

**Lab Equipment Details**

S.No	Name of the Department	Name of the laboratories	Cost price
1	Computer Science & Engineering	Computer Programming Lab	2240550
2		IT Workshop Lab	653200
3		Data Technology Lab	1616225
4		Information and Networking Computing Lab	1237000
5		Advanced Computing Lab	2476358
6		Research &Development Lab	538248
7		APSSDC Lab	1467624
8	Department of Science & Humanities	Computer Programming Lab	292166
9		Engineering Chemistry Lab	332123
10		English Communication skills Lab	1344990
11	Department of Electrical and Electronics Engineering	Electrical Machines Lab	1304943
12		Electrical Circuits Lab	107129
13		Control Systems Lab	312270
14		Power Electronics Lab	425642
15		Electrical Measurements Lab	183813
16		Power Systems Lab	366000
17		Simulation Lab	1309725
18	Department of Mechanical Engineering	Engineering Workshop	179452
19		Mechanics of Solids Lab	730200
20		Metallurgy Lab	127075
21		Production Technology	113000
22		FMHM	744560
23		Machine Tools Lab	1126140
24		Thermal Engineering Lab	232192
25		Instrumentation Lab	197400
26		Metrology Lab	84425
27		Heat Transfer	197400

28		Theory of Machines Lab	<b>359852</b>
29		Mechatronics Lab	<b>136290</b>
30		CAD/CAM Lab	<b>2494380</b>
31		Thermal Engineering Lab (PG)	<b>266609</b>
32		ARC Lab	<b>982017</b>
33	Department of Electronics Communication Engineering	LICA/PDC Lab	<b>431945</b>
34		MPMC Lab	<b>122285</b>
35		MW & OC Lab	<b>652240</b>
36		DSP LAB	<b>641817</b>
37		VLSI/DICA Lab	<b>356800</b>
38		EDC/ECA Lab	<b>319130</b>
39		AC/DC Lab	<b>830230</b>
40	Civil Engineering	Surveying Lab	<b>103380</b>
41		Concrete Technology Lab	<b>255600</b>
42		Engineering Geology Lab	<b>123900</b>
43		Geotechnical Engineering Lab	<b>173100</b>
44		Transportation Engineering Lab	<b>76800</b>
45		Environmental Engineering Lab	<b>13684</b>
	Two Core Eighty Two Lakhs Seventy Nine Thousand and Nine Hundred Nine only		<b>28279909</b>

# Department of Computer Science & Engineering

## Lab Equipment Details with Cost Price

S.No	Name of the laboratory	Equipment Name & Details	Quantity	Cost Price
1	Computer Programming Lab	Acer Desktop PC Acer Dual Core 2.9 GHz, 2GB Ram, 500 GB	70	1519000
		HP DESKTOP DX2480	01	25500
		UPS (Emersion 6KV)	03	322500
		Network material (Cat 5 Cable ,Switches)	01 set	80000
		42 u Rack	01	34500
		Air-Conditioner (2 Ton Samsung)	04	200000
		Laser Printer	01	16800
		Projector Set	01	36250
		CCTV	02	6000
		<b>Grand Total</b>		
2	IT Workshop Lab	HCL Dual Core 1.8 GHz, 1GB Ram, 80 GB HDD, HCL 15''	24	391200
		LENOVO Core 2 Due, 1GB Ram,250 HDD,	08	156000
		Emersion 6KV a (Common for CP lab	-	-
		Cat 5 Cable ,Switches, Network Rack (Common for CP Lab	-	-
		Air-Conditioner (2 Ton Samsung)	02	100000
		CCTV	02	6000
		<b>Grand Total</b>		
3	Data Technology Lab	LENOVO Dual Core 3 <sup>rd</sup> Gen, 2GB Ram,500 HDD, Lenovo 19'' Monitor	44	1012000
		Emersion 6KV a	03	315000
		Cat 5 Cable ,Switches, Network Rack	1set	40275
		Air-Conditioner (4 Ton Media)	02	196000
		HP Laser M1005 jet	02	16000
		Epson	01	30950

		CCTV	02	6000
		Grand Total		<b>1616225</b>
4	Information and Networking Computing Lab	LENOVO Dual Core 3 <sup>rd</sup> Gen, 2GB Ram,500 HDD, Lenovo 19'' Monitor	45	1035000
		Emersion 6KVa (Common With DT Lab)	-	-
		Cat 5 Cable ,Switches, 9 u Rack (Common With DT Lab)	1set	-
		4 Ton's Media AC	02	196000
		C Camera	02	6000
		Grand Total		<b>1237000</b>
5	Advanced Computing Lab	HP Intel i5 9 <sup>rd</sup> Gen, 16GB Ram,1 TB HDD, HP 19'' Monitor HDD, Lenovo 19'' Monitor	43	1838250
		LENOVO Dual Core 3 <sup>rd</sup> Gen, 2GB Ram,500 HDD, Lenovo 19'' Monitor	17	39100
		Cat 5 Cable ,Switches, Network 9u Rack	1 set	62290
		Emersion 6KVa	03	235480
		4 Ton's Media AC	02	248388
		HP Laser 1020	01	10600
		View Sonic Projector Set	01	36250
		C Camera	02	6,000
Grand Total		<b>2476358</b>		
6	Research &Development Lab	HP Intel i5 9 <sup>rd</sup> Gen, 16GB Ram,1 TB HDD, HP 19'' Monitor HDD,	06	256500
		ACER Intel i5 7 <sup>th</sup> Gen, 16GB Ram,500 HDD, Laptop	05	192040
		D-link Network Switch	01	5110
		Emersion 6KVa (Common With AC Lab)	03	-
		2 Ton's Midea AC's	02	67998

		HP Laser 1020	01	10600
		C Camera	01	6000
		Total Amount		<b>538248</b>
7	APSSDC Lab	ACER Laptop Intel i5 7 <sup>th</sup> Gen, 16GB Ram,500 HDD, 15''Screen, Stranded Keyboard & Mouse	32	1229056
		D-link Network Switch	02	10220
		Emersion 6KVa	01	107500
		2 Ton's Midea	02	67998
		HP Laser 1020	01	10600
		C Camera	02	6000
		View Sonic Projector	01	36250
		Total Amount		<b>1467624</b>

#### Summary of Lab Equipment Details with Cost Price

S.No	Name of the laboratory	Cost Price
1	Computer Programming Lab	<b>2240550</b>
2	IT Workshop Lab	<b>653200</b>
3	Data Technology Lab	<b>1616225</b>
4	Information and Networking Computing Lab	<b>1237000</b>
5	Advanced Computing Lab	<b>2476358</b>
6	Research &Development Lab	<b>538248</b>
7	APSSDC Lab	<b>1467624</b>
	Total Amount (One Core Two Laks Twenty Nine Thousand and Two hundred Five Only )	<b>10229205</b>

## Department of Science & Humanities

### Lab Equipment Details with Cost Price

S.No	Name of the laboratory	Equipment Name & Details	Quantity	Cost Price
1	Engineering Physics Lab	Ammeter	3	1161
		Battery Eliminator(Ac/Dc-2TO)	3	2722.5
		Battery Eliminator	3	2722.5
		Diffraction Grating	4	2394
		Dc wire roll	2	945
		Galvanometer	3	1255.5
		Lumagna	6	1402.2
		Melde's Apparatus set	2	3975
		Meter scales	7	1281
		Newton's ring microscope	2	16626
		plug key single	4	336
		RC &LCR series CKT	2	3600
		Retort stand set	3	1211.25
		Rheostat Grove type	3	3105
		Spectrometer	4	30540
		Spectrometer Prism (Denseflint)	4	2280
		Sonometer	4	3450
		Stewart Gee's Apparatus	5	24700
		Screw guage	6	1197
		Stop clock	3	2137.5
		Spirit level	2	108
		Travelling microscope	2	13425
		Torsional pendulum	3	6412.5
		Tuning fork sets	4	3990
		Transformer	1	1335
		Volt meter	2	774
		Vernier callipers	6	1107
Wedge metho- Galss plates	2	696		
Weight box	2	1239		
Slotted weights(500*5)	4	1050		

		Digital multi meter	2	1350
		Nicrome wire	1	240
		Energy Band Gap-Kit	3	10200
		Series Resonance circuit	1	1900
		Themistor Charecterstics-Kit	2	6800
		Zener diode charecterstics-kit	3	5712
		Eye piece	1	480
		Commutator plug key	3	630
		Glass prism	2	156.8
		Cylinders set	1	224
		Soldering gun with stand	1	345
		Bar magnets	2	214.4
		Magnetic compas	7	175
		Boyels law	2	1164
		Compound pendulum	2	1906
		Volume resonator	2	2312
		Electromagnet coil for meldes experment	1	1303
		Convex lens	2	82
		Lens stand	2	118
		Mercury vapour lamp	3	2424
		Sodium vapour lamp	4	20744
		Rubber Hamer	4	1123.75
		Pendulum bobs	4	564
		Screens	2	142
		Quil tube	1	188
		B-H Curve with CRO	2	49000
		Charging discharging	2	13000
		Laser set with stand	2	37000
		Total		<b>292166</b>
2	Engineering Chemistry Lab	Digital Conductiv-Ity Meter	03	16893.99
		L.T.P Demineralizer	01	30680
		Beakers (1000)MI	09	2430
		Bod Bottles	20	8200

	Conical Flask	35	2449
	Droppers (4 Inches)	12	90
	Droppers (6 Inches)	12	96
	Funnels	5	510
	Iodine Flask	15	2295
	Measuring Jar (10)MI	15	2250
	Measuring Jar (100)MI	20	4795
	G-Pipette 1 MI	05	290
	G-Pipette 5 MI	10	730
	G-Pipette 10 MI	10	790
	Glass Rods	25	312.5
	Reagent-Bottle 125 MI	30	6750
	Reagent Bottle 250 MI	30	7350
	Reagent Bottle 500 MI	20	5500
	Rubber Bulbs Small	12	66
	Rubber Bulbs Medium	12	72
	Spatchula 8"	10	180
	Salt-Bridge 250 MI	04	1626.56
	Spirite-Lamps 125 MI	02	132
	Test-Tubes 18x150m	100	1090
	Test-Tubes Brushes 9"	12	60
	Tiles Glazed	30	720
	Volumetric Flask 25 MI	25	3150
	Volumetric Flask 50 MI	15	2100
	Volumetric Flask 100 MI	35	5969.2
	Volumetric Flask 1000 MI	05	1895
	Weighing Bottle 25ml	06	1020
	Wash Bottle 250 MI	30	720
	Digital Ph Meter	03	14227.2
	Digital Turbidity-Meter	02	16598.4
	Hot Air-Oven	01	8145.28
	Hot Plate Rectangular	02	6851.68
	Water-Bath Rectangular	01	6595.2



		Dessicator-Plain	03	5840.61
		Burette	20	6480
		Burette	10	2950
		China Dishes	50	1900
		Measuring Jar (50)MI	35	5980
		Thermo Mtr 0 To 110c	05	410
		Volumetric Flask 250 MI	10	1880
		Volumetric Flask 500 MI	05	1260
		Digital Potentiometer	01	10654
		Beakers (250)MI	45	2790
		V-Pipette 20 MI	35	3250
		Beakers (500)MI	25	3500
		Beakers (100)MI	50	3127
		V-Pipette 10 MI	10	788.55
		Bureete Stands + Fisher Type Clamps	05	1581.2
		Bureete Stands + Fisher Type Clamps	30	9660
		Scientific Lab Balance	02	7890
		<b>Total Amount</b>		<b>332123</b>
3	English Communication skills Lab	Hcl Systems	20	326000
		LENEVO Systems	25	487500
		Hp System	1	22700
		10 KV UPS	1	225000
		PA system	1	8290
		Air conditioners	5	200000
		Ahuja Wall mount speakers	10	18350
		Communication Soft ware K-VAN &ECSL Software	2	47250
		Head phones	30	9900
		<b>Total Amount</b>		

### Summary of Lab Equipment Details with Cost Price

S.No	Name of the laboratory	Cost Price
1	Computer Programming Lab	<b>292166</b>
2	Engineering Chemistry Lab	<b>332123</b>
3	English Communication skills Lab	<b>1344990</b>
	Total Amount (Nineteen Laks Sixty Nine Thousand Two Hundred Seventy Nine Only)	<b>1969279</b>

## Department of Electrical and Electronics Engineering

### Lab Equipment Details with Cost Price

S.No	Name of the laboratory	Equipment Name & Details	Quantity	Cost Price
1	Electrical Machines Lab	D.C.Shunt Motor Generator Set	1	49800
		D.C. Shunt Motor	1	25400
		D.C. Shunt Motor With Brake Drum Arra.	1	34800
		3 - Phase Squirrel Case I.M With Brake Drum Arra.	1	29800
		1- Phase Transformers	2	11980
		1 - Phase Transformers	3	23400
		3- Phase Auto Transformers	1	17800
		3- Phase Auto Transformers	1	19500
		1- Phase Auto Transformers	1	4950
		1- Phase Auto Transformers	1	4250
		1- Phase Auto Transformers	1	7820
		3 - Phase Alternator Shunt Motor Coupled	1	59800
		Resistive Loads	2	27600
		Ammeters Mc Type	2	3280
		Ammeters Mc Type	4	6200
		Ammeters Mc Type	16	20400
		Voltmeters Mc Type	2	3280
		Voltmeters Mc Type	2	2950
		Voltmeters Mc Type	12	15300
		Wattmeters Lpf	4	15000
		Wattmeters Lpf	2	9500
		Wattmeters Lpf	1	5032
		Digitel Tacho Meters	3	7200
		Digitel Tacho Meters	2	4800
		Rheostats	2	7180
		Rheostats	2	8700
		Rheostats	2	6700
		Rheostats	4	9400
Rheostats	4	9400		

	Rheostats	3	7200
	Rheostats	2	5200
	Rheostats	7	19600
	Rheostats	3	14400
	Rheostats	1	11000
	Rheostats	2	12000
	Rheostats	1	2800
	Rheostats	2	7000
	Rheostats	2	4130
	Distributed Control Panel	1	94000
	D.C Rectifier Unit	1	12400
	Ammeters Mi Type	3	4920
	Ammeters Mi Type	8	11800
	Ammeters Mi Type	2	2380
	Voltmeters Mi Type	5	8200
	Wattmeters Upf	4	9000
	Wattmeters UPF	4	11000
	Dpst Switches	5	2200
	Dpst Switches	10	4500
	Tpst Switches	3	1320
	Clamp On Meter Digital	1	2250
	Insulation Resistance Tester	1	3100
	2 Point Starters	2	5300
	3 Point Starters	4	11800
	3 Point Starters	4	11200
	3 Point Starters	1	2500
	4 Point Starters	1	2900
	D.C.Compound Motor With Brake Drum Arra.	1	35555
	D.C.Series Generator Shunt Motor Coupled	1	72889
	D.C.Compound Generator Shunt Motor Coupled	1	72889
	D.C.Shunt Machine Identical	1	72889
	D.C.Series Machine Identical	1	72889

		1 Phase Induction Motor	1	6300
		Synchronous Motor With Brake Drum Arra.	1	52500
		Dol Starter	1	11500
		Salinent Pole Alternator	1	70800
		1 Phase Induction Motor With Brake Drum Arra.	1	28420
		Dol Starter	1	3940
		Wattmeters Upf	4	15600
		3 Phase Inductive Load	1	35500
		3 Point Starters	2	16000
		Digital Multimeter	1	1950
		Total Amount		
2	Electrical Circuits Lab	Servi Stabilizer	1	10400
		Lab Control Panel	1	30937
		Ammeters Mc Type	14	16660
		Rheostats	4	8952
		Voltmeters Mc Type	12	14280
		Series & Parallel Resonance Kit	1	3450
		Function Generator	1	4900
		Ammeters Mi Type	8	15600
		Digital Multi meter	1	1950
		Total Amount		
3	Control Systems Lab	Characteristics of magnetic amplifier	1	16800
		Effect of feedback of D.C.Servo motor	1	21000
		Effect of P,PD ,PI,PID Controller on ss	1	17500
		Lag Lead network study unit	1	16500
		Second order system study unit	1	6100
		Synchro transmitter and receiver kit	1	23200
		Speed Torque characteristics of A.C SM	1	20800
		Temperature control using PID	1	25000
		Digital multi meter	1	1820
		DC SM speed torque study unit	1	21000

		Digital storage oscilloscopes (CRO's)	2	51600
		Potentiometer as error detector	1	16000
		Speed Torque characteristics of A.C SM	1	22100
		DC Position control system trainer kit	1	31000
		Effect of P,PD ,PI,PID Controller on ss	1	19900
		Digital Multimeter	1	1950
		<b>Total Amount</b>		<b>312270</b>
4	Power Electronics Lab	Characteristics of 1ph AC voltage controller	1	6000
		a) Resistive load	1	1400
		b) Inductive load	1	1300
		Characteristics of 1ph fully controlled bridge converter	1	8500
		a) 1ph bridge converter	1	3000
		b) Resistive load	1	3600
		c) Inductive load	1	3300
		d) Isolation transformer	1	4500
		Characteristics of 1ph parallel inverter	1	9800
		a) Resistive load	1	900
		b) Regulated power supply	1	3500
		1ph cyclo converter with R & RL	1	8650
		a) 1 phCyclo Converter firing unit	1	8500
		b) Resistive load	1	3600
		c) Inductive load	1	3300
		d) Centertap Isolation transformer	1	4500
		Characteristics of 1ph half controlled converter	1	8900
		a) 1 Ph bridge converter	1	3000
		b) Resistive load	1	3600
		c) Inductive load	1	3300
d) centertap Isolation transformer	1	4500		
Characteristics of 1ph series inverter	1	9500		
a) Resistive load	1	900		

	b) Inductive load	1	1300
	c) Regulated power supply	1	3500
	Characteristics of 1ph dual converter	1	15500
	a) Firing unit	1	13500
	b) Resistive load	1	3300
	c) Inductive load	1	3300
	d) centertap Isolation transformer	1	4500
	e) Current limiting indicator	1	9000
	Characteristics of DC Jones chopper	1	7750
	a) DC Chopper Firing unit	1	3200
	b) Resistive load	1	900
	c) Inductive load	1	1300
	d) Regulated power supply	1	3500
	Characteristics of Servo controlled voltage stabilizer	1	20592
	1ph IGBT based PWM inverter	1	20000
	a) Resistive load	1	1600
	1ph Diode bridge rectifier with load capacitance	1	9500
	BUCK-BOOST converter	1	12000
	3ph fully controlled coverter	1	11500
	a) 3 Ph converter firing circuit	1	11500
	b) 3 Ph isolation transformer	1	12500
	DC regulated power supply	2	8000
	Digital storage oscilloscope (DSO)	2	49600
	Characteristics of SCR, TRIAC, DIAC, MOSFET and IGBT study unit	1	7500
	PLC industrial automation demonstration unit	1	20950
	Design & development of firing circuits for Thyrist	1	16000
	Single phase square wave bridge Inverter with R & RL load :-	1	19000
	Single phase Mc Murry Bedford Inverter 30V/2A :-		
	R - Load - reheostat		
	L - Load - with tapping		

		Regulated power supply				
		Digital storage oscilloscope (DSO)	1	23800		
		DC milli ammeter	1	750		
		DC milli ammeter	1	750		
		DC Voltmeter	1	750		
		DC Voltmeter	1	750		
		Total Amount		<b>425642</b>		
5	Electrical Measurements Lab	<b>D.C.Cromptonpotentio meter</b>	1	17550		
		a) fixed stabilized power supply				
		b) volt range box				
		C) Low resistive meter galvano				
				<b>Portal Kelevin Bridge</b>	1	12250
			01) 0.1 ohms 5A			
			02) 1.0 ohms 3A			
				<b>Schering Bridge Set</b>	1	8680
			01) sin wave oscillator			
			02) pair of head phones			
				<b>Anderson Bridge</b>	1	8530
			01) sin wave oscillator			
			02) pair of head phones			
				Pair of head phones	1	459
				1 - Phase Auto Transformers	1	2800
				1 - Phase Auto Transformers	1	4800
				1 - Phase Auto Transformers	2	15640
				Voltmeters MI type	3	4050
				Voltmeters MI type	2	2700
				Voltmeters MI type	2	2192
				Ammeters MI type	5	6750
				Wattmeters LPF	1	5500
				Wattmeters LPF	1	2023
				Wattmeters UPF	2	5800
		Single phase Energy meter	1	1200		
		Single phase power factor meter	1	3938		

		Choke coil	1	95
		Choke coil	1	155
		Rheostats	2	3672
		Current Transformers	2	1138
		3 - phase auto transformers	1	24089
		Resistive load	1	21250
		Inductive loads	3	12393
		pair of head phones	1	459
		Wattmeters UPF	1	3900
		Wattmeters UPF	1	11800
		<b>Total Amount</b>		<b>183813</b>
6	Power Systems Lab	Determination of Positive, negative and zero sequence of 3 phase Transformer	1	98000
		Determination of Dielectric strength of oil	1	39000
		Determination of leakage current on pin insulator	1	55000
		Performance and testing of Transmission line model kit	1	145000
		String insulator kit	1	29000
		<b>Total Amount</b>		<b>366000</b>
7	Simulation Lab	MATLAB SOFTWARE	5 USERS	520975
		Systems	30	788750
		<b>Total Amount</b>		<b>1309725</b>

### Summary of Lab Equipment Details with Cost Price

S.No	Name of the laboratory	Cost Price
1	Electrical Machines Lab	<b>1304943</b>
2	Electrical Circuits Lab	<b>107129</b>
3	Control Systems Lab	<b>312270</b>
4	Power Electronics Lab	<b>425642</b>
5	Electrical Measurements Lab	<b>183813</b>
6	Power Systems Lab	<b>366000</b>
7	Simulation Lab	<b>1309725</b>
	<b>Total Amount</b>	<b>4009522</b>



**Department of Mechanical Engineering**  
**Lab Equipment Details with Cost Price**

S. No	Name of the laboratory	Equipment Name & Details	Quantity	Cost Price
1	Engineering Workshop	Bench Vice	12	20592
		Carpentry Vice	14	8616
		Hand Vice	2	395
		Leg Vice	1	2450
		Pipe Vice	1	1664
		Hammers (Ball Peen, Cross Peen, Sledge, Claw)	23	2859
		Arc Welding Transformer	1	12560
		Pillar Type Drilling Machine	1	12500
		Electrical Drilling Machine	1	2028
		Power Hack Saw	1	28500
		Bench Grinding Machine	1	4700
		Electrical Blower	1	3400
		Swage Block	2	7000
		Anvil	1	3600
		Files ( All Typs & Sizes)	64	8324
		Try Squares	12	552
		Chisels( All Types)	14	625
		C-Clamps	2	412
		Steel Rules	32	1240
		Screw Gauge And Vernier Calipers	3	1196
		Spanners (All Sizes)	8	3143
		Surface Plate and Surface Gauge	5	7072
		Calipers and Dividers	30	1108
		Punches (Dot, Centre, Number, Letter)	15	930
		Saws( Hand, Tenon, Saw)	20	1376
		Wooden Marking Gauge	12	2246
		Metal Jack Planes	12	3892
Firmer Chisels	14	1101		
Scribers & Pokers	29	1009		

		Mallets ( All sizes)	29	3529
		Hacksaw Frames	14	1021
		Tongs (All Sizes)	15	2340
		Puller Top & Bottom	1	235
		Stakes	5	4270
		Snips (All Sizes)	18	2278
		Patterns	6	3996
		Rammers	5	425
		Strike Off Bars	5	425
		Runner and Risers	10	500
		Lifters	4	180
		Trowels	10	370
		Vent rod	5	125
		Shovel	1	165
		Riddle	1	110
		Moulding Boxes	5	7500
		Nose pillers	6	749
		Cutting Pilers	6	867
		Screw Drivers	6	374
		Electrical Testers	10	330
		Sleeve Cutters	6	192
		House Wiring set	2	1100
		Furnace	1	3281
		Total Amount		<b>179452</b>
2	Mechanics of Solids	Hand Operated Spring Testing Machine	1	75000
		Analog Universal Testing Machine	1	405600
		Impact Testing Machine	1	83200
		Torsion Testing Machine	1	124800
		Rockwell Cum Brinell Hardness Tester	1	41600
		Total Amount		<b>730200</b>
3	Metallurgy Lab	Metallographic Disc polishing Machine	2	17000
		Monocular Microscope Co-Axial knob	2	9350
		Binocular Microscope	3	9350
		Dry And Wet Linisher belt Surface	1	35700

		Muffle Furnace	1	8075
		Hand Polishing Stainless Steel Stand	1	13600
		Metallographic Specimen Leveler	1	10200
		Metallographic Specimen Stand	1	17000
		Hardness Fixture for Specimen	1	3825
		Jominey End Quenching Apparatus	1	2975
		Total Amount		<b>127075</b>
4	Production Technology	Light Duty Wood Turning Lathe	1	16,500
		Gas Welding Set	1	8,500
		Spot Welding Machine	1	29,500
		Injection Moulding	1	24,000
		Hydraulic Press	1	34,500
		Total Amount		<b>113000</b>
5	FMHM	Venturimeter & Orifice Meter	1	32,000
		Pipe Friction & Friction Losses	1	44,000
		Turbine Flow Meter	1	29,000
		Single Stage Centrifugal Pump	1	40,000
		Multistage Centrifugal Pump	1	49,000
		Reciprocating Pump	1	38,000
		Impact Of Jet Apparatus	1	28,000
		Pelton Wheel Turbine	1	140000
		Kaplan turbine	1	344560
		Total Amount		<b>744560</b>
6	Machine Tools Lab	4 ½ Lathe Machine	1	89440
		Slotting Machine	1	60,000/
		Radial Drilling Machine	1	67,250
		Shaping Machine	1	1,35,000
		4 ½ Lathe Machine 3 Jaw Chuck	2	1,28,000
		Lathe Machine 6 Inches	1	1,80,850
		Surface Grinding Machine	1	103700
		Tool End Cutter Grinding Machine	1	1,39,200
		Universal Milling Machine	1	2,22,700
		Total Amount		<b>1126140</b>
		4-Cylinder 4-Stroke Petrol Engine Test Rig	1	276000
		Single Cylinder 4- Stroke Diesel Engine Test Rig (High Speed)	1	87600
		Single Cylinder 4-Stroke Diesel Engine Test Rig (Low Speed)	1	103200

7	Thermal Engineering lab	Two Stage Air Compressor Test Rig	1	65600
		Cut Section Model Of 4- Stroke Diesel Engine	1	20000
		Cut Section Model Of 4- Stroke Petrol Engine	1	14000
		Cut Section Model Of 2- Stroke Petrol Engine	1	14800
		Fuel Gas Analyzer	1	232192
		Total Amount		
8	Instrumentation Lab	Rotameter Rig	1	29700
		Pressure Gauge	1	16000
		Transducer For Temperature Measurement	1	16800
		LVDT Transducer For Displacement Measurement	1	16800
		Strain Measuring System	1	16800
		Thermo Couple Of Temperature Measurement	1	16800
		Capacitance Transducer For Angular Displacement	1	19000
		Photo Magnetic Speed Pickup	1	33000
		Resistance Temperature Detector	1	15700
		Total Amount		
9	Metrology Lab	Vernier Height Gauge	1	15167
		Inside Micrometer	1	8952
		Dial Gauge Indicator	1	7432
		Sine bar	1	2100
		Slip guage	2	18600
		Spirit Level	1	476
		Vernier Bevel Protractor	1	11200
		Gear Tooth Vernier Calipers	1	3500
		V-Block with 2 Clamps	1	12000
		Spur Gear	2	80
		Dial Gauge With Stand(Magnet)	1	4043
		Micro Meter	1	600
		Wire Gauge	1	275
		Total Amount		
10	Heat Transfer	Thermal Conductivity of Lagged pipe	1	27000
		Efficiency of Pin Fin	1	32000
		Heat transfer co-efficient for Forced Convection	1	32000
		Heat transfer co-efficient for Free	1	26000

		Convection		
		Emissivity Apparatus	1	28000
		Thermal Conductivity of Metal Bar	1	26448
		Thermal Conductivity of Composite Wall	1	30000
		Parallel flow and counter flow Apparatus	1	35000
		Stefan Boltzmann Apparatus	1	26000
		Total Amount		<b>197400</b>
11	Theory of Machines Lab	To determine the position of sleeve against controlling force and speed of a Hartnell governor and to plot the characteristic curve of radius of rotation.	1	36000
		To analyze the motion of a motorized gyroscope when the couple is applied along its spin axis	1	36000
		To find coefficient of friction between belt and pulley.	1	18000
		To find the moment of inertia of a flywheel	1	24000
		To determine whirling speed of shaft theoretically and experimentally	1	54500
		To plot follower displacement vs. cam rotation for various Cam Follower systems.	1	54500
		To determine the frequency of damped force vibration of a spring mass system	1	90000
		To study simple and compound screw jack and determine the mechanical advantage , velocity ratio and efficiency	1	22600
		To study the static and dynamic balancing using rigid blocks	1	32000
		To study various types of gears- Spur, Helical, Worm and Bevel Gears	1	13600
		Total Amount		<b>359852</b>
12	Mechatronics Lab	Complete Transducer Kit	1	42350
		Traffic Light Controller	1	8250
		Water Level Controller	1	11550
		Lift Control Module	1	11550
		Belt Conveyor Model	1	11550
		PLC Trainer Kit	1	19250
		Lower Version Automation Simulation Software	1	27500
		Total Amount		<b>136290</b>
13	CAD Lab	Computers(Lenovo M71E)	60	1290000
		CNC Milling	1	827180

		ANSYS Software	5 Users	165000
		EDGE CAM Software	5 Users	212200
		<b>Grand Total</b>		<b>Rs.2494380</b>
14	Thermal Engineering Lab (PG)	Separating & Throttling Calorimeter	1	66123
		Vapour Compression Refrigeration Test Rig	1	81993
		Air Conditioning Unit	1	112851
		Heat Pipe	1	35266
		Solar Flat Plate Collector	1	71942
		<b>Total Amount</b>		
15	ARC Lab	4 DOF IGUS ROBOT with Magnetic Gripper	1	427485
		5 DOF IGUS ROBOT with Vacuum Gripper	1	554531
		<b>Total Amount</b>		

### Summary of Lab Equipment Details with Cost Price

S. No	Name of the laboratory	Cost Price
1	Engineering Workshop	179452
2	Mechanics of Solids Lab	730200
3	Metallurgy Lab	127075
4	Production Technology	113000
5	FMHM	744560
6	Machine Tools Lab	1126140
7	Thermal Engineering Lab	232192
8	Instrumentation Lab	197400
9	Metrology Lab	84425
10	Heat Transfer	197400
11	Theory of Machines Lab	359852
12	Mechatronics Lab	136290
13	CAD/CAM Lab	2494380
14	Thermal Engineering Lab (PG)	266609
15	ARC Lab	982017
<b>Total Amount</b>		<b>7970992</b>

**Department of Electronics Communication Engineering**  
**Lab Equipment Details with Cost Price**

S.No	Name of the laboratory	Equipment Name & Details	Quantity	Cost Price
1	LICA/PDC Lab	CRO	11	187000
		Function Generator	7	48300
		RPS	10	45000
		Analog Digital Trainer Kit	1	6900
		Servo Stabilizer 5kva	1	12500
		Screw Driver Kit	1	160
		Soldering Kit	1	180
		Bread Board	13	1082
		Multimeter	2	3380
		Bread Board Trainer Kits	11	43780
		4 Bit Dac Opamp Kit	1	1300
		566 Trainer Kit	1	1300
		Digital Trainer Kit	5	34807
		Universal Ic Tester	1	46256
		Total Amount		
2	MPMC Lab	8086/88 Microprocessor Trainer Kit With Keyboard	12	65400
		8051 Micro Controller Kit With Keyboard	6	35935
		8259 Study Card	1	1100
		8279 Study Card	1	2200
		8255 Study Card	1	1100
		8251 Study Card	1	1500
		Traffic Light Interface Card	1	950
		Dac Interface Card	1	900
		Smps +5v 3a Power Supply	16	11200
		Keyboards	10	2000
		Total Amount		
3	MW & OC Lab	Microwave Test Bench Klystron Based Setup	5	342500

		Gunn Diode Characteristics Setup	1	74500
		Directional Coupler 3db	1	4800
		Directional Coupler 6db	1	4800
		Magic Tee	2	9600
		E Plane Tee	1	2400
		H Plane Tee	1	2400
		Circulators	2	4800
		Fiber Optic Trainer Kit	2	39000
		Laser Diode Characteristics Trainer Kit	1	21500
		Matched Termination	11	2800
		30 Mhz Dual Trace Cro	4	131040
		Digital Multimeter	1	1750
		Servo Stabilizer 5kva	1	10350
		<b>Total Amount</b>		<b>652240</b>
4	DSP Lab	Matlab-9.5	5	106065
		Communication Tool Box 7.0	5	58338
		Dsp System Tool Box 9.7	5	58338
		Image Processing Tool Box 10.3	5	58338
		Signal Processing Tool Box 8.1	5	58338
		Dsp Starter Kits-6713	12	302400
		<b>Total Amount</b>		<b>641817</b>
5	VLSI/DICA Lab	L-Spice Simulation Software	1	195000
		Fpga-01 Kit	5	10800
		Xilinx Vivado Software (25-Users)	1	130000
		Fpga Starter Kits With Interface	2	21000
		<b>Total Amount</b>		<b>356800</b>
6	EDC/ECA Lab	CRO	5	85000
		2 Mhz Micro Controller Function Generator	5	34500
		Dual Regulated Power Supply	6	22500
		Semiconductor Device Trainer Boards	16	47360
		Decade Resistance Box	12	15240



		Decade Capacitance Box	12	20160
		Decade Inductance Box	12	21120
		Voltmeters(0-2v)	15	10200
		VOLTMETERS(0-300mv)	10	7400
		Voltmeters(0-20v)	10	7000
		AMMETER(0-25ma)	10	7400
		AMMETER(0-50ma)	5	3700
		AMMETER(0-100ua)	5	3900
		AMMETER(0-750ua)	5	3900
		AMMETER(0-1ma)	5	3700
		Hartley Oscillator Trainer	1	2600
		Colpits Oscillator Trainer	1	2600
		Multimeters	7	10500
		Servo Stabilizer 5kva	1	10350
		<b>Total Amount</b>		<b>319130</b>
7	AC/DC Lab	CRO	10	193440
		Function Generator	9	62100
		Rps	6	33000
		Amplitude Modulation And Demodulation Kit	1	2200
		Agc Characteristics Kit	3	18000
		Balanced Modulator	1	3550
		Diode Detector Kit	1	4200
		Digital Phase Detector Kit	1	3900
		Frequency Mod & Demodulation Kit	2	2200
		Frequency Synthesizer	1	3900
		Mixer Characteristics	1	7350
		Pre.Emphasis &De-Emphasis Trainer Kit	1	2250
		Phased Locked Loop Kit	1	2850
		Synchronous Detector Kit	1	4200
		Single Side Band System	2	7200
		Squelch Circuit	1	4100
		Multimeter	1	1690

	PAM Modulation &Demod.Kit	2	4900
	PWM Modulation &Demod.Kit	2	5300
	PPM Modulation &Demod.Kit	2	5700
	PCM Modulation &Demod.Kit	1	6800
	DPCM Modulation &Demod.Kit	2	18950
	PSK Modulation &Demod.Kit	2	13250
	DPSK Modulation &Demod.Kit	2	14800
	FSK Modulation &Demod.Kit	2	8900
	Delta Modulation &Demod.Kit	1	5800
	TDM Mux-Demux Kit	1	3800
	Sampling Theorem	1	2600
	Tms320xxx Dsp Trainer	2	16000
	JTAG TO USB Programming cable	2	5600
	PCM Modulation kit	2	11250
	PCM Demodulation kit	2	11250
	CRC Encoder/Decoder	2	13050
	Convolution Encoder	2	13050
	DSO	8	197400
	Radio Receiver Demonstration kit	1	9500
	Spectrum Analyzer	1	106200
	Total Amount		<b>830230</b>

### Summary of Lab Equipment Details with Cost Price

S. No	Name of the laboratory	Cost Price
1	LICA/PDC Lab	<b>431945</b>
2	MPMC Lab	<b>122285</b>
3	MW & OC Lab	<b>652240</b>
4	DSP LAB	<b>641817</b>
5	VLSI/DICA Lab	<b>356800</b>
6	EDC/ECA Lab	<b>319130</b>
7	AC/DC Lab	<b>830230</b>
	Total Amount	<b>3354447</b>

**Department of Civil Engineering**  
**Lab Equipment Details with Cost Price**

S.No	Name of the laboratory	Equipment Name & Details	Quantity	Cost Price	
1	Surveying Lab	Ranging rods	15	7,200	
		Measuring chain	03	3,120	
		Cross staff	03	1,200	
		Plane table	03	15,600	
		Prismatic compass	02	2,880	
		Measuring Tape	02	800	
		Dumpy level	01	6080	
		Theodolite	01	15,200	
		Vernier theodolite	02	32,400	
		South automatic leveling Instrument	01	12,500	
		Metallic tape	04	2000	
		leveling staff 5 m	02	4400	
		<b>Total Amount</b>			<b>103380</b>
		2	Concrete Technology Lab	Cube moulds	04
Cube moulds 100x100	04			850	
Weighing balance	01			1100	
Set of sieves	01			5000	
Vicat apparatus	01			2500	
Specific gravity bottle	01			400	
Lechat apparatus	01			1500	
Slump cone	01			2400	
Vee bee apparatus	01			28000	
Compaction factor	01			23000	
Rebound hammer	01			16000	
Compression cube testing machine	01			1,35,000	
Cube moulds 150x150x150 mm	01			1500	
Cylindrical moulds	01			5500	
Cube moulds	03			4200	

		Cylindrical mould	01	4500
		Weighing balance 100 kgs	01	13,500
		<b>Total Amount</b>		<b>255600</b>
3	Engineering Geology Lab	Raw samples of minerals	52	46800
		Various structures of geology models	06	19200
		Set of minerals in wooden case	10	5000
		Polarizing microscope	02	3000
		Various structures of geological faults	06	18000
		Streak plates	04	2400
		Geological map of AP	01	900
		Geological & mineral map of INDIA	01	900
		Map geological structure	01	700
				<b>Total Amount</b>
4	Geotechnical Engineering Lab	Specific gravity bottle	01	1600
		Liquid limit apparatus	01	6600
		Plastic limit apparatus	01	2900
		Core cutter apparatus	01	4800
		Shrinkage limit apparatus	01	5100
		Sand poring cylinder	01	4900
		Seives set	01	11000
		Hydrometer	01	1200
		Compaction test apparatus	01	13200
		Vane shear apparatus	01	65000
		Permeability apparatus	01	54000
		Pycno meter	02	1800
		Stop watches	02	1000
				<b>Total Amount</b>
5	Transportation Engineering Lab	Aggregate crushing value apparatus	01	13000
		Viscometer	01	23000
		Flash and fire point	01	7500
		Penetrometer	01	20000
		Length gauge	01	900

		Elongation gauge	01	900
		Aggregate impact value apparatus	01	11500
		Total Amount		<b>76800</b>
6	Environmental Engineering Lab	Digital conductivity meter	01	9,558
		Thermometer	01	220
		Beakers 500ml	02	235
		Beakers 1000 ml	02	493
		Burets 50ml	02	1093
		Conical flask 250 ml	02	236
		Chloroscope	01	1848
		Total Amount		<b>13684</b>

#### Summary of Lab Equipment Details with Cost Price

S. No	Name of the laboratory	Cost Price
1	Surveying Lab	<b>103380</b>
2	Concrete Technology Lab	<b>255600</b>
3	Engineering Geology Lab	<b>123900</b>
4	Geotechnical Engineering Lab	<b>173100</b>
5	Transportation Engineering Lab	<b>76800</b>
6	Environmental Engineering Lab	<b>13684</b>
Total Amount		<b>746464</b>

**(Dr.Ch.S.V.Parameswara Rao)**  
Principal