

**Subject: Notice Inviting Quotation for Purchase of Equipments (CAT-K)**

This institute intends to purchase of Equipments as detailed given below. Interested firm/parties are requested to send the quotation to the office of undersigned in a sealed cover super scribed “**Quotation for Equipments (CAT-K)**” on or before **10.01.2014**.

Sr. No.	Description	Qty.	Specifications
1.	Thermal input transducers	02	As per Annexure-“A”
2.	Photo-electric transducers	02	-do-
3.	Displacement transducer	02	-do-
4.	Transducers on strain, load & pressure measurement	02	-do-
5.	Hall effect sensor study kit	02	-do-
6.	Humidity sensor study kit	02	-do-
7.	Ph measurement using ph sensor	02	-do-
8.	Ultrasonic sensor application	02	-do-
9.	Rotary encoder transducer	02	-do-
10.	Piezo electric transducer	02	-do-
11.	Optical transducer trainer	02	-do-
12.	Pyro electric sensor study kit	02	-do-
13.	Proximity sensor study kit	02	-do-
14.	3 – phase Loading Rheostats	02	-do-
15.	Power Scopes	02	-do-
16.	D.C. Power Supplies	03	-do-
17.	1-Phase Loading Rheostats	02	-do-
18.	Wattmeters	06	-do-
19.	Earth Leakage Relays	02	-do-
20.	Fan Regulator Kit using diac and triac	02	-do-
21.	Single Phase Full controlled converter kit	02	-do-
22.	Power Electronics Trainer Kit Discrete	02	-do-

**Electrical Machine Lab**

23.	Single Phase half bridge inverter kit	02	-do-
24.	Single Phase Full controlled converter kit	02	-do-
25.	Jones chopper kit	02	-do-
26.	Morgan chopper kit	02	-do-
27.	Kit for DC Motor Speed Control in Closed Loop	02	-do-
28.	Soldering and de-soldering work station	02	-do-
29.	R, RC and UJT Firing Circuit Kits	02 each	-do-
30.	Single phase Variac	02	-do-
31.	3 Phase Variac	02	-do-
32.	Three phase Synchronous motor With panel	01	-do-
33.	Three phase slip ring Induction motor with blocking arrangement with control panel	01	-do-
34.	Three phase Induction motor(Squirrel cage) with control panel including Star Delta starter and blocking arrangement	01	-do-
35.	Single phase capacitor Induction motor with mechanical loading arrangement upto 125% with control panel and starter	01	-do-
36.	Three phase transformer	02	-do-
37.	Three phase Auto transformer	02	-do-
38.	Single phase Transformers	04	-do-
39.	Single phase Auto T/F	02	-do-
40.	Scott Transformers With connection arrangement	01	-do-
41.	Starter	01	-do-
42.	Phase sequence meter	01	-do-
43.	Wattmeters	08	-do-
44.	Three phase wattmeter	02	-do-
45.	Voltmeter	06	-do-
46.	Ammeter	08	-do-
47.	Load box (three phase & single phase) 02 each	04	-do-
48.	Tachometer	02	-do-
49.	Rheostat	07	-do-
50.	Loading Rheostat	01	-do-
51.	Fuses	07	-do-
52.	SPST Switch	02	-do-

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**ELECTRICAL WORKSHOP**

53.	CRO oscilloscope Dual trace Analog	02	-do-
54.	Single Phase Transformer	02	-do-
55.	Single Phase transformer	01	-do-
56.	Three Phase Transformer	01	-do-
57.	Regulated D.C. Power Supply	03	-do-
58.	Loading Rheostat single Phase in 10 Steps	02	-do-
59.	Wattmeter	04	-do-
60.	Wattmeter	02	-do-
61.	Rheostat Double Tube Sliding(kenth)	04	-do-
62.	Rheostat Double Tube Sliding(kenth)	04	-do-
63.	Microwave oven	01	-do-
64.	Microwave Training Kit	01	-do-
65.	Mixer Grinder Normal	01	-do-
66.	Electric Heat Convactor	01	-do-
67.	Heat Convactor Training kit	01	-do-
68.	Electric Water Geyser	01	-do-
69.	Electric Water Geyser Training kit	01	-do-
70.	Types of Insulators- Disc Type, Pin type, Suspension Type, Strain type	05 each	-do-
71.	Geo Switch	01	-do-
72.	Oil Tester along with oil	01	-do-
73.	Megger	01	-do-
74.	Complete Motor kit, Capacitor Motor, Shaded pole	01	-do-
75.	Lineman Tool kit with Drill machine & Tools	02	-do-
76.	Student Training Kit	08	-do-
77.	Washing Machine	01	-do-
78.	Washing Machine Training kit	01	-do-
79.	AC (Window)	01	-do-
80.	Air Conditioning Training system	01	-do-
81.	Refrigerator	01	-do-
82.	Refrigerator Model Training System	01	-do-
83.	Water Refrigerating System Control Trainer	01	-do-
84.	Clamp Meter	02	-do-
85.	Residential & Commercial Electrical Wiring Trainer	05	-do-
86.	Soldering Iron	10	-do-
87.	Digital multimeter 3 ¾	04	-do-
88.	Electric Test Pen	04	-do-

**DSP & DIGITAL ELECTRONICS LAB**

89.	Bread Board Trainer with Power Supplies (General Purpose)	10	-do-
90.	Digital Electronic Circuit Trainer (Bread Board Model)	10	-do-
91.	Logic Gates Using Six TTL IC's (6 in 1)	05	-do-
92.	Characteristics Of Operational Amplifier (discrete Component Trainer)	05	-do-

**Note:** It may be noted that quotation received only through REGISTERED/SPEED post shall be considered. The institute is located in remote area and it takes 5 to 7 days to reach the mail, therefore, quotation be dispatched well in time considering this factor.

**N.B.:**

1. Rate of ST/VAT if extra must be mentioned clearly.
2. Price quoted must be FOR SLIET.
3. Quotation received later than due date are liable to be ignored/rejected.
4. Other terms and condition for submitting the quotation are given on overleaf which must be read carefully before submitting the quotation.
5. We are not responsible for accidental opening of the cover if it is not properly super scribed and sealed.
6. Quotation must be submitted on letter head of the firm with all particular, any other format will not be acceptable.

**Faculty I/c,Purchase**

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**TERMS & CONDITIONS FOR QUOTATION**

<b>DELIVERY</b>	The rate quoted must preferably be free delivery/F.O.R. Longowal after allowing the discount, if any. Where quoted extra advalorem rate payable should clearly be indicated. Supply should be made within the specified delivery period.
<b>TERMS OF PAYMENT</b>	Our normal terms of payment is within 30 days after receipt of stores in good condition by means of cheque/draft/RTGS
<b>TAXES</b>	No sales tax concession against Form C and 'D' is admissible to this Institute. However, <b>form of</b> certificate being an educational institute can be issued if sales tax concession is admissible.
<b>EXEMPTIONS</b>	Excise and customs duties are exempted to the institute. The relevant exemption certificate will be issued to the successful bidder only if the excise duty/custom duty is exclusively mentioned in the Quotation.
<b>DIRECTOR'S RIGHTS</b>	Director, SLIET, reserves the rights of acceptance or rejection of any or all quotations. The discretion for increasing or decreasing of the quantities also rests with him. SLIET also not bind itself to accept does the lowest price. In case of any dispute, the decision of Director SLIET will be final & binding.
<b>VALIDITY OF QUOTATIONS</b>	Quotations will be considered valid for 3 months from the date of receipt.
<b>CORRESPONDENCE</b>	No correspondence regarding acceptance/rejection of a quotation will be entertained.
<b>SAMPLE/BRAND/MAKE/WEIGHT</b>	Sample where asked for, will invariably be made available and sent along with the quotations. However, Brand/Make/Weight etc. must be mentioned clearly in the quotations. Technical literature/pamphlet should also be enclosed.
<b>REJECTION</b>	Quotation not confirming to the set procedure as above will be rejected.
<b>DISCOUNT/REBATES</b>	A special discount/rebate wherever admissible keeping in view that the supplies are being made for education purpose in respect of Public Institution of national importance may please be indicated.
	Conditional, telegraphic quotation shall be rejected out rightly.
	SLIET shall not be held responsible for any postal delay in sending or late receipt of quotation.
	Quotation should be free from corrections & erasures.
	<b>Faculty I/c, Purchase</b>

## Deptt. of EIE

S. No.	Name of Equipment with Specification	Qty
01	THERMAL INPUT TRANSDUCERS <ul style="list-style-type: none"> <li>• Thermocouple Sensor</li> <li>• Thermistor Sensor R.T.D. Sensor</li> <li>• Semiconductor Temperature Sensor</li> </ul>	02
02	PHOTO-ELECTRIC TRANSDUCERS <ul style="list-style-type: none"> <li>• Photoconductive Transducers</li> <li>• Photo-Diode Transducers</li> <li>• Phototransistor Transducers</li> <li>• Opto-Coupler Transducers</li> <li>• Optical Intensity Measurement Transducers</li> </ul>	02
03	DISPLACEMENT TRANSDUCER <ul style="list-style-type: none"> <li>• Potentiometric Displacement Transducers</li> <li>• Capacitive Displacement Transducer &amp; Applications</li> <li>• Capacitive Proximity Sensor Study kit</li> <li>• Inductive Displacement Transducers</li> <li>• L.V.D.T. Transducers</li> </ul>	02
04	TRANSDUCERS ON STRAIN, LOAD & PRESSURE MEASUREMENT <ul style="list-style-type: none"> <li>• Strain Gauge Transducers</li> <li>• Load Cell Transducers</li> <li>• Pressure Transducers</li> </ul>	02
05	HALL EFFECT SENSOR STUDY KIT	02
06	HUMIDITY SENSOR STUDY KIT	02
07	pH MEASUREMENT USING pH SENSOR	02
08	ULTRASONIC SENSOR APPLICATION	02
09	ROTARY ENCODER TRANSDUCER	02
10	PIEZO ELECTRIC TRANSDUCER	02
11	OPTICAL TRANSDUCER TRAINER	02
12	PYRO ELECTRIC SENSOR STUDY KIT	02
13	PROXIMITY SENSOR STUDY KIT	02
14	<b>3 – phase Loading Rheostats</b> <ul style="list-style-type: none"> <li>• 440 V/15A,</li> <li>• Ten Steps (1.5A each)</li> <li>• With loading continuously up to 30 minutes (minimum) or for more time.</li> <li>• Maximum temperature rise is 375°C</li> <li>• Ambient temperature is 0 to 70°C</li> </ul>	02
15	<b>Power Scopes</b> <ul style="list-style-type: none"> <li>• Two-in-one operation normal and differential mode</li> <li>• Differential inputs 1500V max.</li> <li>• Dual Channel DC to 30 MHz, 2 mV</li> </ul>	02

	<ul style="list-style-type: none"> <li>• Timebase 20ns-0.2s ; variable hold off 10:1, x10 magnification</li> <li>• Triggering DC-50 MHz</li> <li>• Component Tester , 2 level calibrator</li> <li>• Overscan Indicator</li> <li>• Digital Frequency Readout</li> </ul>	
16	<p><b>D.C. Power Supplies</b></p> <ul style="list-style-type: none"> <li>• 0-100 Volt, 5 A</li> <li>• Current Limit Adjustable from 5% to 110% of Specified Load Current.</li> <li>• Two Completely Isolated outputs can be configured in Series or Parallel to Enhance Voltage or Current Output Capacity Respectively.</li> <li>• Regulation : Voltage (CV) : Load &amp; Line : <math>\pm 0.01</math> % max. : Current (CC) : Load &amp; Line : <math>\pm 0.05</math>% max. Ripple : CV : 1 mV (r. m. s.) Max., : CC: 0.03% Amp. (r. m. s.) Max.,</li> <li>• Protected Against Overload &amp; Short Circuit by Means of Automatic Crossover Characteristics.</li> <li>• Externally Programmable Output Voltage.</li> <li>• Remote Sensing for Distantly Situated Loads</li> <li>• Continuous Metering of Output Voltage &amp; Current.</li> <li>• Input Voltage: 230V AC <math>\pm 10\%</math>, 50Hz, Single Phase.</li> <li>• Operating Temperature Range: 0 to 55<sup>0</sup> C.</li> </ul>	03
17	<p><b>1-Phase Loading Rheostats</b></p> <ul style="list-style-type: none"> <li>• 230 V/15A,</li> <li>• Ten steps (1.5A, each)</li> <li>• With loading continuously up to 30 minutes (minimum) or for more time.</li> <li>• Maximum temperature rise is 375°C</li> <li>• Ambient temperature is 0 to 70°C</li> </ul>	02
18	<p><b>Wattmeters</b></p> <ul style="list-style-type: none"> <li>• 110/220/440 V,</li> <li>• 15/30 A,</li> <li>• Teakwood casing</li> <li>• Table Top</li> </ul>	06
19	<p><b>Earth Leakage Relays</b></p> <ul style="list-style-type: none"> <li>• 3-Phase,</li> <li>• 440V, 50Hz A.C. Supply</li> </ul>	02
20	<p><b>Fan Regulator Kit using diac and triac :</b></p> <p>Shall be able to operate 60 W fan from single phase AC supply in the range of very low to rated speed smoothly, showing the circuit schematic on the display with all its test points, equipped with proper resolution ammeter and voltmeter for current and voltage measurements and laboratory manual of the kit mentioning all the specifications of the kit and its experiment procedure.</p>	02

21	<p><b>Single Phase Full controlled converter kit:</b></p> <p>Shall be able to control a 500 W load from single phase AC supply in the full range of firing angle of the thyristor smoothly, showing the circuit schematic on the display with all its test points, equipped with proper resolution ammeter and voltmeter for current and voltage measurements and laboratory manual of the kit mentioning all the specifications of the kit and its experiment procedure.</p>	02
22	<p><b>Power Electronics Trainer Kit Discrete:</b></p> <p>Shall be able to control a 500 W load from single phase AC supply in the full range of firing control of the switches such as thyristor, Triac, UJT, IGBT, MOSFET smoothly, having connectivity of all the components and its test points, equipped with proper resolution ammeter and voltmeter for current and voltage measurements and laboratory manual of the kit mentioning all the specifications of the kit along with various experiments to be performed and its experiment procedure.</p>	02
23	<p><b>Single Phase half bridge inverter kit:</b></p> <p>Shall be able to control a 500 W load from single phase AC supply in the full range of firing control of the switching device (preferably IGBT) smoothly, showing the circuit schematic on the display with all its test points, equipped with proper resolution ammeter and voltmeter for current and voltage measurements and laboratory manual of the kit mentioning all the specifications of the kit and its experiment procedure.</p>	02
24	<p><b>Single Phase Full controlled converter kit:</b></p> <p>Shall be able to control a 500 W load from single phase AC supply in the full range of firing angle of the thyristor smoothly, showing the circuit schematic on the display with all its test points, equipped with proper resolution ammeter and voltmeter for current and voltage measurements and laboratory manual of the kit mentioning all the specifications of the kit and its experiment procedure.</p>	02
25	<p><b>Jones chopper kit :</b></p> <p>Shall be able to control a 500 W load from single phase AC supply in the full range of firing control of the switching device smoothly, showing the circuit schematic on the display with all its test points, equipped with proper resolution ammeter and voltmeter for current and voltage measurements and laboratory manual of the kit mentioning all the specifications of the kit and its experiment procedure.</p>	02
26	<p><b>Morgan chopper kit :</b></p> <p>Shall be able to control a 500 W load from single phase AC supply in the full range of firing control of the switching device smoothly, showing the circuit schematic on the display with all its test points, equipped with proper resolution ammeter and voltmeter for current and voltage measurements and laboratory manual of the kit mentioning all the specifications of the kit and its experiment procedure.</p>	02
27	<p><b>Kit for DC Motor Speed Control in Closed Loop :</b></p> <p>Shall be able to control a 1/4 hp DC Motor in the closed loop operation, firing control of the switching device for full range speed variation smoothly, operated from single phase AC supply, showing the circuit schematic on the display with all its test points, equipped with proper resolution ammeter and voltmeter for current and voltage measurements, a test motor and laboratory manual of the kit mentioning all the specifications of the kit and its experiment procedure.</p>	02



28	<b>Soldering and de-soldering work station :</b> Shall be capable of smooth and accurate soldering and de-soldering of the electronic circuits, shall have its work bench and soldering rod holder.	02
29	<b>R, RC and UJT Firing Circuit Kits :</b> Shall be able to demonstrate the R, RC and UJT firing circuits separately for the thyristors and shall be operated from single phase AC supply, firing control of the switching device shall be in the its full range, showing the circuit schematic on the display with all its test points, equipped with proper resolution ammeter and voltmeter for current and voltage measurements and laboratory manual of the kit mentioning all the specifications of the kit and its experiment procedure.	02 each
30	<b>Single phase Variac</b> (0-270 V, 15 A) with circular moving contact and over load protection supplied from 230 V AC mains	02
31	<b>3 Phase Variac</b> (0-440 V, 25 A rating) with circular moving contact and over load protection supplied from 400 V 3 phase AC mains	02

### Electrical Machine Lab

S.N.	Item	Specifications	Qty
1	Three phase Synchronous motor With panel	3KVA,415V,3.5A,1500 rpm excitation 220V, 1.4A	1
2	Three phase slip ring Induction motor with blocking arrangement with control panel	3H.P,415V,7.8A,1500rpm,50Hz, horizontal foot, class B insulation	1
3	Three phase Induction motor(Squirrel cage) with control panel including Star Delta starter and blocking arrangement	3-phase 3HP,415V,1500rpm,8A 50Hz. T.E.F.C. horizontal foot, class B insulation	1
4	Single phase capacitor Induction motor with mechanical loading arrangement upto 125% with control panel and starter	1.0/1.5H.P,230V,1500rpm,50Hz	1
5	Three phase transformer	1KVA,415V,3A, (Provisions with star and Delta connection)	2
6	Three phase Auto transformer	415/0-470V,15A(wire wound)	2
7	Single phase Transformers	3KVA,230/115V,50Hz 2KVA,230/110V,50Hz	2 2
8	Single phase Auto T/F	230/0-270V,16A(wire wound)	2
9	Scott Transformers With connection arrangement	1KVA,230/115V4.34A (I/P)	1
10	Starter	D.O.L	1
11	Phase sequence meter	500V	1
12	Wattmeters	2.5A/300V(LPF) 10A/150V(UPF) 5A/300V(LPF) 10A/75V(UPF) 20A/300V(UPF) 10A/300V(UPF)	1 1 1 1 1 1

		5/10A,125/250/500V	2
13	Three phase wattmeter	5A/500V(LPF and UPF)	2
14	Voltmeter	0-300V(M.I.) 0-250V(M.I.) 0-150V(M.I.) 0-50V(M.I.) 0-500V(M.I.)	2 1 1 1 1
15	Ammeter	0-2A (M.C.) 0-2.5A(M.I.) 0-5A(M.I.) 0-10A(M.I.) 0-20A(MI)	2 1 2 1 2
16	Load box three phase single phase	230V/0-15A( Rheostat) 230V/0-15A( Rheostat)	2 2
17	Tachometer	0-50000rpm (Digital)	2
18	Rheostat	250ohm,1.5A(wire wound) 400ohm,8A.(double tube)	1 6
19	Loading Rheostat	2KVA 1.5A per step	1
20	Fuses	5A 10A	4 (3Nos6)
21	SPST Switch	20A	2

## Electrical Workshop

S.No	Name of Equipment	Specifications	Qty
1.	CRO oscilloscope Dual trace Analog	20MHZ	2
2.	Single Phase Transformer	1KVA, 230/115v	2
3.	Single Phase transformer	2KVA, 230/115V	1
4.	Three Phase Transformer	5kVA, 415V	1
5.	Regulated D.C. Power Supply	0-100V, 3A	3
6.	Loading Rheostat single Phase in 10 Steps	Load per Step 1.5Amp	2
7.	Wattmeter	110v/220/440v 2.5/5A	4
8.	Wattmeter	300/600V 5/10A	2
9.	Rheostat Double Tube Sliding(kenth)	150ohm, 3A	4
10.	Rheostat Double Tube Sliding(kenth)	110ohm, 3A	4
11.	Microwave oven	26 Litre	1
12.	Microwave Training Kit	20 ltr, 220V, 50HZ, Input power - 1180W, zOutput Power-700W	1
13.	Mixer Grinder Normal	220V, 50 HZ	1
14.	Electric Heat Convector	2000W	1
15.	Heat Convector Training kit	2000W	1
16.	Electric Water Geyser	25 Litre	1
17.	Electric Water Geyser Training kit	20 Litre	1
18.	Types of Insulators- Disc Type, Pin type, Suspension Type, Strain type	Rated for upto 440V	5 each
19.	Geo Switch	440V, 1000A	1
20.	Oil Tester along with oil	0-5 KV p.a.,11 KV	1
21.	Megger	5KV (0-5KV) range	1

22.	Complete Motor kit, Capacitor Motor, Shaded pole	200Watt, 230V 80W,230V	1
23.	Lineman Tool kit with Drill machine & Tools	Standard	2
24.	Student Training Kit	Plier, Screw Driver, Tester Pen, Filer, Poker, Hammer, Nose Plier with small drill machine	8
25.	Washing Machine	7 Kg (Top Loading)	1
26.	Washing Machine Training kit	6 Kg	1
27.	AC (Window)	1.5 Ton	1
28.	Air Conditioning Training system	Main Display are: - Compressor, Condenser, Capillary Tube, and Evaporator.	1
29.	Refrigerator	165 Litre (Frost Free)	1
30.	Refrigerator Model Training System	Refrigerator components on the front panel of the system. Demonstrates four major elements, Condenser, Compressor, Evaporator, and Capillary Tube located at the rear side of the system.	1
31.	Water Refrigerating System Control Trainer	control components of chilled water unit were placed on the panel layout, The input vapor-pressure, which is divided into 3 mimic pressures like low- pressure, high-pressure and oil pressure,	1
32.	Clamp Meter	AC current - 0.1A to 1000A Insulation test - 100k $\Omega$ to 2000m $\Omega$ (with option 500v insulation tester unit ) AC Voltage - 1V to 750V DC Voltage - 1V to 1000V Resistance -100m $\Omega$ to 20k $\Omega$ Continuity test - 50+-25 $\Omega$ with audio tone	2
33.	Residential & Commercial Electrical Wiring Trainer	Residential and Commercial Electrical Wiring Trainer is double-sided and designed to teach and experiment in the field of residential and commercial electricity, as well in various building services in compliance with standards	05
34.	Soldering Iron	25W	10
35.	Digital multimeter 3 $\frac{3}{4}$	3 $\frac{3}{4}$	4
36.	Electric Test Pen	Standard	4

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**DSP & Digital Electronics Lab**

Sl. No.	Name of items with specifications	Qty
1	<p><b>Bread Board Trainer with Power Supplies (General Purpose)</b></p> <p>Features :</p> <p>Basic trainer for students to perform experiments of analog electronics Glass Epoxy PCB used as front panel of 270mm x 170mm &amp; mounted on light weight shock proof plastic cabinet</p> <p>On board power supplies &amp; Bread board mounted Supplied with connecting wires 4 Nos horizontally common strips(100 Tie points each)</p> <p>Power requirement : 220 VAC +/-10% , 50 Hz</p> <p>Standard Accessories :</p> <p>Set of components, 2 mtr. hookup wire, 5 nos. Patch Chords with 4mm banana plug on one end, Power Chord &amp; Instruction Manual</p>	10
2	<p><b>Digital Electronic Circuit Trainer (Bread Board Model)</b></p> <p>Features :</p> <p>Basic trainer for students to perform basic experiment of digital electronics Glass Epoxy PCB used as front panel of 300mm x 220mm &amp; mounted on light weight shock proof plastic cabinet</p> <p>On board power supplies &amp; pulse generator/clock &amp; Bread board mounted Supplied with connecting wires</p> <p>Technical Specifications :</p> <p>DC Regulated Power Supplies</p> <p>Output voltages: One fixed DC regulated power supply of 5V/1Amp</p> <p>: One fixed output DC regulated power supply of +15V / 500mA</p> <p>Load regulation : + 0.2%</p> <p>Line regulation : + 0.05%</p> <p>Ripple : Less than 3mV RMS</p> <p>Protections : Short circuit &amp; over load protected</p> <p>Pulse Generator/Clock</p> <p>Operating modes: Square 1Hz to 10KHz (1Hz, 1KHz, &amp; 10KHz, selectable)</p> <p>Clock: 1Hz monoshot</p> <p>On Board Switches/LED/Display</p> <p>2 nos. Push to on Pulser Switches</p> <p>10 Nos toggle switches for logic input</p> <p>10 Nos. LED Display for logic output</p> <p>1 Nos. Seven Segment Display &amp; 3.5 Digit Dual range voltmeter selectable (2V/20V)</p> <p>Bread Board Strips</p> <p>2 Nos vertically common strips (640 Tie points each)</p> <p>4 Nos horizontally common strips(100 Tie points each)</p> <p>Power requirement: 220 VAC +10% , 50 Hz</p>	10

	<p>Standard Accessories : 5 mtr.hookup wire, 18 nos. Patch Chords with 4mm banana plug on one end,  Power Chord &amp; Instruction Manual</p>	
3	<p><b>Logic Gates Using Six TTL IC's (6 in 1)</b> <b>Technical Specifications :</b> Inbuilt Fixed / Variable DC Regulated Power Supply Output Voltages : 5VDC  IC's &amp; Components Provided IC : 7408, 7432, 7404, 7486, 7400, 7402  Logic Input (0 &amp; 1) : 2 Nos ( Each) Output Indicator : 1 Nos. Glass Epoxy PCB used as front panel of 270mm x 170mm &amp; mounted on light weight shock proof plastic cabinet Circuit diagram printed on Glass Epoxy PCB &amp; all important IC's &amp; test points are brought out on front panel Power requirement : 230 VAC +/-10%, 50Hz. Standard Accessories : Power chord, Patch chords &amp; Instruction manual.</p>	5
4	<p><b>Characteristics Of Operational Amplifier (discrete Component Trainer)</b>  Technical Specifications : Inbuilt Fixed / Variable DC Regulated Power Supplies Output Voltages : +15VDC : 0-2VDC IC , Diode &amp; Components Provided IC : 741 Potentiometers Resistances High quality Aluminum used as front panel of 270 mm x 170mm &amp; mounted on light weight shock proof plastic cabinet Symbol diagram printed on Aluminum Front Panel &amp; all important test Points  Are brought out on front panel Power requirement : 230 VAC +/-10%, 50Hz.  Standard Accessories : Power chord, Patch chords &amp; Instruction manual. Operational Amplifier Trainer Technical Specifications : Inbuilt Fixed DC Regulated Power Supplies Output Voltages : 0-5VDC (2Nos.)</p>	5

	<p style="text-align: center;">: +12VDC</p> <p>IC's, Transistor &amp; Components Provided</p> <p>IC : 741</p> <p>Transistor : CL 100 (NPN)</p> <p>Resistances</p> <p>Capacitors</p> <p>High quality Aluminum used as front panel of 270 mm x 170mm &amp; mounted on light weight shock proof plastic cabinet</p> <p>Circuit diagram printed on Aluminum Front Panel &amp; all important test Points are brought out on front panel</p> <p>Power requirement : 230 VAC +/-10%, 50Hz.</p> <p>Standard Accessories: Power chord, Patch chords &amp; Instruction manual.</p>	
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