

# BOARD OF TECHNICAL EDUCATION, U.P.

1-Gurugovind Singh Marg, Bans Mandi Xing, Charbagh, Lucknow  
Phone No. 0522-2630243, 2638709  
Webside : [www.bteup.com](http://www.bteup.com)

## **Inspection Proforma For Institute Information**

[To be filled by the institute]

1. Name of the society:
2. Name of Institute :
3. Address of Correspondence with E-mail ID :
4. Registration No. (Attached Photocopy of registration Certificate)
5. Location of Institute
6. Year of the establishment:
7. Govt. Order for N.O.C. :
8. Letter No. of Director of Technical Education for Inspection :
9. Land (Detail of Land with Proof):

10. Name of Inspection Team Members Present :

i.

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11. Details of courses running & Applied

S.No	Name of the Trade	Periods	Intake Applied	Academic Session
1.	Civil Engg.	3 yrs.		
2.	Mechanical Engg.	3 yrs.		
3.	Electrical Engg.	3 yrs.		
4.	Electronics Engg.	3 yrs.		
5.	Computer Science & Engg.	3 yrs.		
6.	Information Technology	3 yrs.		

13. Detail of floor area provided

A. Administrative

S.No	Particular	To be filled by Institute				Remark
		No.of Rooms Required	Standard Carpet Area (Sq.mt)	No.of Rooms Available	Carpet Area	
i.	Principal Room	01	30			
ii.	Office	01	80			
iii.	Confidential Room	01	20			
iv.	Steno Room	01	06			
v.	Record Room	01	20			
vi.	Store Room	01	100			
vii.	library	01	150*			
viii.	Student's Common Room(Boys & Girls Each)	02	80			
ix.	Lecturers Room(Asper Requirement)		10			
x.	H.O.D. Room	01	15			

B. (I.) Academic (Class Room)\*\* Class Room Requirement As Per B.T.E./A.I.C.T.E. Norms For Each Trade

S.No	Particular	To be filled by Institute - Intake 60				Remark
		No.of Rooms Required	Standard Carpet Area (Sq.mt.)	No.of Rooms Available	Carpet Area	
i.	Lecture Room*	02 for each trade	60			
ii.	Drawing Hall	01	90			

**(ii.) Laboratory & Shops Requirement**

(Mention all Labs As Per A.I.C.T.E./B.T.E. Syllabus) , Example For  
Civil/Mechanical/Electrical/Electronics/Computer Science & Engg. (5 Branches)

S.No.	Name of Lab	No.	Required Space(sq.mt.)	Area Provided	Gas Supply	Water Supply	Electric Supply
1	APPLIED PHYSICS LAB	1	90				
2	CHEMISTRY LAB	1	90				
3	APPLIED MECHANICS LAB/E.M.E. LAB	1	120				
4	ELECTRICAL ENGG. I LAB	1	120				
5	CIVIL ENGG. LAB	1	120				
6	BASIC ELECTRICAL ENGG. LAB	1	120				
7	E.C.D. LAB	1	120				
8	COMPUTER LAB	1	60				
9	F.E.D. LAB	1	120				
10	SURVEYING LAB	1	80				
11	WORKSHOP	8	50X8				

I. APPLIED PHYSICS LAB

S.No.	Name of Equipment	No.	@ Rs.	Amt. in Rs.
1.	Brass ball with hook 2 cm. dia	2	20	40
2.	Stop clock least count 0.1 Sec	2	500	1000
3.	Wall bracket with clamping arrangement	2	50	100
4.	Meter scale	5	20	100
5.	Convex lences of focal length 10 cm., 20 cm., 50 cm. and 100 cm. 2 nos. of each	8	10	80
6.	Optical bench steel with pin and lence holders	2	500	1000
7.	Anstronomical telescope	1	500	500
8.	Searl's conductivity apparatus with copper & steel rods 25 X 4 cm. diameter with all accessories	1 set	1000	1000
9.	Lea's conductivity app. complete with all accessories	1 set	1000	1000
10.	Constant water flow arrangement	2	400	800
11.	Boiler made of copper 2 lt. cap.	4	200	800
12.	Platinum resistance thermometer	2	800	1600
13.	Potentiometer - 10 wires with jocky	1	500	500
14.	Meter bridge complete	1	250	250
15.	Lead accumulator 2.2 V. and 20 amp. hour capacity	2	250	500
16.	Moving coil galvenometer	3	200	600
17.	Moving coil ammeter 0-1 amp., 0-5 amp., 0-10 amp., 1 no of each	3	250	750
18.	Moving coil voltmeter 0-1 V. 0-5 V., 0-10 V. 1 No of each	3	250	750
19.	Lechlanchi cell complete	3	100	300
20.	Resonance col. of steel tube with tuning forcs and other accessories	1	500	500
21.	Tuning forcs set of different frequencies	1 set	1000	1000
22.	App. for determining coefficient of friction on a horrizontal plane	1 set	1000	1000
23.	Appratus for determining characteristics of P-N junction diode complete with all accessories	1 set	1500	1500
24.	Post office box dial type	1	1200	1200
25.	Resistance box 0-10 ohm., 0-100 ohm. 2 nos. each	4	400	1600
26.	Rehostat of different ohm.capacity	8	250	2000
27.	Physical balance with weight box	2	800	1600
28.	Set of fractional weights	10	20	200
29.	Fortin's barometer with mercury	1	2500	2500
30.	Battery eleminator 6 V. & 3 amp.	1	250	250
31.	Lab tables	3	8000	24000
32.	Lab stools	10	100	1000
33.	Anemometer cup type	1	1000	1000
34.	Anemometer hand held	1	1000	1000
35.	Suryamapi	1	1500	1500
36.	Insolation meter	1	1500	1500
	Misc.	Lum Sum		5000

II. APPLIED CHEMISTRY LAB

S.No.	Name of Equipment	No.	@ Rs.	Amt. in Rs.
1.	Test tube stand	15	10	150
2.	Funnel stand	15	10	150
3.	Burette stand	15	30	450
4.	Pipette stand	15	10	150
5.	Chemical balances with analytical weights 1gm -200gms	5	1500	7500
6.	Fractional weights set with rider	5sets	25	125
7.	Kipp's apparatus 1000 ml. polythen	2	500	1000
8.	Reagents bottles			
	250ml	120	10	1200
	500ml	5	15	75
	1000ml	5	25	125
9.	Wide mouth bottle 250 ml	15	15	225
10.	Winchester bottle 2.5 litre	15	30	450
11.	Test tubes 1/4" x 6"	75	1	75
12.	Boiling tube 1" x 6" hard glass	24	10	240
13.	Pestle and mortar 10 cms	2	30	60
14.	Watch glass 7.5 cms	15	5	75
15.	Beakers			
	100 ml.	10	15	150
	250 ml.	24	20	480
	400 ml.	12	25	300
	1000 ml.	5	30	150
16.	Weighing bottle 10 ml with lid	15	10	150
17.	Wash bottles	15	15	225
18.	Conical flask 250 ml.	15	30	450
19.	Flat bottom flask 500 ml.	6	40	240
20.	Flat bottom flask 250 ml.	15	25	375
21.	Burette 50 ml.	15	60	900
22.	Pipette 25 ml.	15	20	300
23.	Measuring flask 250 ml. with stopper	15	50	750
24.	Measuring cylinder of various sizes (250 ml, 500 ml, 1000 ml) 3 no. of each	9	LS	250
25.	Bunsen's burner of brass	15	50	750
26.	Gas plant petrol 10 to 20 burners automatic	1	5000	5000
27.	Spirit lamp	15	30	450
28.	Tripod stand	15	10	150
29.	Wire gauge 15 X 15 cm. with asbestos	15	15	225
30.	Test tube holder	15	10	150
31.	Porcelain plates	15	20	300
32.	Funnel 15 cm.	15	16	240
33.	Blow pipe & work tools with electric blower for glass blowing	1 set	10000	10000
34.	Cork borers with sharpn	2 set	100	200
35.	Cork pressure	1 set	250	250
36.	Glass cutting knife	1	75	75
37.	Spatula hard & nickel/steel	2 each	50	100
38.	Water tapes with gooseneek	6	200	1200
39.	Gas taps two way	10	150	1500
40.	Pinch cock & screw	15	20	300
41.	Distilled water units (electrical)	1	5000	5000
42.	Distilled water units (solar)	1	5000	5000
43.	Open balance 1000 gms./10 mg.	1	600	600

44. Platinum wire	5	25	125
45. Brush for cleaning various type	40	10	400
46. Jars 20 Lit. for keeping distilled water	5	100	500
47. Lab table 2 m. x 1.2 m. x 1 m. high with central sink and cup boards (Teak wood) with drawers and two built in almirah on each side with reagent racks, better tile top	4	8000	32000
48. Exhaust fans 18"	4	2000	8000
49. Side racks and selves for bench reagents made of teak wood for 24 bottles each set	4	2000	8000
50. Digital balance electronic	1	10000	10000
51. Hot plates 7-1/2", 3" dia controled 2000 watts	1	1000	1000
52. Hot air oven thermostatically controled with selves and rotary switches 350 x 350 x 25 high	1	8000	8000
53 pH Meter	1	1000	1000
54 Glass Electrode	2		
55. Reference Electro	2		
Miscellaneous	LS		10000

### III. WORKSHOP PRACTICE

#### CARPENTRY SHOP

S.No.	Name of Equipment	No.	@ Rs.	Amt.in Rs.
1.	60 cm.rule	10	15	150
2.	Flexible steel rule 2 metre	2	20	40
3.	T square 23 cm. steel	10	20	200
4.	Bevel square 23 cm. steel	2	30	60
5.	Marking knife 25 cm. steel	10	30	300
6.	Marking gauge wooden & brass 25 cm.	10	30	300
7.	Mortise gauge wooden & brass 25 cm.	10	50	500
8.	Caliper inside, steel 20 cm.	2	50	100
9.	Caliper outside , steel 20 cm.	2	50	100
10.	Compass steel 20cm.	2	40	80
11.	Devider steel 20 cm.	2	40	80
12.	Plumb	2	20	40
13.	Wooden bench vice steel 20 cm.	10	200	2000
14.	Bench hold fast steel 30 cm.	10	40	400
15.	Bar clamp 2 m.	2	300	600
16.	G clamp of flat spring steel 20x30 cm.	4	60	240
17.	Rip saw 40-45 cm.	10	80	800
18.	Cross cut saw 40-45 cm.	2	80	160
19.	Tennon saw 30-35 cm.	10	50	500
20.	Dovetail saw 30-35 cm.	2	60	120
21.	Compass saw 35 cm.	4	60	240
22.	Key hole saw or pad saw 30-35 cm.	2	25	50
23.	Bow saw	2	25	50
24.	Frame saw	2	25	50
25.	Chisel fish brand 1" to 1/8" firmer	3 set	100	300
	Dovetail	3 set	100	300
	Mortise	3 set	100	300
26.	Gauge or Golchi 1" to 1/8"	3 set	150	450

27.	Wooden jack plane complete	10	100	1000
28.	Wooden smoothing plane	10	80	800
29.	Iron jack plane complete	10	200	2000
30.	Iron rebate plane complete	3	80	240
31.	Iron grooving plane complete	3	120	360
32.	Iron compass plane complete	3	200	600
33.	Wooden moulding plane complete	3	200	600
34.	Bradawl	3	150	450
35.	Gimlet drills set	1 set	150	150
36.	Center bit	2	120	240
37.	Twist bit	2	80	160
38.	Auger bit	2	40	80
39.	Dovetail bit	2	15	30
40.	Counter shank bit	2	20	40
41.	Ratchet brace machine	2	175	350
42.	Grand drill machine 1/4"	2	200	400
43.	Wooden hand drill burmi	5	200	1000
44.	Wooden mallet	10	25	250
45.	Claw hammer	3	30	90
46.	Carpenters hammer	10	30	300
47.	Cutting tool for Universal wood working machine	3 set	800	2400
48.	Screw driver 18" & 15"	6	50	300
49.	Adze 500 gm.	10	50	500
50.	Pincer 175 mm.	6	75	750
51.	Plier 150 mm.	4	90	360
52.	Oil stone 8"	4	75	300
53.	Rasp file 12"	4	100	400
54.	Half round file 12"	4	80	320
55.	Round file 12"	4	80	320
56.	Triangular file 5", 4"	8	60	480
57.	Water stone	4	20	80
58.	Carpentry work benches	4	2000	8000
59.	Band saw machine complete	1	30000	30000
60.	Circular saw machine	1	15000	15000
61.	Double Ended Electric Bench grinder	1	6000	6000
62.	Universal wood working machine	1	15000	15000
	misc. for foundation of machines	LS		10000

#### SMITHY SHOP

1.	Anvil 150 Kg. with stand	5	2500	12500
2.	Swage block 50x30x8cm.&45x45x10cm.	2	1250	2500
3.	Hammers			
	Ball peen 0.8 Kg. (Approx.)	10	150	1500
	Cross peen 0.8 Kg. (Approx.)	10	150	1500
4.	Beak iron 25 Kg.	1	500	500
5.	Swages different types	6	40	240
6.	Fullers different types	6	30	180
7.	Leg vice 15 cms. opening	1	150	150
8.	Electric blower with motor	1	5000	5000
9.	Furnace chimney with exhaust pipe	5	5000	25000
10.	Sledge hammer - 5 Kg.	2	200	400
	Misc. tools		LS	2500

S.No.	Name of Equipment	No.	@ Rs.	Amt. in Rs.
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SHEET METAL, SOLDERING & BRAZING				
1.	Dividers - 15cm.	5	60	300
2.	Trammel 1 m.	1		
3.	Angle protector	5	60	300
4.	Try square 30 cm.	5	40	200
5.	Centre punch	5	20	100
6.	Steel rule 30 cm. , 60 cm.,	5	25	125
7.	Sheet metal gauge	1	120	120
8.	Straight snips 30 cm.	2	250	500
9.	Curved snips 30 cm.	2	300	600
10.	Bench shear cutter 40 cm.	1	5000	5000
11.	Chisel 10 cm.	5	100	500
12.	Hammer	5	150	750
13.	Bench vice 13 cm.	5	1000	5000
14.	Plier	5	50	250
15.	Nose plier	5	60	300
16.	Sheet metal anvil/stakes	5	2000	10000
17.	Shearing machine 120 cm.	1	2500	2500
18.	Solder electric	2	500	1000
19.	Solder furnace type	2	250	500
20.	Brazing equipments and accessories	1	5000	5000
21.	Blow lamp	2	250	500
22.	Sheet bending machine	1	10000	10000
	Misc.		LS	5000
FITTING SHOP				
1.	Bench vice jaw 10 cm.	10	300	3600
2.	Surface plate 45x45 cm.	2	2000	4000
3.	V. Block 10x7x4 cm.	5	350	1650
4.	Try square	10	40	400
5.	Bevel protractor 30 cm.	1	2100	2100
6.	Combination set	1	2500	2500
7.	Divider	5	60	300
8.	Centre punch	5	20	100
9.	Calipers (Different sizes)	12	20	240
10.	Vernier calipers 30 cm.	2	600	1200
11.	Micrometer 0-25, 25-50 m.m.	4	500	2000
12.	Vernier depth gauge	1	350	350
13.	Feeler gauge--15 blades	1	30	30
14.	Radius gauge	1	100	100
15.	Angle gauge	1	100	100
16.	Thread gauge	1	100	100
17.	Bench drilling machine 13 mm.	1	5000	5000
18.	Double ended electric grinder	1	4000	4000
19.	Drill set	1set	1000	1000
20.	Reamer set	1set	2000	2000
21.	Tap set	1set	2000	2000
22.	Adjustable wrenches (15 cm.,20cm. 30 cm.)	1set	500	500
23.	Allen key set	1set	350	350
24.	Spanners	6	60	360
25.	Work benches	6	2000	12000
26.	Power hacksaw	1	4000	4000
	Misc. Files, Dieset, Hexa frames etc.		LS	10000
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S.No.	Name of Equipment	No.	@ Rs.	Amt.in Rs.
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WELDING SHOP

1.	Ellectric welding set oil cooled	1	10000	10000
2.	Industrial regulator type oil cooled arc welder	1	12000	12000
3.	Air cooled spot welder 7.5 KVA	1	15000	15000
4.	General accssories for air cooled spot welder of 7.5 KVA			8000
5.	Gas welding set with gas cutting torch and complete with all accessories	1	15000	15000
6.	Misc. work benches		LS	20000

PAINTING & POLISHING SHOP

1.	Air compressor complete with 2 HP motor	1set	12000	12000
2.	Spray gun with hose pipe	1	1000	1000
3.	Stoving oven	1	3000	3000
4.	Buffing machine with leather and cotton wheels	1	4000	4000
5.	Electroplating Equipment for cromium Nikle plating.	1	10000	10000
	Misc.		LS	2000

PLUMBING SHOP

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S.No.Name of Equipment No. @ Rs. Amt.in Rs.  
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1.	Pipe vice 5 cm.	4	250	1000
2.	Chain wrenches	5	250	1250
3.	Ring spanner Set	5	125	625
4.	Wheel pipe cutter	2	300	600
5.	Water pump plier	4	50	200
6.	Pipe die set 2" set	2 set	600	1200
7.	Pipe bending device	1	5000	5000
8.	Work benches	4	4000	16000
9.	Set of various types of plumbing fittings e.g. Bib cock, Cistern, Stop cock, Wheel volve, Gat volve etc.		LS	2000
10.	Misc. Hacksaw frame and others		LS	2000

FOUNDRY SHOP

1.	Moulding boxes	25		6000
2.	Laddles	5		1000
3.	Tool kits	10 sets		2500
4.	Quenching tanks water or oil	2		1000
5.	Permiability tester	1		1000
6.	Mould hardness tester	1		6000
7.	Sand tensile testing equipment	1		7500
8.	Portable grinders	1		3000
9.	Temperature recorders/controllers	LS		5000
10.	Pit furnace with Blower	1		5000

## MACHINE SHOP

1.	Lathe machine 4.5 feet	2	25000	50000
	"V" bed. Height of centres 8.5 inch. Dog chuck 8 inch complete 1 H.P. motor 440v, push button starter with coolant pump, tray and with standard accessories.			
2.	Shaper machine 12 inch	1	20000	200000
	stroke with 2 H.P. motor 440 volts push button starter with vice 6 inch (Swivel base)			

### NOTE:-

The institutes running mechanical engg. course need not purchase these two items separately because they will have one complete machine shop for the course

BUILDING MATERIAL TESTING LAB/ CIVIL LAB I

1.	Kit of specimens of stones ( at least 10 types) kept in a wooden box labelled	2 set	1000	2000
2.	Kit of specimen of timber of size 15x10x5 cm kept in wooden box labelled ( at least 10 types)	2 set	1000	2000
3.	Vicat's needle apparatus complete with all accessories.	4	800	3200
4.	Air permeability apparatus blain type as per IS 5536 for fineness of cement	1	1600	1600
5.	Compression Testing Machine Electrically cum manually operated with pumping unit up to 100 Tonnes Capacity.	1	70000	70000
6.	Lechatlier's apparatus for determining soundness of cement IS 5514 & 4031	4	250	1000
7.	Single pan Balance Dial Type 10 Kg. Capacity.	1	1000	1000
8.	Pan Balance 1 Kg Capacity Dial Type	2	500	1000
9.	Plate form weighing machine 100 Kg Capacity	1	4000	4000

ELEMENTS OF MECHANICAL ENGINEERING LAB  
(Applied Mechanics Lab. Room)

S.No.	Name of Equipment	No.	@ Rs.	Amt.in Rs.
1.	Biogas Plant	1	By Out door visit	
2.	Windmill	1	By Out door visit	
3.	Experimental Solar Cooker Box Type- Instrumented To Measure Temperature its Performance & Temperature At Various Location.	1	500	500
4.	Photo Voltage Solar Cell	1	10000	10000
5.	Throttling & Separating Colorimeter. (Thermal Engg. Lab)	1	10000	10000
6.	Jib Head Key, Flat Key, Saddle Key, Wood Ruff Key, Feather Key Pinkey & A piece of splined shaft.	1 Set	L.S.	500
7.	Pins- Split Pin, Taper Cottor Type Split Pin, Cottor or Cottor Pin, Cottor Bolts; Lewis or Rag Foundation Bolt, Fish Tail & Square Head Foundation Bolts.	1 Set	L.S.	500
8.	Friction Clutches & Couplings -Cone Clutch, Single Plate Muff Coupling, Flange Coupling Universal Coupling or Hooks Joint. Flexible Coupling- Belt & Pin Type, Coil Spring Type.	1 Set	L.S.	2500
9.	Bearings- Plane, Bushed, Split Step, Ball, Rollar Bearings, Thrust Bearings.	1 Set	L.S.	1000
10.	Spur gear Single & Double Helical Gears, Bevel Gears.	1 Set	L.S.	1000
11.	Simple Spur Gear train	1	1500	1500
12.	Compound Gear Train	1	1500	1500
13.	Epicyclic Gear Train	1	2000	2000
14.	Compression & Tension Helical Springs.	1 Each	200	200
15.	Four Bar Mechanism Fitted on a board.	1	1000	1000
16.	Slider Crank Mechanism	1	1000	1000
17.	Whitworth Quick Return Mechanism Fitted on a board.	1	1000	1000
18.	Steam Boiler Electric Low Pressure, upto 5 psi steam capacity, 8 Kg./ 12 Kg. Per hour, Supply 440V Three Phase	1	20000 (Thermal Engg. Lab.)	20000
19.	Orsat Apparatus	1	2000 (Thermal Engg. Lab.)	2000

ELECTRONICS LABORATORY

Electronic Components And Devices Lab. (First Year)  
 Industrial Electronics And Transducers Lab. (Second Year)  
 Networks Filters & Transmission Lines Lab. (Second Year)  
 Electronic Devices & Circuits Lab. (Second Year)

S.No.	Name of the Equipment/ Board/Kit Etc.	Elec. Components & Devices Lab.		Indus. Elec. & Transducers Lab.		Networks Filters & Transmission Lab.		Elec. Devices & Ckts. Lab.		Total		Total No. Recommended		Rate per Piece In Rs.	Total Cost	
		Intake 30	Intake 45	Intake 30	Intake 45	Intake 30	Intake 45	Intake 30	Intake 45	Intake 30	Intake 45	Intake 30	Intake 45		Intake 30	Intake 45
1.	Audio Oscillator	2	3	-	-	7	9	6	7	15	19	13	15	2000	26000	30000
2.	Multimeter, 20 K. Ohm per volt Sensitivity, + 1% accuracy d.c. voltage 2500 v. max.	2	3	-	-	4	6	-	-	6	9	5	7	1000	5000	7000
3.	Digital Elec. multimeter.	7	9	2	3	7	9	8	9	24	30	12	15	3000	36000	45000
4.	Regulated Power Supply 0-30 V, 0.5/1 Amps.	5	7	2	3	-	-	8	9	15	19	10	12	2000	20000	24000
5.	Multi output Power Supply 0-30V 1 Amp. 0-+12 V, 1 Amp., 5 V. 2 Amp.	2	3	-	-	-	-	2	3	4	6	3	4	2500	7500	10000
6.	Power Supply 0-300 Volt, 1 Amp.	-	-	2	3	-	-	-	-	2	3	2	3	2000	4000	6000
7.	Dual Trace C.R.O. (0-10 MHz)	2	3	5	5	-	-	5	6	12	15	8	10	15000	120000	150000
8.	R.F.Signal Generator	-	-	-	-	-	-	2	3	2	3	2	3	5000	10000	15000
9.	Function Generator	-	-	-	-	-	-	3	4	3	4	3	4	4000	12000	16000
10.	A.C. Millivolt Meter (Elec.)	-	-	-	-	-	-	4	5	4	5	4	5	2000	8000	10000
11.	Out Put Audio Power Meter 4 Ohm. - 20 K & 1 MW - 10 W	-	-	-	-	-	-	2	3	2	3	2	3	1500	3000	4500
12.	A.C. Milliammeter/A.C. Micro-meter & A.C. Millivoltmeter (Suitable range)	4	5	2	3	-	-	-	-	6	8	4	5	200	800	1000
13.	D.C. Voltmeter /D.C. Milliammeter/D.C. Micrometer (suitable range)	20	25	-	-	-	-	5	6	25	31	20	25	200	4000	5000
14.	Decade Resistance Box (Different ranges)	-	-	-	-	3	4	-	-	3	4	3	4	600	1800	2400
15.	Decade Capacitor Box (Different range)	-	-	-	-	4	5	-	-	4	5	4	5	2000	8000	10000 Cont.
16.	Decade Inductance Box	-	-	-	-	4	5	-	-	4	5	4	5	2500	10000	12500
17.	Different Transducers : pressure type, thermo couple, LVFT, Opto pick electromagnetic pick up; Thermal relay, ultrasonic pick up and potentiometer etc. including strain gauge, Piezoelectric Transducer, Diff. types of Photo sources & Detector, Optical Fibre sensors	-	-	4	4	-	-	-	-	4	4	LS	LS	5000	20000	20000
18.	Experimental Kit/ Teaching Modules/ Training boards/ Learning kits. of relevant subject.	2*	3*	0	0	2*	3*	0	0	4*	6*	LS	LS	--	75000	100000
19.	Component Storage rack	2	2	2	2	2	2	2	2	8	8	8	8	--	25000	35000
20.	Consumable Items	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	--	20000	20000
21.	Miscellaneous	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	--	15000	20000

BASIC ELECT. ENGG. & ELECTRICAL INSTRUMENTS & MEASUREMENT LAB

Sl. No.	Equipment	Qty.	Price
1.	Ammeter -dynamometer type portable, moving coil, permanent magnet 150 mm uniform scale		
	a. Range 0 - 2.5 - 5 Amp.	2	1200
	b. Range 0 - 50 m A	1	500
	c. Range 0 - 500 mA	2	1000
2.	Ammeter - moving iron type Portable moving iron permanent magnet, 150 mm uniform scale		
	a. Range 0 - 5 Amp.	2	1000
	b. Range 0 - 10/20 Amp.	2	1000
	c. Range 0 - 500 mA/1000 mA	2	1000
3.	Voltmeter dynamometer type portable moving coil permanent magnet 150 mm uniform scale		
	a. Range 0 - 5/10 V	2	1000
	b. Range 0 - 15/30 V	1	1000
	c. Range 0 - 50 mv/100 mv	1	1000
	d. Range 0 - 125/500 V	1	1000
	e. Range 250/500 V		
4.	Digital multimeter 3.5 digit - display D.C. voltage 0 - 1000 V in 5 steps A.C. voltage 0 - 750 V in 5 steps Resistance 0 - 20 M ohm in 6 steps D.C. 0 - 10 A in 6 steps A.C. 0 - 10 A in 6 steps Power supply 9 V.	1	3000
5.	Analog multimeter (Portable) D.C. Voltage 0 0 1000 V AC Voltage 0 2/5/10/25/100/250/1100 V. Resistance 0 200 M ohm DC 0 - 50 micro Amp./1 mA/10 mA/100mA/1A/10A AC 0 - 100 mA/1A/25 A/10A	1	1000
6.	Wattmeter single phase (LPF= 0.2) portable dynamometer type, scale 150 mm current range 0 - 5/10 Amps voltage Range 0 - 250/500 V	2	5000
7.	Decade resistance box constantan coils, single dial 10x10, 10x100, 10x1000, 10x10,000 ohms	1	1000
8.	Continuously variable 0 - 1000 micro farad, 250 V	1	1000
9.	Energymeter single phase induction type, industrial grade 5 A or 10 A, 250 V, 50 Hz.	1	2000

10.	Energymeter(Substandard) single phase, induction type 5 A/10A, 250 V, 50 Hz.	1	3000
11.	Power factor meter dynamometer type, eddy current damping, 50 Hz, scale length 150 mm range upto 20 amp, voltage range 300 V 10 F. range 0.5 log, unity 0.5 load.	1	5000
12.	Frequency meter (Reed type) 230 V, range for having 21 reeds for 40-60 Hz range.	1	500
13.	Rheostat sliding rheostats wound with evenly oxidised iron free nickel copper on vitreous enamelled round steel tube 150 ohms 2 Amps.	1	600
	110 ohms 2.5 Amps.	1	600
14.	Variable inductor single phase, 250 V, 2.5 KVA continuously variable	1	2000
15.	Cathode ray oscilloscope 10 MHz dual beam oscilloscope vertical defection band width DC-10 MHz (-3db) rise time 30 ms defeccion coefficient 12 horizontal defeccion band width 1 MHz (+6db)	1	10,000
16.	Battery charger 12 V silicon bridge rectifier AC input 230 V, DC output suitable for charging 6 V And 12 V batteries provided with MC voltmeter 0 - 20 V and ammeter 0 - 5 A	1	1000
17.	Capacitors 2.5 microfarad, electrolytic type	4	200
18.	Q Meter frequency 0 - 30 MHz Q 0 to 500	1	4000
19.	LCR meter (digital) 3.5 digit display capacitance 0 to 20,000 microfarad inductance 0 to 200 Henry resistance 0 to 20 M ohms	1	8000

20.	LCR/Q bridge capable of measuring resistance, inductance and capacitance of range 8 amps, 0.012 to 10 M ohms, 4 to 10,000 H, 0.5 pico farad to 10 F.	1	5000
21.	Kelvin double bridge 10 x 0.1 ohms circular slide wire devided into 200 equal parts		
22.	Energy meter 3 phase induction type, 4 wire, industrial grade, 50 Hz, 10 A, 440 Volt	1	5000
24.	Energy meter (Sub standard) 3 phase, 4 wire, 440 V, 10A, 50 Hz induction type.		
25.	Transformer single phase core type, 230/110 V, 1 KVA, 50 Hz.	1	5000
26.	Universal shunt 0 - 75 A	1	2000
27.	Current transformer 10/25/50/5A as per IS 4201/1967 and 2705/1981	1	2000
28.	Potential transformer 10 VA, 415/110 V as per IS 4201/1967 and 2705/1981	1	2000
29.	Strain guage	1	1000
30.	Maxwells bridge	1	1000
31.	Weins bridge	1	1000
32.	Schering bridge	1	1000
33.	Single Phase AC Watt Hour Meter (Electronic Energy Meter) 240V,50 C/s 10 Amp.,	1	1200
34.	3 Phase Four Wire (3X240V between Line To Nuetral) AC static Watt Hour Meter (Electronic Energy Meter) 10A	1	2500
35.	Trivector Meter	1	5000

## ELECTRICAL ENGINEERING LAB

- (i) Electrical Engineering-I (First Year)  
(ii) Electrical Engineering-II (Second Year)

Sl. No.	Equipment	Qty.	Price
1.	Ammeter -dynamometer type portable, moving coil, permanent magnet 150 mm uniform scale		
	a. Range 0 - 2.5 - 5 Amp.	2	1200
	b. Range 0 - 50 m A	1	500
	c. Range 0 - 500 mA	2	1000
2.	Ammeter - moving iron type Portable moving iron permanent magnet, 150 mm uniform scale		
	a. Range 0 - 5 Amp.	2	1000
	b. Range 0 - 10/20 Amp.	2	1000
	c. Range 0 - 500 mA/1000 mA	2	1000
3.	Voltmeter dynamometer type portable moving coil permanent magnet 150 mm uniform scale		
	a. Range 0 - 5/10 V	2	1000
	b. Range 0 - 15/30 V	1	1000
	c. Range 0 - 50 mv/100 mv	1	1000
	d. Range 0 - 125/500 V	1	1000
	e. Range 250/500 V		
4.	Digital multimeter 3.5 digit - display D.C. voltage 0 - 1000 V in 5 steps A.C. voltage 0 - 750 V in 5 steps Resistance 0 - 20 M ohm in 6 steps D.C. 0 - 10 A in 6 steps A.C. 0 - 10 A in 6 steps Power supply 9 V.	1	3000
5.	Analog multimeter (Portable) D.C. Voltage 0 0 1000 V AC Voltage 0 2/5/10/25/100/250/1100 V. Resistance 0 200 M ohm DC 0 - 50 micro Amp./1 mA/10 mA/100mA/1A/10A AC 0 - 100 mA/1A/25 A/10A	1	1000
6.	Wattmeter single phase (LPF= 0.2) portable dynamometer type, scale 150 mm current range 0 - 5/10 Amps voltage Range 0 - 250/500 V	2	5000
7.	Decade resistance box constantan coils, single dial 10x10, 10x100, 10x1000, 10x10,000 ohms	1	1000
8.	Continuously variable 0 - 1000 micro farad, 250 V	1	1000
9.	Energymeter single phase	1	2000

	induction type, industrial grade 5 A or 10 A, 250 V, 50 Hz.		
10.	Energymeter(Substandard) single phase, induction type 5 A/10A, 250 V, 50 Hz.	1	3000
11.	Power factor meter dynamometer type, eddy current damping, 50 Hz, scale length 150 mm range upto 20 amp, voltage range 300 V 10 F. range 0.5 log, unity 0.5 load.	1	5000
12.	Frequency meter (Reed type) 230 V, range for having 21 reeds for 40-60 Hz range.	1	500
13.	Rheostat sliding rheostats wound with evenly oxidised iron free nickel copper on vitreous enamelled round steel tube 150 ohms 2 Amps.	1	600
	110 ohms 2.5 Amps.	1	600
14.	Variable inductor single phase, 250 V, 2.5 KVAR continuously variable	1	2000
15.	Battery charger 12 V silicon bridge rectifier AC input 230 V, DC output suitable for charging 6 V And 12 V batteries provided with MC voltmeter 0 - 20 V and ammeter 0 - 5 A	1	1000
16.	Capacitors 2.5 microfarad, electrolytic type	4	200
17.	Q Meter frequency 0 - 30 MHz Q 0 to 500	1	4000
18.	LCR meter (digital) 3.5 digit display capacitance 0 to 20,000 microfarad inductance 0 to 200 Henry resistance 0 to 20 M ohms	1	8000
19.	LCR/Q bridge capable of measuring resistance, inductance and capacitance of range 8 amps, 0.012 to 10 M ohms, 4 to 10,000 H, 0.5 pico farad to 10 F.	1	5000
20.	Kelvin double bridge 10 x 0.1 ohms circular slide wire devided into 200 equal parts		

21.	Energy meter 3 phase induction type, 4 wire, industrial grade, 50 Hz, 10 A, 440 Volt	1	5000
22.	Energy meter (Sub standard) 3 phase, 4 wire, 440 V, 10A, 50 Hz induction type.		
23.	Transformer single phase core type, 230/110 V, 1 KVA, 50 Hz.	1	5000
24.	Universal shunt 0 - 75 A	1	2000
25.	Current transformer 10/25/50/5A as per IS 4201/1967 and 2705/1981	1	2000
26.	Potential transformer 10 VA, 415/110 V as per IS 4201/1967 and 2705/1981	1	2000
27.	Strain guage	1	1000
28.	Maxwells bridge	1	1000
29.	Laboratory D.C. power supply (220 V) static converter input from 3 phase 50 Hz, 415 volts A.C., output rating of 200 watts to 260 watts, 50 amps, continuously varibale.	1	50,000
30.	Diesel generator set 3 phase, 415 volts, 15 kva, 50 Hz, diesel generator set, with suitable control pannel, for a stabilized supply including metering for voltage, current frequency, fuel level storage fuel tank of 200 litre capacity 12/24 volt battery for starting the engine, battery charger mounted on trolley wheels.	1	10,00,000
31.	D.C. motor generator set two identical 220 V, 1 KW 1500 rpm. compound d.c. machines with all terminals of armature, series field, shunt field separately mounted for independent connections. D.C. motor starter, field control rheostat suitable for above machines. brushes, commutator should he vissible for study purposes.	1	15,000

32.	D.C. shunt motor 220 V, 3 KW, 1500 rpm dc shunt motor with 3 point starter and ponybrake loading arrangement with loading drum, spring balance with belt.	1	10,000
33.	3 Phase variable inductive loading unit rating 400 V, 50 Hz, 0-10 Amps.	1	8000
34.	3 Phase variable capacitive loading unit: rating 400V, 50 Hz, 0-10 Amps.	1	5000
35.	3 Phase squirrel cage induction motor rating 415 V, 50 Hz, 1440 rpm 3 KW with star/Delta starter	1	1,2000
36.	Starters for squirrel cage induction motor suitable for 3KW, 415V, 50 HZ, 1440 rpm		
	a. Star/delta automatic	1	5000
	b. Star/delta manual	1	3000
37.	Starter for squirrel cage induction motor 3KW, 415 V, 50 Hz, 1440 rpm direct on line	1	3000
38.	Static speed control unit for 3 phase induction motor 3 KW, 425, 0-1500 rpm.	1	5000
39.	3 Phase synchronous motor (induction start) rating 3 KW, 3 phase, 1500 rpm, 50 Hz 415 v A.C. supply with d.c. exciter mounted on the shaft of motor with suitable starter.	1	15,000
40.	Capacitor start single phase induction motor 230 V, 50 Hz 1440 rpm, 500 watts.	1	2500
41.	Watt meter 3 phase induction type 2 element voltage range 0/300/600 V current range 0/5/10 A	1	2000
42.	Frequency meter - portable (Reed type) 45-55 Hz with 21 reeds	1	2000
	Frequency meter digital portable 3.5 digit LED display range 20-99 Hz	1	2000
43.	Phase sequence indicator (Rotary) 3 phase, 415 V, 50 Hz	1	1000
44.	Phase sequence indicator (Indicating type) 3 phase, 400 V, 50 Hz	1	1000
45.	Galvanometer centre zero response time 1.8 sec.	1	1000

46.	VAR meter 1/5 A, 300/600 V	1	2000
47.	Synchroscope - portable 230 V, 50 Hz	1	3000
48.	Loading rheostat single phase	1	3000
	a. 240 V, 2.5 KW, trolley type resistance type		
	b. 240 V, 6 KW insteps of 0.25	1	3000
49.	Lamp load 3 phase 415 V, 6 KW	1	2000
50.	Water load 3 phase 415 V, 5 KW	1	2000
51.	Capacitor bank 415 V, 0-10 A, 50 Hz trolley mounted	1	3000
52.	Wire wound rheostats		
	15 ohms, 10 A	2	1200
	100 ohms, 5 A	2	1200
	250 ohms, 5 A	2	1200
	1000 ohms, 0.5 A	2	1200
	2500 ohms, 0.1 A	2	1200
53.	Stop watch least count 0.01 Sec.	2	2000
54.	Stop watch (digital) LED	2	2000

## ELECTRONIC WORKSHOP

## PART (A)- ELECTRICAL WORKSHOP

S.No.	Name of Equipment /Board/Kit etc.	Equipment required		Rate per Piece @ Rs.	Total cost	
		Intake 30	45		Intake 30	45
1.	Coil winding Ma- chine.	2	2	5000	10000	10000
2.	Bench Drilling Machine.	1	1	5000	5000	5000
3.	Bench Lathe.	1	1	10000	10000	10000
4.	Portable Drill- ing Machine.	3	4	1500	4500	6000
5.	Multimeter (indicating typ and assorted)	4	6	1000	4000	6000
6.	Megger (1000 V) and Growler	1 each	1 each	--	4500	4500
7.	Bearing Pullers Pulley Pullers, wire gauges and blow lamps	LS	LS	--	1000	1500
8.	Ceiling fans of different types (one with solid state speed con- trol)	LS	LS	--	3000	4000
9.	Electric appli- ances (Iron, Hot Plate to Aster, immersion heater and room heater air heater, wat- er cooler	LS	LS	--	8000	10000
10.	Old burnt out ceiling fan mot- er, grinder mot- ers, D C moter armatures, and three phase ind- uction moters for winding	LS	LS	--	6000	8000
11.	Starter (3 Point 40 Point D.O.L. star/delta, auto transformer and automatic star/	LS	LS	--	6500	6500

	delta) for fault creation and rectification					
12.	Single Phase Variac (15 A)	1	2	1000	1000	2000
13.	Dynamic demonstration model of automobile electrical wiring	1	1	5000	5000	5000
14.	Spare starting motor dynamo cut out, wiper moter, ignition coil & horn for car moters	LS	LS	--	3000	4000
15.	Different types of lamps with their fittings	1 set	1 set	--	5000	5000
16.	HV support fitting & insulators	LS	LS	--	1500	2000
17.	HV cable sections and jointing materials	LS	LS	--	2000	2500
18.	Damonstrations boards on fuses, switches, conductors and electrical engg. materials(one each)	LS	LS	--	2000	2500
19.	Electric Blower	1	1	2000	2000	2000
20.	Low Voltage circuit breakers & conductors	LS	LS	--	2500	3000
21.	Wiring boards (Wodden)	LS	LS	--	5000	6000
22.	Miscellaneous tools (for servicing & cable jointing, soldering irons,neon testers etc.)	LS	LS	--	12000	15000

Total Money Required :- 103500 120500

COMPUTER CENTRE

S.No.	DESCRIPTION	QTY.	APPROX. COST (in Rs.)
1	Latest Version-Core-2 Dual Processor 62 2 MB L2 Cache, 2.4 Ghz ofr Higher 1 GB DDR2 RAM,160 GB SATA HDD,72K RPM MONITOR COLOUR 17" TFT DVD Writer, Multi Media Kit with Speaker & Microphone FDD - 1.44 MB Key Board - Multimedia Mouse - Optical Scrool Fibre Mouse 32 Bit PCI ETHERNET CARD(10/100) Mbps Internal Modem, Pen Drive 2GB, Blue Tooth Pre loaded Windows XP/2000/VISTA Pre loaded latest Anti Virus with licence media and manual with UPS 660 VA OR  Computer of latest Specification	62	20,000,00=00 (60+2Server)
2.	Lap Top (Latest Version)	04	300000.00
3.	Software :(With Licence)		
	i WINDOWS - XP/2000/VISTA		
	ii ORACLE 9i or Latest Windows based 20 USERS) & Development (Latest)		
	iii. VISUAL STUDIO (professional)		
	iv. MS OFFICE XP		
	v. COMPILER - 'C',C++, JAVA		
	vi. Unix & Linux		
	vii. Front Pange, Internet Explorer,Page Maker Corel Draw, Dream Weaver		
	viii. Personal Web Server, HTML, IIS		
	ix. Tally		
3.	Hardware		
	i. Switch-16,8,24 Port all accessories related to Networking.		100000.00
	ii.Scanner- A4/Auto lighter Scanner	02	25000.00
4.	132 Column 600 CPS or faster 9 Pin dot matrix printer with 500 million character head life	02	50000.00
5.	Laser Jet-A4,All In One (2 Each)	04	70000.00
6.	Desk Jet-A4, Photo Smart(2 Each)	04	40000.00
7.	5 KVA on line UPS with minimum 30 miniute battery backup along with sealed maintenance free batteries. Provision for connecting external batteries with network connectivity. (For 2 Labs)	04	400000.00
7.	Split Air Conditioner 1.5 tones capctity with ISI mark alongwith electronic voltage stablizer with over voltage and time delay circuit	08	300000.00
8.	Room preparation and furniture	LS	
9.	Cat-6 cabling for network	LS	
10.	2 KVA Inverter Cum UPS	02	50000.00

11. Digital Camera	01	25000.00
14. Fire Extinguisher (2 Kg.)	04	15000.00
16. Fire Extinguisher (5 Kg.)	04	30000.00
17. Vaccum Cleaner	02	15000.00
18. LCD Projector	02	200000.00
19. Pen drive 1GB, 2GB, 4 GB	10	15000.00
20. DVD writer External	02	5000.00
21. HDD External 160 GB	02	10000.00
22. PDA (Latest Configuration)	02	10000.00
23. Broadband For Internet(Speed Min. 8mbps)	04	
24. USB Modem	02	10000.00
25. Generator 10 KVA Water Coolent	01	100000.00

NOTE : All the above items should be equally distributed in the 2 computer centres

HARDWARE MAINTENANCE & PROJECT LAB

S.No.	Description	Qty.	Approximate Cost.
1.	Digital Multimeter	12	24,000
2.	Power Supply	10	30,000
3.	Latest Version-Core-2 Dual Processor 2 MB L2 Cache, 2.4 Ghz or Higher, 1 GB DDR2 RAM, 160 GB SATA HDD, 72K RPM, CD/DVD Drive	10	400000
4.	Printer (600 cps) a) Dot Matrix b) Desk Jet c) Laser	2 Each	100000
5.	Constant Voltage Transformer	4	32,000
6.	PC Card Sets (One Mother Board, 4 Cards)	2	20,000
7.	Spike Buster	10	5,000
8.	Tool Kit	10 Set	50000

7. LEARNING RESOURCE MATERIALS

1.	Overhead Projector with screen	1	--	20000
2.	35 m.m. Slide cum Film Projector	1	--	50000
3.	Audio Cassette Recorder	1	--	15000
4.	V.C.R. with Monitor & Accessories	1	--	35000
5.	Photography Camera for Production of slide and film strips, 35 mm still camera dark room equipment.	1		100000
6.	Cutting, Binding & Stitching equipment.	1	--	30000
7.	L. C. D. Projector	1	--	400000

Principles of Digital Electronics Lab. )  
Microprocessors And Applications Lab.)

S.No.	Name of the Equipment/ Board/Kit Etc.	Principles of Digital Eltx. Lab.		Micropro- cessors & Applicat- ion Lab.		Total		Total No. Recommen- ded		Rate per Piece @ Rs.	Total Cost	
		Intake 30	45	Intake 30	45	Intake 30	45	Intake 30	45		Intake 30	45
1.	CRO dual trace with delayed time base, 25 MHz or higher band width.	1	1	-	-	1	1	1	1	25000	25000	25000
2.	CRO dual trace 15 MHz.	1	2	-	-	1	2	1	2	15000	15000	30000
3.	CRO dual trace 10 MHz.	2	2	1	2	3	4	3	4	10000	30000	40000
4.	Multimeter, 20 K Ohm/volt sensitivity, 1% accuracy in D.C. voltage range, Max. D.C. voltage range 2500 V, A.C Current.	2	3	-	-	2	3	2	3	2500	5000	7500
5.	Multimeter, Digital hand held 3 1/2 digit, 0.3% accuracy 1000 V D.C. and 20 m ohm resistance range protected against transients.	2	3	1	2	3	5	3	5	2000	6000	10000
6.	Logic Probe	15	18	5	7	20	25	20	25	300	6000	7500
7.	Logic board/trainer including +5 Volt, 1Amp + 15 V, 0.3 Amp. power supply and bread board and flexible leads.	10	14	-	-	10	14	10	14	3500	35000	49000
8.	Microprocessor trainer kits with 8085 system (EC 85 or similar).	-	-	8	10	8	10	8	10	8000	64000	80000
9.	Component rack 144 tray (small) & 24 large tray.	2	2	1	1	3	3	3	3	5000	15000	15000
10.	Consumable material such as components ICs, resistors transistors etc.	LS	LS	LS	LS	LS	LS	LS	LS	--	50000	60000
11.	Miscellaneous	LS	LS	LS	LS	LS	LS	LS	LS	--	40000	45000

10.(A) Detail of Director/Principal

S.No.	Particulars	Filled by Institute	Remark by inspection Committee
i.	Name		
ii.	Qualification		
iii.	Experience		
iv.	Pay Scale		
v.	Gross Salary		

10.(B) Detail of Teaching Faculty

S.No.	Name of Faculty & Registration*	Designation	Pay scale	Date of Joining	Signature ,, of Faculty	Remark By Inspection Committee





- c. Detail of Electrical Backup if Available
  
- d. Transport Facilities For
  - i Students
  
  - ii For Staff
  
- e. Canteen If Available.
  
- f. Internet Facilities.
  
- g. Detail of Play Grounds & Other Games Facilities Available.

Recommendations :-

Signature of the Inspection Team:-

- |    |     |    |    |
|----|-----|----|----|
| 1. | 2.  | 3. | 4. |
| 5. | 6.  | 7. | 8. |
| 9. | 10. |    |    |