



COMSATS University Islamabad (CUI), Lahore Campus

Defence Road, Off Raiwind Road, Lahore

Tender No. CUI-LHR-TN-13-19-1294

Case # 2864

Single Stage One Envelop Procedure

Title of Tender: **Lab Items for Lab of Electrical & Computer Engineering Department, CUI-Lahore Campus**

TERMS AND CONDITIONS

- 1. All pages of bidding documents are mandatory to be signed / stamped, meaning thereby bidder agrees to our terms & conditions mentioned herein, failing which the bid may be rejected.*
- 2. Any addition, deletion or modification of any clause of the procurement terms & conditions/BoQs of CUI, Lahore Campus by any vendor will not be acceptable and may lead to rejection of the bid.*
- 3. Only registered Suppliers, who are on Active Taxpayers List (ATL) of FBR, are eligible to participate in tender.*
4. The contract will be executed and handed over in satisfactory conditions up to the entire satisfaction of COMSATS University Islamabad, Lahore Campus.
5. Documents along with Pay Order / Demand Draft amounting to **Rs. 500/-** as a tender document fee (Non-Refundable) shall be submitted in favor of COMSATS University Islamabad, Lahore Campus to the address given below. No bid will be accepted without tender documents' fee.
6. Part / Advance payments is not allowed.
- 7. The exact completion/delivery time from the date of the purchase / work order will be 10 days. The handing over / completion time for this contract is of critical importance.**
8. Your bid proposal should be inclusive of freight and all other taxes and to be delivered at CUI, Lahore Campus's premises.
9. After opening of bids, CUI, Lahore Campus will examine the bids for completeness as per tender document.
10. Purchase order (s) will be awarded to the lowest or technically recommended bidder (s) on the basis of item wise / subtotal wise / grand total wise according to the nature of BoQs.
11. The bid should be submitted in a sealed envelope up to **October 02, 2019** on or before **1400hrs** and will be opened on the same date **at 1430hrs** in the presence of available bidders.
12. The envelope should be marked as under;

Secretary, Purchase Committee
COMSATS University Islamabad, Lahore Campus
Defence Road, Off Raiwind Road, Lahore.
Tel: 042-111-001-007, Ext: 875

The envelope shall also bear the word “**CONFIDENTIAL**” and following identification quotation of **“Lab Items for Lab of Electrical & Computer Engineering Department, CUI-Lahore Campus”**.

13. The bid form (BoQs) must be duly filled in, stamped and signed by the authorized representative of the bidder.
14. **If the vendor fails to deliver the goods / services to CUI-Lahore Campus in time then the penalty will be charged as under:-**
 - a. 1% per day of the invoice price for 5 working days.
 - b. 2% per day of the invoice price for further 5 working days.
 - c. If the vendor fails to deliver the goods / services during the extended period then the purchase / work order may be cancelled, earnest money and payment may be forfeited.
15. If the delivered goods / services are not according to the required quality standards / specifications, the same shall be liable to be rejected after inspection. The vendor would be required to supply as per requirements mentioned in our BoQs, otherwise the purchase / work order will be cancelled after due date with confiscation of earnest money.
16. Deduction of Income Tax and any other tax will be deducted at source according to Government prevailing rules.
17. Payment will be made on submission of Invoice in the name of “COMSATS University Islamabad, Lahore Campus” with a copy of delivery challan (s) after the complete order has been supplied, inspected and accepted which includes delivery / installation, and COMSATS acceptance / inspection thereof.
18. All prices should be quoted on **F.O.R (Pak Rupees) inclusive of all taxes.**
19. All prices should be valid for at least **60 days.** Withdrawal or any modification of the original offer within the validity period shall entitle CUI-Lahore Campus to forfeit the earnest money in favor of the CUI-Lahore Campus and / or put a ban on such vendor participation in CUI tenders / works.
20. It is the sole responsibility of the agent / supplier / manufacturer to comply with the applicable laws, be national or international.
21. In case of any dispute or grievance, the matter shall be addressed as per PPRA rules.
22. The CUI-Lahore Campus reserves the right to modify the quantities of goods / services at any time before the award of purchase / work order.
23. **The bidder is required to furnish in form of Bank deposit/ CDR / Pay order equivalent to 2% of the total Bid price as Earnest Money crossed in favor of “COMSATS University Islamabad, Lahore Campus”.**
24. COMSATS University Islamabad, Lahore Campus reserves the rights to reject the bid if;
 - i. Received without earnest money
 - ii. Received later than the date and time fixed for tender submission
 - iii. The tender is unsigned/ unstamped
 - iv. The offer is ambiguous
 - v. The offer is conditional
 - vi. The offer is from a firm, which is black listed by any Govt. Office.
 - vii. The offer is received by telephone/telex/fax/telegram.
 - viii. Any unsigned / ambiguous erasing, cutting / overwriting etc. is made.

25. The bidder should furnish a certificate as worded below in token of acceptance of all the terms and conditions of the tender otherwise the tender will not be considered under any circumstances.
26. The undersigned affirm that the terms and conditions as contained in this document have been read and accepted and that in the event of selection of my/our rate the agreement in the prescribed form will be entered into:

- **Company / Vendor Name:**.....
- **Postal Address:**.....
- **Tel. / Mobile:**.....**Email:**.....
- **NTN#:**.....**GST#:**.....
- **Signature:**
- Please also attach the Certificate supporting being Active Taxpayer as per requirement of FBR.

BoQs of Lab Items for Lab of Electrical & Computer Engineering Department, CUI-Lahore Campus

Vendors are required to provide both unit and total price of each item and calculations must be made carefully to avoid mistakes. However, in case, total price does not match with the unit price and quantity due to calculation error or typo error, any of the following can be opted

1. The bid may be rejected on the reason of ambiguity (OR)
2. Unit price will be considered as final and total price of the respective item will be calculated by multiplying it with the quantity required. Sub-totals and grand total will also be corrected accordingly.

No change in the BoQs (Specs & Qty.) of CUI-Lahore Campus, as detailed below, is allowed. Any additional information may be mentioned in the blank columns (i.e. model / brand or Price). Any modification in CUI-Lahore Campus BoQ may lead to rejection of bid (fully or partially).

Prices to be quoted inclusive of all Taxes

Sr. #	Item Name & Specifications		Qty		Quoted Model / Make	Unit Price (Rs.)	Total Price (Rs.)
	Electric Machines Lab						
1	Push Buttons	N/A	10	Nos.			
2	Battery	9V	10	Nos.			
3	Cells	1.5V	50	Nos.			
4	Brush	2"	2	Nos.			

5	Fuse	2A	500	Nos.			
Sub Total Amount (Rs.)							
Communication Systems Lab							
6	IC	84CN or equivalent	20	Nos.			
7	IC	82CP or equivalent	20	Nos.			
8	IC	81CP or equivalent	20	Nos.			
9	IC	7408 or equivalent	20	Nos.			
10	IC	LM6171 or equivalent	10	Nos.			
11	IC	LF 398 (amplifier DIP8) or equivalent	24	Nos.			
12	Resistor	1 Ω , 1 Watt	200	Nos.			
13	Resistor	100 Ω , 1 Watt	200	Nos.			
14	Resistor	220 Ω , 1 Watt	200	Nos.			
15	Resistor	0.5K Ω , 1 Watt	200	Nos.			
16	Resistor	1k Ω , 1 Watt	200	Nos.			
17	Resistor	2.2k Ω , 1 Watt	200	Nos.			
18	Resistor	3.3K Ω , 1 Watt	200	Nos.			
19	Resistor	5.6K Ω , 1 Watt	200	Nos.			
20	Resistor	6.8K Ω , 1 Watt	200	Nos.			
21	Resistor	7.5K Ω , 1 Watt	200	Nos.			

22	Resistor	10K Ω , 1 Watt	200	Nos.			
23	Resistor	22K Ω , 1 Watt	200	Nos.			
24	Resistor	33K Ω , 1 Watt	200	Nos.			
25	Resistor	100K Ω , 1 Watt	200	Nos.			
26	Resistor	220K Ω , 1 Watt	200	Nos.			
27	Resistor	470K Ω , 1 Watt	200	Nos.			
28	Resistor	560K Ω , 1 Watt	200	Nos.			
29	Capacitor	10 PF	100	Nos.			
30	Capacitor	20 PF	100	Nos.			
31	Capacitor	100 PF	100	Nos.			
32	Capacitor	1000 PF	100	Nos.			
33	Capacitor	1 nF	100	Nos.			
34	Capacitor	0.01 uf	100	Nos.			
35	Capacitor	0.03 uf	100	Nos.			
36	Capacitor	0.05 uf	100	Nos.			
37	Capacitor	0.1 uf	100	Nos.			
38	Capacitor	0.3 uf	100	Nos.			
39	Capacitor	1uf	100	Nos.			
40	Capacitor	1000uf	100	Nos.			

41	Diode	IN 4148 or equivalent	100	Nos.			
42	Diode	IN 4007 or equivalent	100	Nos.			
43	Zener Diode	8 v	50	Nos.			
44	Wire	Jumper Wire	2	Kg			
45	Transistor	3906 or equivalent	100	Nos.			
46	Transistor	3904 or equivalent	100	Nos.			
47	Transistor	BC107 or equivalent	100	Nos.			
48	Transistor	BC547 or equivalent	100	Nos.			
49	Transistor	2N2222 or equivalent	100	Nos.			
50	Inductor	0.1 uH	100	Nos.			
51	Inductor	22 uH	100	Nos.			
52	Cable	BNC to Crocodile	10	Nos.			
53	Cable	Banana Plugs To Crocodile Clamps Test Leads Line DC Power Supply	20	Nos.			
54	Cable	Banana to Banana Plug Test Cable	20	Nos.			
55	CMOS Cell	2032 or equivalent	10	Nos.			
Sub Total Amount (Rs.)							

Antenna / Microwave Lab						
56	Power Supply Adapter	Mod SD-0505010 or equivalent Input AC 100-240 V (50Hz to 60Hz) Output DC = 5V 100mA	3	Nos.		
57	Double Side Tape	NA	2	Nos.		
58	Thinner	NA	2	Nos.		
59	USB	8GB	1	No.		
60	USB Extension Cable	NA	3	Nos.		
61	WD40	NA	2	Nos.		
62	Register	NA	1	No.		
63	Batteries	7Amp Dry Batteries	2	Nos.		
Sub Total Amount (Rs.)						
Power / Industrial Electronics Lab						
64	Soldering Wire	60/40 0.8mm 100G Tin Lead Rosin Core Solder Flux Soldering Wire	2	Nos.		
65	Glass Fuse	5 x 20mm , 10A	100	Nos.		
66	Glass Fuse	5 x 20mm , 4A	100	Nos.		
67	Glass Fuse	5 x 20mm , 630mA	100	No.		
68	Cable Tie 12"	12"	1	Nos.		
69	Battery Rechargeable	9v	15	Nos.		

70	Jumper Wire	Male to Male Connector	5	Nos.			
71	Jumper Wire	Roll for bread board	2	Nos.			
72	Diode	IN 5408 or equivalent	200	Nos.			
73	Diode	IN 4148 or equivalent	200	Nos.			
74	Diode	IN 4007 or equivalent	200	Nos.			
75	Thyristor	BT151 or equivalent	100	Nos.			
76	Thyristor	BT152 or equivalent	100	Nos.			
77	Thyristor	TIC106 or equivalent	100	Nos.			
78	Zener Diode	6V2	50	Nos.			
79	Diode (GERMANIUM)	AA113 or equivalent	50	Nos.			
80	UJT	2N2646 or equivalent	50	Nos.			
81	PUT	2N6027 or equivalent	50	Nos.			
82	SCR	C106D or equivalent	100	Nos.			
83	SCR	MCR 100-5 or equivalent	100	Nos.			
84	SCR	TIC47 or equivalent	50	Nos.			
85	TRIAC	Z0405MF or equivalent	50	Nos.			
86	DIAC	D3202 or equivalent	50	Nos.			

87	MOSFET	IRF 9640 or equivalent	100	Nos.			
88	MOSFET	IRF 740 or equivalent	100	Nos.			
89	MOSFET	IRF 540 or equivalent	100	Nos.			
90	THYRISTOR	BT 151 or equivalent	100	Nos.			
91	THYRISTOR	BT 152 or equivalent	100	Nos.			
92	TRANSISTOR	BC 337 or equivalent	100	Nos.			
93	TRANSISTOR	BC 327 or equivalent	100	Nos.			
94	TRANSISTOR	2N3904 or equivalent	100	Nos.			
95	TRANSISTOR	2N3906 or equivalent	100	Nos.			
96	Laminated copper Wire	36/38 SWG	2	Nos.			
97	Ferrite Core "O Shape"	As per Sample	100	Nos.			
98	POT	10K	100	Nos.			
99	POT	100K	100	Nos.			
100	Variable power supply connector (Male)	As per Sample	100	Nos.			
101	Capacitor	1uf , 50v, Non Polar	100	Nos.			
102	Capacitor	3.3uf , 50v, Non Polar	100	Nos.			
103	Capacitor	10uf , 50v, Non Polar	100	Nos.			
104	Capacitor	33uf , 50v, Non Polar	100	Nos.			

105	Capacitor	47uf , 50v, Non Polar	100	Nos.			
106	Capacitor	56uf , 50v, Non Polar	100	Nos.			
107	Capacitor	10uf , 50v, Non Polar	100	Nos.			
108	Capacitor	22uf , 50v, Non Polar	100	Nos.			
109	Capacitor	33uf , 50v, Non Polar	100	Nos.			
110	Capacitor	47uf , 50v, Non Polar	100	Nos.			
111	Capacitor	56uf , 50v, Non Polar	100	Nos.			
112	Capacitor	100uf , 50v,Non Polar	100	Nos.			
113	Capacitor	220uf , 50v,Non Polar	100	Nos.			
114	Capacitor	330uf , 50v, Non Polar	100	Nos.			
115	Capacitor	470uf , 50v, Non Polar	100	Nos.			
116	Capacitor	560uf , 50v, Non Polar	100	Nos.			
117	Capacitor	1000uf , 50v, Non Polar	100	Nos.			
118	Capacitor	2200uf , 50v, Non Polar	100	Nos.			
119	Capacitor	1uf , 50v, Polar	100	Nos.			
120	Capacitor	3.3uf , 50v, Polar	100	Nos.			
121	Capacitor	10uf , 50v, Polar	100	Nos.			
122	Capacitor	33uf , 50v, Polar	100	Nos.			
123	Capacitor	47uf , 50v, Polar	100	Nos.			

124	Capacitor	56uf , 50v, Polar	100	Nos.			
125	Capacitor	10uf , 50v, Polar	100	Nos.			
126	Capacitor	22uf , 50v, Polar	100	Nos.			
127	Capacitor	33uf , 50v, Polar	100	Nos.			
128	Capacitor	47uf , 50v, Polar	100	Nos.			
129	Capacitor	56uf , 50v, Polar	100	Nos.			
130	Capacitor	100uf , 50v, Polar	100	Nos.			
131	Capacitor	220uf , 50v, Polar	100	Nos.			
132	Capacitor	330uf , 50v, Polar	100	Nos.			
133	Capacitor	470uf , 50v, Polar	100	Nos.			
134	Capacitor	560uf , 50v, Polar	100	Nos.			
135	Capacitor	1000uf , 50v, Polar	100	Nos.			
136	Capacitor	2200uf , 50v, Polar	100	Nos.			
137	Crocodile Connector	Red Colour	100	Nos.			
138	Crocodile Connector	Black Colour	100	Nos.			
139	Inductor	1mH	100	Nos.			
140	Inductor	2mH	100	Nos.			
141	Inductor	3mH	100	Nos.			
142	Inductor	5mH	100	Nos.			

143	Inductor	8mH	100	Nos.			
144	Inductor	10mH	100	Nos.			
145	Inductor	12mH	100	Nos.			
146	Inductor	22mH	100	Nos.			
147	Inductor	25mH	100	Nos.			
148	Inductor	47mH	100	Nos.			
149	Inductor	33mH	100	Nos.			
150	Inductor	50mH	100	Nos.			
151	Screw for DC Power Supply	As per Sample	100	Nos.			
152	Transformer	Input: AC220v Output: AC 12v x 2, 2Amp	10	Nos.			
153	Slotted Cap Panel Mount Fuse Holder	As per Sample	50	Nos.			
154	Resistor	1 Ω , 1 Watt	200	Nos.			
155	Resistor	2.2 Ω , 1 Watt	200	Nos.			
156	Resistor	4.7 Ω , 1 Watt	200	Nos.			
157	Resistor	10 Ω , 1 Watt	200	Nos.			
158	Resistor	82 Ω , 1 Watt	200	Nos.			
159	Resistor	47 Ω , 1 Watt	200	Nos.			
160	Resistor	100 Ω , 1 Watt	200	Nos.			

161	Resistor	220 Ω , 1 Watt	200	Nos.			
162	Resistor	330 Ω , 1 Watt	200	Nos.			
163	Resistor	470 Ω , 1 Watt	100	Nos.			
164	Resistor	680 Ω , 1 Watt	200	Nos.			
165	Resistor	820 Ω , 1 Watt	200	Nos.			
166	Resistor	560 Ω , 1 Watt	200	Nos.			
167	Resistor	1k Ω , 1 Watt	200	Nos.			
168	Resistor	2.2k Ω , 1 Watt	200	Nos.			
169	Resistor	3k Ω , 1 Watt	200	Nos.			
170	Resistor	4k Ω , 1 Watt	200	Nos.			
171	Resistor	5.6K Ω , 1 Watt	200	Nos.			
172	Resistor	8.5K Ω , 1 Watt	200	Nos.			
173	Resistor	10K Ω , 1 Watt	200	Nos.			
174	Resistor	15K Ω , 1 Watt	200	Nos.			
175	Resistor	22K Ω , 1 Watt	200	Nos.			
176	Resistor	33K Ω , 1 Watt	200	Nos.			
177	Resistor	68k Ω , 1 Watt	200	Nos.			
178	Resistor	220K Ω , 1 Watt	200	Nos.			
179	Resistor	100K Ω , 1 Watt	200	Nos.			

180	Resistor	470K Ω , 1 Watt	200	Nos.			
181	Resistor	3.3K Ω , 1 Watt	200	Nos.			
182	Resistor	150K Ω , 1 Watt	200	Nos.			
183	Resistor	6.8K Ω , 1 Watt	200	Nos.			
184	Resistor	560K Ω , 1 Watt	200	Nos.			
185	Resistor	12K Ω , 1 Watt	200	Nos.			
186	Resistor	1 Ω , 1/2 Watt	200	Nos.			
187	Resistor	2.2 Ω , 1/2 Watt	200	Nos.			
188	Resistor	4.7 Ω , 1/2 Watt	200	Nos.			
189	Resistor	10 Ω , 1/2 Watt	200	Nos.			
190	Resistor	82 Ω , 1/2 Watt	200	Nos.			
191	Resistor	47 Ω , 1/2 Watt	200	Nos.			
192	Resistor	100 Ω , 1/2 Watt	200	Nos.			
193	Resistor	220 Ω , 1/2 Watt	200	Nos.			
194	Resistor	330 Ω , 1/2 Watt	200	Nos.			
195	Resistor	470 Ω , 1/2 Watt	200	Nos.			
196	Resistor	680 Ω , 1/2 Watt	200	Nos.			
197	Resistor	820 Ω , 1/2 Watt	200	Nos.			
198	Resistor	560 Ω , 1/2 Watt	200	Nos.			

199	Resistor	1k Ω , 1/2 Watt	200	Nos.			
200	Resistor	2.2k Ω , 1/2 Watt	200	Nos.			
201	Resistor	3k Ω , 1/2 Watt	200	Nos.			
202	Resistor	4k Ω , 1/2 Watt	200	Nos.			
203	Resistor	5.6K Ω , 1/2 Watt	200	Nos.			
204	Resistor	8.5K Ω , 1/2 Watt	200	Nos.			
205	Resistor	10K Ω , 1/2 Watt	200	Nos.			
206	Resistor	15K Ω , 1/2 Watt	200	Nos.			
207	Resistor	22K Ω , 1/2 Watt	200	Nos.			
208	Resistor	33K Ω , 1/2 Watt	200	Nos.			
209	Resistor	68k Ω , 1/2 Watt	200	Nos.			
210	Resistor	220K Ω , 1/2 Watt	200	Nos.			
211	Resistor	100K Ω , 1/2 Watt	200	Nos.			
212	Resistor	470K Ω , 1/2 Watt	200	Nos.			
213	Resistor	3.3K Ω , 1/2 Watt	200	Nos.			
214	Resistor	150K Ω , 1/2 Watt	200	Nos.			
215	Resistor	6.8K Ω , 1/2 Watt	200	Nos.			
216	Resistor	560K Ω , 1/2 Watt	200	Nos.			
217	Resistor	12K Ω , 1/2 Watt	200	Nos.			

218	Power Resistor	10W, 10Ω	100	Nos.				
219	Power Resistor	10W, 100Ω	100	Nos.				
220	Power Resistor	5W, 10Ω	100	Nos.				
221	Power Resistor	5W, 100Ω	100	Nos.				
222	Power Cord	As Per Sample	10	Nos.				
223	CMOS Cell	No. 2032 or equivalent	20	Nos.				
224	Flexible Wire	1.5mm	1	No.				
225	2 Pin Power Plug	10 Amp	10	Nos.				
Sub Total Amount (Rs.)								
Electronics Lab								
226	Resistor	100Ω (1/4W)	1000	Nos.				
227	Resistor	180Ω (1/4W)	1000	Nos.				
228	Resistor	220Ω (1/4W)	500	Nos.				
229	Resistor	270Ω (1/4W)	1000	Nos.				
230	Resistor	330Ω (1/4W)	500	Nos.				
231	Resistor	390Ω (1/4W)	500	Nos.				
232	Resistor	680Ω (1/4W)	1000	Nos.				
233	Resistor	820Ω (1/4W)	1000	Nos.				
234	Resistor	1KΩ (1/4W)	3000	Nos.				

235	Resistor	2.2K Ω (1/4W)	3000	Nos.			
236	Resistor	2.7K Ω (1/4W)	1000	Nos.			
237	Resistor	3.3K Ω (1/4W)	3000	Nos.			
238	Resistor	4.7K Ω (1/4W)	3000	Nos.			
239	Resistor	10K Ω (1/4W)	3000	Nos.			
240	Resistor	47K Ω (1/4W)	1000	Nos.			
241	Resistor	100K Ω (1/4W)	1000	Nos.			
242	Resistor	220K Ω (1/4W)	1000	Nos.			
243	Resistor	270K Ω (1/4W)	1000	Nos.			
244	Resistor	1M Ω (1/4W)	1500	Nos.			
245	Resistor	2.2M Ω (1/4W)	500	Nos.			
246	Resistor	22 Ω (1/2W)	1500	Nos.			
247	Resistor	82 Ω (1/2W)	1500	Nos.			
248	Resistor	100 Ω (1W)	1500	Nos.			
249	Resistor	120 Ω (1/2W)	1500	Nos.			
250	Resistor	180 Ω (1/2W)	1500	Nos.			
251	Resistor	47 Ω (1/2W)	1500	Nos.			
252	Resistor	1M Ω (1/4W)	1000	Nos.			
253	Variable Resistor	5K Ω	100	Nos.			

254	Variable Resistor	10K Ω	100	Nos.			
255	Variable Resistor	100K Ω	100	Nos.			
256	Variable Resistor	500K Ω	100	Nos.			
257	Variable Resistor	1M Ω	100	Nos.			
258	Disk Capacitor	1nF	600	Nos.			
259	Disk Capacitor	10nF	600	Nos.			
260	Disk Capacitor	100nF	600	Nos.			
261	Electrolytic Capacitor	10uF	600	Nos.			
262	Electrolytic Capacitor	22uF	400	Nos.			
263	Electrolytic Capacitor	1uF	500	Nos.			
264	Electrolytic Capacitor	100uF	600	Nos.			
265	Zener Diodes	10V	150	Nos.			
266	Diodes	IN4007 or equivalent	300	Nos.			
267	JFET	J305 or equivalent	500	Nos.			
268	Transistor (PNP)	2N3906 or equivalent	400	Nos.			
269	Transistor (NPN)	2N3904 or equivalent	600	Nos.			
270	Transistor (NPN)	Tip31	150	Nos.			
271	Transistor (PNP)	Tip30 or equivalent	150	Nos.			
272	Transistor (NPN)	2N2222 or equivalent	250	Nos.			

273	Transistor (NPN)	Tip 122 or equivalent	150	Nos.				
274	Operational Amplifier	LM741 or equivalent	300	Nos.				
275	Timer	NE555 or equivalent	300	Nos.				
276	DC Battery	9V	30	Nos.				
277	Multi Meter Probes	-	10	Nos.				
278	Jumper wire	-	8	Nos.				
279	DC Battery	1.5V	50	Nos.				
Sub Total Amount (Rs.)								
Control and Instrumentation Lab								
280	Resistor(1W)	100Ω	200	Nos.				
281	Resistor(1W)	120Ω	200	Nos.				
282	Resistor (1/4W)	470Ω	200	Nos.				
283	Resistor (1/4W)	1KΩ	200	Nos.				
284	Resistor (1/4W)	2.2KΩ	200	Nos.				
285	Resistor (1/4W)	3.3KΩ	200	Nos.				
286	Resistor (1/4W)	4.7KΩ	200	Nos.				
287	Resistor (1/4W)	10KΩ	200	Nos.				
288	Resistor (1/4W)	12KΩ	200	Nos.				
289	Resistor (1/4W)	15KΩ	200	Nos.				

290	Resistor (1/4W)	20K Ω	200	Nos.			
291	Resistor (1/4W)	33K Ω	200	Nos.			
292	Resistor (1/4W)	1M Ω	200	Nos.			
293	Variable Resistor	500 Ω	50	Nos.			
294	Variable Resistor	2K Ω	50	Nos.			
295	Variable Resistor	3K Ω	50	Nos.			
296	Variable Resistor	5K Ω	50	Nos.			
297	Variable Resistor	10K Ω	50	Nos.			
298	Variable Resistor	15K Ω	50	Nos.			
299	Variable Resistor	47K Ω	50	Nos.			
300	Variable Resistor	100K Ω	50	Nos.			
301	Disk Capacitor	1nF	100	Nos.			
302	Disk Capacitor	10nF	100	Nos.			
303	Disk Capacitor	100nF	100	Nos.			
304	Disk Capacitor	220nF	100	Nos.			
305	Electrolytic Capacitor	0.47 μ F	100	Nos.			
306	Electrolytic Capacitor	2.2 μ F	100	Nos.			
307	Electrolytic Capacitor	10 μ F	100	Nos.			
308	Electrolytic Capacitor	15 μ F	100	Nos.			

309	Electrolytic Capacitor	80uF	50	Nos.			
310	Electrolytic Capacitor (63V)	220uF	50	Nos.			
311	Variable Capacitor	10pF	50	Nos.			
312	Variable Capacitor	50pF	50	Nos.			
313	Variable Capacitor	100pF	50	Nos.			
314	Inductor	1mH	100	Nos.			
315	Inductor	2.2mH	100	Nos.			
316	Inductor	8mH	100	Nos.			
317	Inductor	10mH	100	Nos.			
318	Inductor	25mH	100	Nos.			
319	Inductor	50mH	100	Nos.			
320	Transistor (NPN)	2N3904 or equivalent	50	Nos.			
321	Transistor (NPN)	2N3906 or equivalent	50	Nos.			
322	ADC 0804 or equivalent	0804 or equivalent	300	Nos.			
323	Op Amp	LM741 or equivalent	40	Nos.			
324	Glass Fuse	1 Amp, 250 V	20	Nos.			
325	Glass Fuse	2 Amp, 250 V	20	Nos.			
326	Glass Fuse	4 Amp, 250 V	20	Nos.			
327	Temperature Sensor	LM 35 or equivalent	60	Nos.			

328	Light Sensor	LDR or equivalent	30	Nos.			
329	Cable Tie	6"	2	Nos.			
330	Cable Tie	12"	3	Nos.			
331	VGA Cable	-	3	Nos.			
332	Jumper Wire	-	1	Kg			
333	VGA Cable	5 Meter	1	No.			
334	DP to VGA Convertors	-	5	Nos.			
335	Insulation Tape	-	5	Nos.			
336	Button Cell	CMOS 2032 Or equivalent	20	Nos.			
Sub Total Amount (Rs.)							
Circuit Analysis Lab							
337	Resistor	1 Ω (1W)	1000	Nos.			
338	Resistor	4.7 Ω (1W)	1000	Nos.			
339	Resistor	10 Ω (1W)	1000	Nos.			
340	Resistor	22 Ω (1W)	1000	Nos.			
341	Resistor	47 Ω (1W)	1000	Nos.			
342	Resistor	82 Ω (1W)	1000	Nos.			
343	Resistor	100 Ω (1W)	1000	Nos.			
344	Resistor	180 Ω (1W)	1000	Nos.			

345	Resistor	220Ω (1W)	1000	Nos.			
346	Resistor	330Ω (1W)	1000	Nos.			
347	Resistor	470Ω (1W)	1000	Nos.			
348	Resistor	560Ω (1W)	2000	Nos.			
349	Resistor	680Ω (1W)	1000	Nos.			
350	Resistor	820Ω (1W)	1000	Nos.			
351	Resistor	1KΩ (1/4W)	5000	Nos.			
352	Resistor	1.2KΩ (1/4W)	5000	Nos.			
353	Resistor	1.5KΩ (1/4W)	3000	Nos.			
354	Resistor	1.8KΩ (1/4W)	4000	Nos.			
355	Resistor	2.2KΩ (1/4W)	6000	Nos.			
356	Resistor	2.7KΩ (1/4W)	5000	Nos.			
357	Resistor	3.3KΩ (1/4W)	2000	Nos.			
358	Resistor	4.7KΩ (1/4W)	1500	Nos.			
359	Resistor	47KΩ (1/4W)	1000	Nos.			
360	Resistor	56KΩ (1/4W)	1500	Nos.			
361	Resistor	68KΩ (1/4W)	1000	Nos.			
362	Resistor	82KΩ (1/4W)	1500	Nos.			
363	Resistor	220KΩ (1/4W)	1000	Nos.			

364	Resistor	470K Ω (1/4W)	1000	Nos.			
365	Resistor	560K Ω (1/4W)	1000	Nos.			
366	Resistor	2.2M Ω (1/4W)	1000	Nos.			
367	Resistor	10M Ω (1/4W)	500	Nos.			
368	Resistor	820K Ω (1/4W)	1000	Nos.			
369	Electrolytic Capacitor	1UF (16V)	500	Nos.			
370	Electrolytic Capacitor	10UF (16V)	500	Nos.			
371	Electrolytic Capacitor	22UF (16V)	500	Nos.			
372	Electrolytic Capacitor	100UF (16V)	500	Nos.			
373	1mH	Ceramic	300	Nos.			
374	2mH	Ceramic	300	Nos.			
375	5mH	Ceramic	300	Nos.			
376	10mH	Ceramic	300	Nos.			
377	50mH	Ceramic	300	Nos.			
378	DC Battery	9V	50	Nos.			
379	Multi Meter Probes	-	20	Nos.			
380	Jumper wire	-	8	Nos.			
381	Voltage regulator	7905 or equivalent	50	Nos.			
382	Voltage regulator	7805 or equivalent	50	Nos.			

383	Voltage regulator	7812 or equivalent	50	Nos.			
384	Voltage regulator	7912 or equivalent	50	Nos.			
Sub Total Amount (Rs.)							
Data Communication & Internetworking Lab							
385	Voltage regulator	LM337 or equivalent	50	Nos.			
386	Voltage regulator	LM337 or equivalent	50	Nos.			
387	Op-amp	TL071CP or equivalent	50	Nos.			
388	Signal & Clock generator	XR2206CP or equivalent	20	Nos.			
389	Round Header pins	-	50	Nos.			
390	Connector	RJ45	100	Nos.			
391	Nylon Cable Tie	6"	2	Nos.			
Sub Total Amount (Rs.)							
Project & Research Lab							
392	DC Battery	9V	15	Nos.			
393	Glue Gun Rod	-	20	Nos.			
394	Jumper Wire	-	2	Kg			
395	Soldering Wire	-	1	No.			
Sub Total Amount (Rs.)							

Computer Lab						
396	Connector	RJ45	60	Nos.		
397	Cable Tie	6"	2	Nos.		
Sub Total Amount (Rs.)						
DLD Lab						
398	IC 7400 or equivalent	NAND Gate	130	Nos.		
400	IC 7402 or equivalent	NOR Gate	50	Nos.		
401	IC 7404 or equivalent	NOT Gate	100	Nos.		
402	IC 7408 or equivalent	AND Gate	120	Nos.		
403	IC 7432 or equivalent	OR Gate	100	Nos.		
404	IC 7447 or equivalent	BCD to 7seg Decoder	20	Nos.		
405	IC 7476 or equivalent	JK-Flip Flop or equivalent	50	Nos.		
406	IC 7483 or equivalent	4-Bit Binary Full Adder	50	Nos.		
407	IC 7485 or equivalent	4-Bit Comparator	60	Nos.		
408	IC 7486 or equivalent	XOR Gate	150	Nos.		
409	IC 7495 or equivalent	Shift Register	70	Nos.		
410	IC 74139 or equivalent	De MUX or equivalent	20	Nos.		
411	IC 74147 or equivalent	10 to 4Line priority Encoder	30	Nos.		
412	IC 74148 or equivalent	8 to3-LINE PRIORITY ENCODERS	30	Nos.		

413	IC 74153 or equivalent	4:1 MUX	70	Nos.				
414	IC 74157 or equivalent	2 to 1-Line Data Selector	40	Nos.				
415	IC 7474 or equivalent	D-Flip Flop or equivalent	30	Nos.				
416	Jumper Wires	-	5	Kg				
417	7 Segment Display	C . A	150	Nos.				
418	Fuse	One Amp	2	Packet s				
419	Fuse Holder	-	40	Nos.				
420	Silicon Rod	-	20	Nos.				
Sub Total Amount (Rs.)								
Embedded System Lab								
421	Soldering Wire	-	1	No.				
422	Soldering Paste	-	1	No.				
423	Base	Transparent Plastic sheet base (8mm) for FPGA Board (Length 8.2", Width 6") and 6 screw hole on each base.	10	Nos.				
424	Electric Plug	Universal Plug 3 Pin to 2 Pin Round.	10	Nos.				
Sub Total Amount (Rs.)								

Special Terms and conditions;

1. Please quote the rates on our BoQs and clearly mention the quoted model / brands, otherwise your bid / items may be rejected.
2. Purchase / work order (s) will be awarded on **Sub Total Basis (Lab Wise)** as mentioned in BoQs.
3. **Multiple rates of an item may also lead to the rejection of bid / item.**