Voltage Lab	4,32,416=00
10	DSP & Embedded System Lab	8,35,087=00
11	Research Lab	18,35,440=00
12	P G Lab	33,92,810=00
13	Class room Teaching	10,90,953=00
14	Furniture's & Fixtures	10,41,206=00
		<b>1,60,91,103=00</b>

*S. Ankurki*  
 Head of the Department  
 of Electrical & Electronics Engineering,  
 S.D.M. College of Engg & Technology  
 Chavalegiri, DHARWAD-500 002