



COMSATS University Islamabad, Lahore Campus
Defence Road, Off Raiwind Road, Lahore

Tender No. CUI-LHR-TN-22-1620

Case # 3651

Single Stage One Envelope Procedure

Title of Tender: **Consumable Items for Labs of Electrical & Computer Engineering Department**

A. GENERAL 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 (GST & Income Tax), 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. **Tender Fee & Earnest Money/CDR**
 - a. Documents along with Pay Order / Demand Draft amounting to **Rs.1,500/-** as a tender documents fee (Non-Refundable) shall be submitted in favor of COMSATS University Islamabad, Lahore to the address given below. No proposal/bid will be accepted without tender documents' fee.
 - b. 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", which shall be released after the completion of work / supply on submission of written request on firm / company letterhead. Any bid not accompanied by Earnest Money shall be rejected without any right of appeal.
6. Part / Advance payments is not allowed.
7. **The exact completion/delivery time from the date of the purchase / work order will be 15 days. The handing over / completion time for this contract is of critical importance.**
8. Your bid proposal should be inclusive of freight and all taxes to be delivered at COMSATS University Islamabad, Lahore Campus's premises.
9. After opening of bids, COMSATS University Islamabad, Lahore Campus will examine the bids for completeness as per tender document.
10. In case more than one bidder have quoted same rates for an item; the bidder securing more items (in terms of cost) will be awarded the specific item.
11. Purchase order (s) will be awarded to the lowest evaluated or technically recommended bidder (s) on the basis of item wise / subtotal wise / grand total wise according to the nature of BoQs.

12. The bid should be submitted in a sealed envelope up to **November 09, 2022** on or before **1400hrs** and will be opened on the same date **at 1430hrs** in the presence of available bidders. In case of any holiday is announced by the Govt. OR any unforeseeable circumstances that prevent the tender from being opened on the date announced (Force Majeure Situation), the tenders will be opened on the very next working day. Timing will remain as mentioned in the tender notice.
13. 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
14. The envelope shall also bear the word “**CONFIDENTIAL**” and following identification quotation of **“Consumable Items for Labs of Electrical & Computer Engineering Department, CUI-Lahore Campus”**
15. The bid form (BoQs) must be duly filled in, stamped and signed by the authorized representative of the bidder.
16. **If the vendor fails to deliver the goods / services to COMSATS University Islamabad (CUI), Lahore Campus within the given deadline, any of the following can be opted by CUI Lahore campus on the recommendation of the end user and approval of the authority;**
 - a. An extension in the delivery period may be granted in case a valid reason/justification with necessary documentary evidence is provided by the vendor supporting the reason for delay.
 - b. A penalty upto 10% of the invoice value may be charged.
 - c. Purchase order may be cancelled along with confiscation of earnest money if the vendor fails to deliver the goods / services after the initial or extended delivery time, as the case may be.
17. 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.
18. Any defective / sub-standard item (s) will be replaced by the bidder in same quoted cost. In case of failure to supply the specific item, CUI-Lahore may issue PO to next lowest bidder to supply the item while the difference of amount will be deducted from the 1st lowest bidder’s earnest money.
19. Deduction of Income Tax and any other tax will be deducted at source according to Government prevailing rules.
20. Payment will be made as per PPRA rule 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.
21. All prices should be quoted on F.O.R (Pak Rupees) inclusive of all applicable taxes.
22. 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 to forfeit the earnest money in favor of the CUI-Lahore and / or put a ban on such vendor participation in tenders / works.
23. It is the sole responsibility of the agent / supplier / manufacturer to comply with the applicable laws, be national or international.
24. In case of any dispute or grievance, the matter shall be addressed as per PPRA rules.

- 25. The CUI-Lahore Campus reserves the right to modify the quantities of goods / services at any time before the award of purchase / work order.
- 26. The prices / cost will be considered as inclusive of all applicable taxes.
- 27. CUI-Lahore Campus shall disqualify any firm(s), if at any stage; it finds that the information submitted, or documents provided are inaccurate, fake, ambiguous or incomplete.
- 28. COMSATS University Islamabad, Lahore Campus reserves the rights to accept or 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.
- 29. 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.
- 30. 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 Consumable Items for Labs of Electrical & Computer Engineering

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:


The bid may be rejected on the reason of ambiguity (OR)

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-LHR. 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-LHR. BoQ may lead to rejection of bid (fully or partially).

Rates to be quoted inclusive of all
(applicable) taxes

Sr. #	Item Name & Specifications		Qty		Quoted Model / Brand /Make	Unit Price (Rs.)	Total Price (Rs.)
Microwave / RF/ Antenna lab							
1	9V Battery Power Plus Heavy Duty-9 volt Battery	Non-Rechargeable China or equivalent	10	Nos.			
2	Primary Cell	Super Heavy Duty 1.5V, AAA, Toshiba or equivalent	10	Nos.			
3	AC/DC Adapter	Input: 240v, Output: 5vdc, 01 Amp. China or equivalent	10	Nos.			
4	PVC Cable Tie	12" (in Pkt) Local or equivalent	100	Nos.			
5	CMOS Cell	No. 2032 China or equivalent	70	Nos.			
6	WD40 or equivalent	WD 40 or equivalent 350ml	1	No.			
Circuit Analysis Lab							
7	Resistor	1K Ω (1/4W) China or equivalent	1000	Nos.			
8	Resistor	1.2K Ω (1/4W) China or equivalent	1000	Nos.			
9	Resistor	1.5K Ω (1/4W) China or equivalent	1000	Nos.			
10	Resistor	1.8K Ω (1/4W) China or equivalent	1000	Nos.			
11	Resistor	2.7K Ω (1/4W) China or equivalent	1000	Nos.			
12	Resistor	3.3K Ω (1/4W) China or equivalent	1000	Nos.			
13	Resistor	4.7K Ω (1/4W) China or equivalent	1000	Nos.			
14	Resistor	5.6K Ω (1/4W) China or equivalent	1000	Nos.			

15	Resistor	8.2K Ω (1/4W) China or equivalent	1000	Nos.			
16	Resistor	10K Ω (1/4W) China or equivalent	1000	Nos.			
17	Round Hader pins	 China or equivalent	40	Nos.			
18	DC Battery	9V, Non-Rechargeable China or equivalent	100	Nos.			
19	Multi Meter Probes	Red and black color leads Cable length: 58cm (without plugs or leads) Plug external diameter: 8mm Plug internal diameter: 6mm Internal plug metal conductor: 3mm-4.5mm banana plug Lead length: 10.5cm Rated as 1000V Max, 10A Max, CAT II 600V Metal conductors China or equivalent	30	Nos.			
20	Jumper wire	1mm 250 meter of one roll China or equivalent	3	Roll			
Electronics Lab							
21	Resistor	10 Ω (1/4W) China or equivalent	500	Nos.			
22	Resistor	100 Ω (1/4W) China or equivalent	500	Nos.			
23	Resistor	180 Ω (1/4W) China or equivalent	500	Nos.			
24	Resistor	220 Ω (1/4W) China or equivalent	500	Nos.			
25	Resistor	270 Ω (1/4W) China or equivalent	500	Nos.			
26	Resistor	330 Ω (1/4W) China or equivalent	500	Nos.			
27	Resistor	390 Ω (1/4W) China or equivalent	500	Nos.			
28	Resistor	680 Ω (1/4W) China or equivalent	500	Nos.			
29	Resistor	820 Ω (1/4W) China or equivalent	500	Nos.			

30	Resistor	1KΩ (1/4W) China or equivalent	1000	Nos.			
31	Resistor	1.5KΩ (1/4W) China or equivalent	500	Nos.			
32	Resistor	2.2KΩ (1/4W) China or equivalent	500	Nos.			
33	Resistor	2.7KΩ (1/4W) China or equivalent	500	Nos.			
34	Resistor	3KΩ (1/4W) China or equivalent	500	Nos.			
35	Resistor	3.3KΩ (1/4W) China or equivalent	500	Nos.			
36	Resistor	3.9KΩ (1/4W) China or equivalent	500	Nos.			
37	Resistor	4.7KΩ (1/4W) China or equivalent	500	Nos.			
38	Resistor	5.6KΩ (1/4W) China or equivalent	500	Nos.			
39	Resistor	10KΩ (1/4W) China or equivalent	1000	Nos.			
40	Resistor	47KΩ (1/4W) China or equivalent	500	Nos.			
41	Resistor	100KΩ (1/4W) China or equivalent	500	Nos.			
42	Resistor	220KΩ (1/4W) China or equivalent	500	Nos.			
43	Resistor	270KΩ (1/4W) China or equivalent	500	Nos.			
44	Resistor	1MΩ (1/4W) China or equivalent	1000	Nos.			
45	Resistor	2.2MΩ (1/4W) China or equivalent	500	Nos.			
46	Resistor	1KΩ (1/2W) China or equivalent	500	Nos.			
47	Resistor	22Ω (1/2W) China or equivalent	500	Nos.			
48	Resistor	82Ω (1/2W) China or equivalent	500	Nos.			
49	Resistor	120Ω (1/2W) China or equivalent	500	Nos.			
50	Resistor	180Ω (1/2W) China or equivalent	500	Nos.			
51	Resistor	47Ω (1/2W) China or equivalent	500	Nos.			
52	Resistor	100Ω , 1 Watt China or equivalent	100	Nos.			

53	Resistor	220Ω , 1 Watt China or equivalent	100	Nos.			
54	Resistor	56Ω , 1 Watt China or equivalent	100	Nos.			
55	Variable Resistor	5KΩ China or equivalent	100	Nos.			
56	Variable Resistor	10KΩ China or equivalent	100	Nos.			
57	Variable Resistor	100KΩ China or equivalent	100	Nos.			
58	Variable Resistor	500KΩ China or equivalent	100	Nos.			
59	Variable Resistor	1MΩ China or equivalent	100	Nos.			
60	Disk Capacitor	1nF China or equivalent	100	Nos.			
61	Disk Capacitor	10nF China or equivalent	100	Nos.			
62	Disk Capacitor	100nF China or equivalent	100	Nos.			
63	Disk Capacitor	2.2uF China or equivalent	300	Nos.			
64	Disk Capacitor	4.7uF China or equivalent	400	Nos.			
65	Electrolytic Capacitor	10uF China or equivalent	400	Nos.			
66	Electrolytic Capacitor	22uF China or equivalent	400	Nos.			
67	Electrolytic Capacitor	47uF China or equivalent	400	Nos.			
68	Electrolytic Capacitor	1uF China or equivalent	300	Nos.			
69	Electrolytic Capacitor	100uF China or equivalent	300	Nos.			
70	Zener Diodes	08V China or equivalent	100	Nos.			
71	Zener Diodes	10V China or equivalent	100	Nos.			
72	Zener Diodes	16V China or equivalent	100	Nos.			
73	Diodes	IN4007 China or equivalent	500	Nos.			
74	JFET	J305 China or equivalent	150	Nos.			
75	Transistor (PNP)	2N3906 China or equivalent	50	Nos.			
76	Transistor (NPN)	2N3904 China or equivalent	500	Nos.			

77	Transistor (NPN)	Tip31 China or equivalent	150	Nos.			
78	Transistor (PNP)	Tip30 China or equivalent	150	Nos.			
79	Transistor (NPN)	2N2222 China or equivalent	200	Nos.			
80	Transistor (NPN)	Tip 122 China or equivalent	100	Nos.			
81	Operational Amplifier	LM741 China or equivalent	200	Nos.			
82	Timer	NE555 China or equivalent	200	Nos.			
83	Schmitt trigger	74ls14 China or equivalent	80	Nos.			
84	MOSFET Transistor	IRF540N China or equivalent	80	Nos.			
85	DC Battery	9V, Non-Rechargeable China or equivalent	80	Nos.			
86	Multi Meter Probes	Red and black color leads Cable length: 58cm (without plugs or leads) Plug external diameter: 8mm Plug internal diameter: 6mm Internal plug metal conductor: 3mm-4.5mm banana plug Lead length: 10.5cm Rated as 1000V Max, 10A Max, CAT II 600V Metal conductors China or equivalent	30	Nos.			
87	Digital Multimeter Fuse	0.5 Amp China or equivalent	20	Nos.			
88	Jumper wire	1mm 250 meter of one roll China or equivalent	3	Roll			
89	Cell	1.5V, AAA China or equivalent	50	Nos.			
90	1 Slot AA Size Power Battery Storage	Case Box Holder With Wire Leads Toshiba or equivalent	80	Nos.			
91	Oscilloscope Test Probe for Function Generator	Lead Cable BNC Male Plug Q9 to Dual Clip 0.5m , 20 MHZ China or equivalent	40	Nos.			
92	Oscilloscope Test Probe	Lead Cable BNC Male Plug Q9 to BNC Male Plug Q9 0.5m , 20 MHZ China or equivalent	10	Nos.			

93	5A Banana Plugs To Crocodile Clamps Test Leads Line	DC Power Supply Alligator Clips Test Lead Cable Wire 1M China or equivalent	60	Nos.			
94	WD40 or equivalent	200 mL Penetrating Oil China or equivalent	1	No.			
Power/Industrial Electronics Lab							
95	Soldering Wire	60/40 0.8mm 100G Tin Lead Rosin Core Solder Flux Soldering Wire China or equivalent	2	Nos.			
96	Glass Fuse	5 x 20mm , 10A China or equivalent	50	Nos.			
97	Glass Fuse	5 x 20mm , 0.5A China or equivalent	50	Nos.			
98	Glass Fuse	5 x 20mm , 4A China or equivalent	100	Nos.			
99	Glass Fuse	5 x 20mm , 630mA China or equivalent	50	Nos.			
100	Cable Tie 12"	12" China or equivalent	1	Nos.			
101	Battery Non-Rechargeable	9v China or equivalent	10	Nos.			
102	Jumper Wire	Male to Male Connector Length: 6 inch China or equivalent	5	Nos.			
103	Jumper Wire	Roll for bread board 1mm 250 meter of one roll China or equivalent	1	Roll			
104	Diode	IN 5408 China or equivalent	100	Nos.			
105	Diode	IN 4148 China or equivalent	100	Nos.			
106	Diode	IN 4007 China or equivalent	100	Nos.			
107	Thyristor	BT151 China or equivalent	100	Nos.			
108	Thyristor	BT152 China or equivalent	100	Nos.			
109	Thyristor	TIC106 China or equivalent	50	Nos.			
110	Zener Diode	6V2 China or equivalent	25	Nos.			
111	Diode (GERMANIUM)	AA113 China or equivalent	25	Nos.			
112	UJT	2N2646 China or equivalent	25	Nos.			

113	PUT	2N6027 China or equivalent	25	Nos.			
114	SCR	C106D China or equivalent	50	Nos.			
115	SCR	MCR 100-5 China or equivalent	50	Nos.			
116	SCR	TIC47 China or equivalent	50	Nos.			
117	TRIAC	Z0405MF China or equivalent	100	Nos.			
118	DIAC	D3202 China or equivalent	100	Nos.			
119	MOSFET	IRF 9640 China or equivalent	50	Nos.			
120	MOSFET	IRF 740 China or equivalent	100	Nos.			
121	MOSFET	IRF 540 China or equivalent	100	Nos.			
122	THYRISTOR	BT 151 China or equivalent	100	Nos.			
123	THYRISTOR	BT 152 China or equivalent	100	Nos.			
124	TRANSISTOR	BC 337 China or equivalent	50	Nos.			
125	TRANSISTOR	BC 327 China or equivalent	50	Nos.			
126	TRANSISTOR	2N3904 China or equivalent	50	Nos.			
127	TRANSISTOR	2N3906 China or equivalent	50	Nos.			
128	Glass Fuse	5 x 20mm , 250v, 5 Amp. China or equivalent	100	Nos.			
129	Capacitor	1uf , 50v, Non Polar China or equivalent	50	Nos.			
130	Capacitor	3.3uf , 50v, Non Polar China or equivalent	50	Nos.			
131	Capacitor	10uf , 50v, Non Polar China or equivalent	50	Nos.			
132	Capacitor	33uf , 50v, Non Polar China or equivalent	50	Nos.			
133	Capacitor	47uf , 50v, Non Polar China or equivalent	50	Nos.			
134	Capacitor	56uf , 50v, Non Polar China or equivalent	50	Nos.			
135	Capacitor	10uf , 50v, Non Polar China or equivalent	50	Nos.			
136	Capacitor	22uf , 50v, Non Polar China or equivalent	50	Nos.			

137	Capacitor	33uf , 50v, Non Polar China or equivalent	50	Nos.			
138	Capacitor	47uf , 50v, Non Polar China or equivalent	50	Nos.			
139	Capacitor	56uf , 50v, Non Polar China or equivalent	50	Nos.			
140	Capacitor	100uf , 50v,Non Polar China or equivalent	50	Nos.			
141	Capacitor	220uf , 50v,Non Polar China or equivalent	50	Nos.			
142	Capacitor	330uf , 50v, Non Polar China or equivalent	50	Nos.			
143	Capacitor	470uf , 50v, Non Polar China or equivalent	50	Nos.			
144	Capacitor	560uf , 50v, Non Polar China or equivalent	50	Nos.			
145	Capacitor	1000uf , 50v, Non Polar China or equivalent	50	Nos.			
146	Capacitor	2200uf , 50v, Non Polar China or equivalent	50	Nos.			
147	Capacitor	1uf , 50v, Polar China or equivalent	50	Nos.			
148	Capacitor	3.3uf , 50v, Polar China or equivalent	50	Nos.			
149	Capacitor	10uf , 50v, Polar China or equivalent	50	Nos.			
150	Capacitor	33uf , 50v, Polar China or equivalent	50	Nos.			
151	Capacitor	47uf , 50v, Polar China or equivalent	50	Nos.			
152	Capacitor	56uf , 50v, Polar China or equivalent	50	Nos.			
153	Capacitor	10uf , 50v, Polar China or equivalent	50	Nos.			
154	Capacitor	22uf , 50v, Polar China or equivalent	50	Nos.			
155	Capacitor	33uf , 50v, Polar China or equivalent	50	Nos.			
156	Capacitor	47uf , 50v, Polar China or equivalent	50	Nos.			
157	Capacitor	56uf , 50v, Polar China or equivalent	50	Nos.			
158	Capacitor	100uf , 50v, Polar China or equivalent	50	Nos.			
159	Capacitor	220uf , 50v, Polar China or equivalent	50	Nos.			
160	Capacitor	330uf , 50v, Polar China or equivalent	50	Nos.			

161	Capacitor	470uf , 50v, Polar China or equivalent	50	Nos.			
162	Capacitor	560uf , 50v, Polar China or equivalent	50	Nos.			
163	Capacitor	1000uf , 50v, Polar China or equivalent	50	Nos.			
164	Capacitor	2200uf , 50v, Polar China or equivalent	50	Nos.			
165	Crocodile Connector	Red Colour China or equivalent	50	Nos.			
166	Crocodile Connector	Black Colour China or equivalent	50	Nos.			
167	Inductor	1mH China or equivalent	75	Nos.			
168	Inductor	2mH China or equivalent	75	Nos.			
169	Inductor	3mH China or equivalent	75	Nos.			
170	Inductor	5mH China or equivalent	75	Nos.			
171	Inductor	8mH China or equivalent	75	Nos.			
172	Inductor	10mH China or equivalent	50	Nos.			
173	Inductor	12mH China or equivalent	25	Nos.			
174	Inductor	22mH China or equivalent	25	Nos.			
175	Inductor	25mH China or equivalent	25	Nos.			
176	Inductor	47mH China or equivalent	25	Nos.			
177	Inductor	33mH China or equivalent	25	Nos.			
178	Inductor	50mH China or equivalent	25	Nos.			
179	Screw for DC Power Supply	4mm China or equivalent	50	Nos.			
180	Glass Fuse	5 x 20mm , 250v, 3 Amp. China or equivalent	100	Nos.			
181	Resistor	1 Ω , 1 Watt China or equivalent	100	Nos.			
182	Resistor	2.2 Ω , 1 Watt China or equivalent	100	Nos.			
183	Resistor	4.7 Ω , 1 Watt China or equivalent	100	Nos.			
184	Resistor	10 Ω , 1 Watt China or equivalent	100	Nos.			

185	Resistor	82Ω , 1 Watt China or equivalent	100	Nos.			
186	Resistor	47Ω , 1 Watt China or equivalent	100	Nos.			
187	Resistor	100Ω , 1 Watt China or equivalent	100	Nos.			
188	Resistor	220Ω , 1 Watt China or equivalent	100	Nos.			
189	Resistor	330Ω , 1 Watt China or equivalent	100	Nos.			
190	Resistor	470Ω , 1 Watt China or equivalent	100	Nos.			
191	Resistor	680Ω , 1 Watt China or equivalent	100	Nos.			
192	Resistor	820Ω , 1 Watt China or equivalent	100	Nos.			
193	Resistor	560Ω , 1 Watt China or equivalent	100	Nos.			
194	Resistor	1kΩ , 1 Watt China or equivalent	100	Nos.			
195	Resistor	2.2kΩ , 1 Watt China or equivalent	100	Nos.			
196	Resistor	3kΩ , 1 Watt China or equivalent	100	Nos.			
197	Resistor	4kΩ , 1 Watt China or equivalent	100	Nos.			
198	Resistor	5.6KΩ , 1 Watt China or equivalent	100	Nos.			
199	Resistor	8.5KΩ , 1 Watt China or equivalent	100	Nos.			
200	Resistor	10KΩ , 1 Watt China or equivalent	100	Nos.			
201	Resistor	15KΩ , 1 Watt China or equivalent	100	Nos.			
202	Resistor	22KΩ , 1 Watt China or equivalent	100	Nos.			
203	Resistor	33KΩ , 1 Watt China or equivalent	100	Nos.			
204	Resistor	68kΩ , 1 Watt China or equivalent	100	Nos.			
205	Resistor	220KΩ , 1 Watt China or equivalent	100	Nos.			
206	Resistor	100KΩ , 1 Watt China or equivalent	100	Nos.			
207	Resistor	470KΩ , 1 Watt China or equivalent	100	Nos.			
208	Resistor	3.3KΩ , 1 Watt China or equivalent	100	Nos.			

209	Resistor	150K Ω , 1 Watt China or equivalent	100	Nos.			
210	Resistor	6.8K Ω , 1 Watt China or equivalent	100	Nos.			
211	Resistor	560K Ω , 1 Watt China or equivalent	100	Nos.			
212	Resistor	12K Ω , 1 Watt China or equivalent	100	Nos.			
213	Resistor	1 Ω , 1/2 Watt China or equivalent	100	Nos.			
214	Resistor	2.2 Ω , 1/2 Watt China or equivalent	100	Nos.			
215	Resistor	4.7 Ω , 1/2 Watt China or equivalent	100	Nos.			
216	Resistor	10 Ω , 1/2 Watt China or equivalent	100	Nos.			
217	Resistor	82 Ω , 1/2 Watt China or equivalent	100	Nos.			
218	Resistor	47 Ω , 1/2 Watt China or equivalent	100	Nos.			
219	Resistor	100 Ω , 1/2 Watt China or equivalent	100	Nos.			
220	Resistor	220 Ω , 1/2 Watt China or equivalent	100	Nos.			
221	Resistor	330 Ω , 1/2 Watt China or equivalent	100	Nos.			
222	Resistor	470 Ω , 1/2 Watt China or equivalent	100	Nos.			
223	Resistor	680 Ω , 1/2 Watt China or equivalent	100	Nos.			
224	Resistor	820 Ω , 1/2 Watt China or equivalent	100	Nos.			
225	Resistor	560 Ω , 1/2 Watt China or equivalent	100	Nos.			
226	Resistor	1k Ω , 1/2 Watt China or equivalent	100	Nos.			
227	Resistor	2.2k Ω , 1/2 Watt China or equivalent	100	Nos.			
228	Resistor	3k Ω , 1/2 Watt China or equivalent	100	Nos.			
229	Resistor	4k Ω , 1/2 Watt China or equivalent	100	Nos.			
230	Resistor	5.6K Ω , 1/2 Watt China or equivalent	100	Nos.			
231	Resistor	8.5K Ω , 1/2 Watt China or equivalent	100	Nos.			
232	Resistor	10K Ω , 1/2 Watt China or equivalent	100	Nos.			

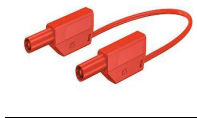

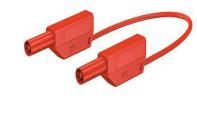
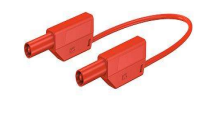
233	Resistor	15K Ω , 1/2 Watt China or equivalent	100	Nos.			
234	Resistor	22K Ω , 1/2 Watt China or equivalent	100	Nos.			
235	Resistor	33K Ω , 1/2 Watt China or equivalent	100	Nos.			
236	Resistor	68k Ω , 1/2 Watt China or equivalent	100	Nos.			
237	Resistor	220K Ω , 1/2 Watt China or equivalent	100	Nos.			
238	Resistor	100K Ω , 1/2 Watt China or equivalent	100	Nos.			
239	Resistor	470K Ω , 1/2 Watt China or equivalent	100	Nos.			
240	Resistor	3.3K Ω , 1/2 Watt China or equivalent	100	Nos.			
241	Resistor	150K Ω , 1/2 Watt China or equivalent	100	Nos.			
242	Resistor	6.8K Ω , 1/2 Watt China or equivalent	100	Nos.			
243	Resistor	560K Ω , 1/2 Watt China or equivalent	100	Nos.			
244	Resistor	12K Ω , 1/2 Watt China or equivalent	100	Nos.			
245	Power Resistor	10W, 10 Ω China or equivalent	50	Nos.			
246	Power Resistor	10W, 100 Ω China or equivalent	50	Nos.			
247	Power Resistor	5W, 10 Ω China or equivalent	50	Nos.			
248	Power Resistor	5W, 100 Ω China or equivalent	50	Nos.			
249	Power Cord	China or equivalent	10	Nos.			
250	CMOS Cell	No. 2032 China or equivalent	20	Nos.			
251	Flexible Wire	1.5mm China or equivalent	1	Nos.			
252	2 Pin Power Plug	10 Amp China or equivalent	10	Nos.			
Communication Systems Lab							
253	IC	84CNA China or equivalent	24	Nos.			
254	IC	82CPE China or equivalent	24	Nos.			
255	IC	81CPE China or equivalent	24	Nos.			
256	IC	7408M China or equivalent	12	Nos.			





257	IC	LM6171R China or equivalent	12	Nos.			
258	IC	LF 398S (8 Pin) China or equivalent	12	Nos.			
259	IC	LM311K China or equivalent	12	Nos.			
260	IC	XR 2206D China or equivalent	12	Nos.			
261	IC	LF356A China or equivalent	12	Nos.			
262	IC	74HC00U China or equivalent	12	Nos.			
263	IC	AD633JNS China or equivalent	12	Nos.			
264	Cable	BNC Cable Length = 1.5 meter China or equivalent	12	Nos.			
265	Flexible Wire	Multi colour flexible wire Length: 1.5 meter each Gauge: 7/0.67mm Red 5 Nos. Black: 5 Nos. China or equivalent	10	meter			
266	Soldering Wire	60/40 0.8mm 100G Tin Lead Rosin Core Solder Flux Soldering Wire China or equivalent	1	Roll			
267	Screw Driver Kit	31 In 1 Screw Driver Set With Toolkit Magnetic screwdriver handle Compact storage design, convenient to place and carry Including 1 handle, 30 blades as follow: 9 Heads Torex T4, T5, T6, T7, T8, T9, T10, T15, T20 (cell phone, PC, hard drive, printer, Xbox, Xbox 360, shaver) 4 Heads Philips PH000, PH00, PH0, PH1 (Most common crossheads) 7 Heads Straight 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0 (Most common Straight heads) 8 Heads Hex 0.7, 0.9, 1.3, 1.5, 2.0, 2.5, 3.0, 4.0 (model, bicycle, Engine, Guns) 2 Heads Philip Z0, PZ1 Handle length: 10.2 cm Blade length: 2.8 cm Size of storage box: approx. 5.5 cm in diameter, 12 cm in height. China or equivalent	1	set			
268	CMOS Cell	2032 China or equivalent	24	Nos.			

FYP Lab							
269	Soldering Wire	60/40 0.8mm 100G Tin Lead Rosin Core Solder Flux Soldering Wire China or equivalent	1	Roll			
270	Screw Driver Set	Screw Driver set Large Multibit for 220volt 9 pcs set China or equivalent	1	Set			
271	Screw Driver Set (small)	31 In 1 Screw Driver Set With Toolkit Magnetic screwdriver handle Compact storage design, convenient to place and carry Including 1 handle, 30 blades as follow: 9 Heads Torex T4, T5, T6, T7, T8, T9, T10, T15, T20 (cell phone, PC, hard drive, printer, Xbox, Xbox 360, shaver) 4 Heads Philips PH000, PH00, PH0, PH1 (Most common crossheads) 7 Heads Straight 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0 (Most common Straight heads) 8 Heads Hex 0.7, 0.9, 1.3, 1.5, 2.0, 2.5, 3.0, 4.0 (model, bicycle, Engine, Guns) 2 Heads Philip Z0, PZ1 Handle length: 10.2 cm Blade length: 2.8 cm Size of storage box: approx. 5.5 cm in diameter, 12 cm in height. China or equivalent	3	set			
272	Wire Cutter	Wire Cutter China or equivalent	3	Nos.			
273	CMOS Cell	2032 China or equivalent	10	Nos.			
Electrical Machine Lab							
274	Push Button	LA38 /203/209B China or equivalent	20	Nos.			
275	Batteries	9V, Heavy Duty, Non-Rechargeable China or equivalent	50	Nos.			
276	Cells Toshiba	1.5V, AAA Size, Heavy Duty Toshiba or equivalent	200	Nos.			
277	Glass Fuse	2A, 250v, 20mm China or equivalent	500	Nos.			

MSI / VLSI Lab							
278	2 Pin Power Cord	250V China or equivalent	20	Nos.			
279	SIP Resistor	(8-9 Pin) China or equivalent	20	Nos.			
280	Mini Jumper for Hard Drive	Mini Jumper 2.54mm Close Type Pin Header with 25V AC Maximum Voltage Rating Key Specifications/Special Features: Current and voltage rating: 3A, 25V AC maximum Insulator resistance: 5,000M ohms minimum Dielectric withstanding: 250V AC Operating temperature: -20 to 85 Insulator material: PBT China or equivalent	50	Nos.			
281	female to female wire	Length: 6 inch China or equivalent	500	Nos.			
282	male to female wire	Length: 6 inch China or equivalent	200	Nos.			
Computer Lab							
283	Networking Tool Kit Set	Multi-function: Tre are three functions of , tangential and crimping;2. Long service life: T tool ad is made of all metal and has a long service life. Feeling comforle: t handle is made of special material, non-slip, comforle to use, strong touch, ergonoc design. Save and effort: Improve t effect of shking efficiency, and individuals can easily complete t pressure line. T blade quality is good: it can make sure t cut gate is flat and has no burr. T distance between t two metal blades is moderate, and t rubber of t twisted pair can be easily stripped, but it is not easy to cut t network cable. T connection is firm: t outer diameter of t	1	Set			

		<p>pressure line segt is consistent with t crystal ad, and it is not easy to be saligned, so t connection between t twisted pair and t crystal ad can be better.</p> <p>Descriptions: 1.With ratct labor-saving device, it saves effort and ensures t pressing effect. A variety of die can be selected, coveg all t common specifications of and network cable ternals.</p> <p>T ratct has a locking function, which is convenient to store and has t function of UTP / STP round twisted pair.</p> <p>Specifications: Ontology: S45C Hardness: HRC 45 +/- 3 ° Full length: 190mm Crimp range: handset 4P2C / 4P4C RJ22 line 6P2C / 6P4C / 6P6C RJ11 Network cable 8PPC RJ45 power: flat round twisted pair (network cable) colour: black Material: plastic Package Contents: 1*Network Crystal ad Wig Tool Set</p> <p>China or equivalent</p>					
284	CMOS Cell	<p>CR2032 Micro Lithium Cell China or equivalent</p>	10	Nos.			
Power Transmission Lab							
285	Glass Fuse	<p>5 x 20mm , 250v, 1 Amp China or equivalent</p>	100	Nos.			
286	Glass Fuse	<p>5 x 20mm , 250v, 0.5 Amp China or equivalent</p>	100	Nos.			
287	Glass Fuse	<p>5 x 20mm , 250v, 2 Amp China or equivalent</p>	200	Nos.			
288	Glass Fuse	<p>5 x 20mm , 250v, 3 Amp China or equivalent</p>	200	Nos.			
289	Glass Fuse	<p>5 x 20mm , 250v, 4 Amp China or equivalent</p>	200	Nos.			

290	Glass Fuse	5 x 20mm , 250v, 5 Amp China or equivalent	200	Nos.			
291	Glass Fuse	5 x 20mm , 250v, 6 Amp China or equivalent	200	Nos.			
292	Glass Fuse	5 x 20mm , 250v, 10 Amp China or equivalent	200	Nos.			
293	Glass Fuse	6 x 30mm , 250v, 1 Amp China or equivalent	200	Nos.			
294	Glass Fuse	6 x 30mm , 250v, 2 Amp China or equivalent	200	Nos.			
295	Glass Fuse	6 x 30mm , 250v, 3 Amp China or equivalent	200	Nos.			
296	Glass Fuse	6 x 30mm , 250v, 4 Amp China or equivalent	200	Nos.			
297	Glass Fuse	6 x 30mm , 250v, 5 Amp China or equivalent	200	Nos.			
298	Glass Fuse	6 x 30mm , 250v, 6 Amp China or equivalent	200	Nos.			
299	Glass Fuse	6 x 30mm , 250v, 10 Amp China or equivalent	200	Nos.			
300	Test Lead 	Colour: Red, Both ends: Stackable shrouded 4mm banana Plugs, Length: 1.5meter with Silicon Rubber Insulation, AWG: 22, Amp: 10, 30KV-DC, China or equivalent	36	Nos.			
301	Test Lead 	Colour: Yellow, Both ends: Stackable shrouded 4mm banana Plugs, Length: 1.5meter with Silicon Rubber Insulation, AWG: 22, Amp: 10, 30KV-DC, China or equivalent	36	Nos.			
302	Test Lead 	Colour: Blue, Both ends: Stackable shrouded 4mm banana Plugs, Length: 1.5meter with Silicon Rubber Insulation, AWG: 22, Amp: 10, 30KV-DC, China or equivalent	36	Nos.			
303	Test Lead 	Colour: Black, Both ends: Stackable shrouded 4mm banana Plugs, Length: 1.5meter with Silicon Rubber Insulation, AWG: 22, Amp: 10, 30KV-DC, China or equivalent	36	Nos.			

304	Test Lead 	Colour: Red, Both ends: Stackable shrouded 4mm banana Plugs, Length: 06 Inches with Silicon Rubber Insulation, AWG: 22, Amp: 10, 30KV-DC, China or equivalent	24	Nos.			
305	Test Lead 	Colour: Yellow, Both ends: Stackable shrouded 4mm banana Plugs, Length: 06 Inches with Silicon Rubber Insulation, AWG: 22, Amp: 10, 30KV-DC, China or equivalent	24	Nos.			
306	Test Lead 	Colour: Blue, Both ends: Stackable shrouded 4mm banana Plugs, Length: 06 Inches with Silicon Rubber Insulation, AWG: 22, Amp: 10, 30KV-DC, China or equivalent	24	Nos.			
307	Test Lead 	Colour: Black, Both ends: Stackable shrouded 4mm banana Plugs, Length: 06 Inches with Silicon Rubber Insulation, AWG: 22, Amp: 10, 30KV-DC, China or equivalent	24	Nos.			
308	Energy Savers (Screw type)	24W, E27 Cap, 50/60Hz, 250 VAC Philips or equivalent	5	Nos.			
309	Glass Bulb (Screw type)	100W, E27 Cap, 50/60Hz, 250 VAC Philips or equivalent	6	Nos.			
310	Connector	RJ-45 China or equivalent	100	Nos.			
311	Primary Cell	Toshiba or equivalent Super Heavy Duty 1.5V, AAA	6	Nos.			
312	Primary Cell	Toshiba or equivalent Super Heavy Duty 1.5V, AA	6	Nos.			
313	Primary Cell	Toshiba or equivalent Super Heavy Duty 1.5V, D Type	6	Nos.			
314	9V Battery Heavy Duty- 9 volt Battery	Non-Rechargeable Power Plus or equivalent	10	Nos.			
315	PVC Electric Tape	Red Colour 1 inch Osaka / Nitto or equivalent	2	Nos.			

316	CMOS Cell	No. 2032 China or equivalent	25	Nos.			
317	WD-40 or equivalent	350ml WD 40 or equivalent	1	Nos.			
RTES / CA / DSD Lab							
318	Resistor	330 ohm China or equivalent	1000	Nos.			
319	Jumper Wires	40 Pin Strip – 20 cm pin to pin Jumper wires China or equivalent	50	Nos.			
320	Jumper Wires	40 Pin strip – 20 cm pin to hole Jumper wires China or equivalent	50	Nos.			
321	RGB LED	5 mm Red ED China or equivalent	200	Nos.			
322	Variable Resistor	10 k ohm China or equivalent	200	Nos.			
323	Bread Board	MB-102 China or equivalent	20	Nos.			
324	IC	MCP 3008/3208 China or equivalent	24	Nos.			
325	WD-40 or equivalent	300ml, Original Silicon Lubricant Contact Cleaner Mechanical WD 40 or equivalent	2	Nos.			
326	Paint Brush	Paint Brush 2 Inch Local or equivalent	2	Nos.			
327	CMOS Cell	No. 2032 China or equivalent	20	Nos.			
328	Cell Heavy Duty	1.5 V, AAA Size Toshiba or equivalent	10	Nos.			
DLD Lab							
329	IC 7400	NAND Gate China or equivalent	50	Nos.			
330	IC 7402	NOR Gate China or equivalent	50	Nos.			
331	IC 7404	NOT Gate China or equivalent	50	Nos.			
332	IC 7408	AND Gate China or equivalent	50	Nos.			
333	IC 7432	OR Gate China or equivalent	50	Nos.			

334	IC 74153	Multiplexer China or equivalent	30	Nos.			
335	IC 7420	4 input NAND gate China or equivalent	30	Nos.			
336	IC 7483	4-Bit Binary Full Adder China or equivalent	30	Nos.			
337	IC 7485	4-Bit Comparator China or equivalent	30	Nos.			
338	IC 7486	XOR Gate China or equivalent	50	Nos.			
339	IC 7495	Shift Register China or equivalent	30	Nos.			
340	IC 7474	D-Flip Flop China or equivalent	30	Nos.			
341	IC 74148	Encoder China or equivalent	30	Nos.			
342	Seven Segment Display IC 7447	Common Cathode China or equivalent	30	Nos.			
343	Seven Segment Display IC 7447	Common Anode China or equivalent	30	Nos.			
344	CMOS Cell	No. 2032 China or equivalent	50	Nos.			
Control /EMI Lab							
345	Resistor(1/4W)	470Ω China or equivalent	1000	Nos.			
346	Resistor(1/4W)	1KΩ China or equivalent	1000	Nos.			
347	Resistor(1/4W)	2.2KΩ China or equivalent	1000	Nos.			
348	Resistor(1/4W)	3.3KΩ China or equivalent	1000	Nos.			
349	Resistor(1/4W)	4.7KΩ China or equivalent	1000	Nos.			
350	Resistor(1/4W)	10KΩ China or equivalent	1000	Nos.			
351	Resistor(1/4W)	12KΩ China or equivalent	1000	Nos.			
352	Resistor(1/4W)	15KΩ China or equivalent	1000	Nos.			

353	Resistor(1/4W)	20K Ω China or equivalent	1000	Nos.			
354	Resistor(1/4W)	33K Ω China or equivalent	1000	Nos.			
355	Resistor(1/4W)	1M Ω China or equivalent	1000	Nos.			
356	Variable Resistor	500 Ω China or equivalent	100	Nos.			
357	Variable Resistor	1K Ω China or equivalent	100	Nos.			
358	Variable Resistor	5K Ω China or equivalent	100	Nos.			
359	Variable Resistor	10K Ω China or equivalent	100	Nos.			
360	Variable Resistor	15K Ω China or equivalent	100	Nos.			
361	Variable Resistor	50K Ω China or equivalent	100	Nos.			
362	Variable Resistor	100K Ω China or equivalent	100	Nos.			
363	Disk Capacitor	1nF China or equivalent	200	Nos.			
364	Disk Capacitor	10nF China or equivalent	200	Nos.			
365	Disk Capacitor	100nF China or equivalent	200	Nos.			
366	LEDs	5mm China or equivalent	200	Nos.			
367	Electrolytic Capacitor	1uF China or equivalent	250	Nos.			
368	Electrolytic Capacitor	2.2uF China or equivalent	250	Nos.			
369	Electrolytic Capacitor	10uF China or equivalent	250	Nos.			
370	Electrolytic Capacitor	22uF China or equivalent	250	Nos.			
371	Electrolytic Capacitor	100uF China or equivalent	250	Nos.			
372	Electrolytic Capacitor (63V)	220uF China or equivalent	250	Nos.			
373	Variable Capacitor	10pF China or equivalent	100	Nos.			
374	Variable Capacitor	50pF China or equivalent	100	Nos.			
375	Variable Capacitor	100pF China or equivalent	100	Nos.			
376	Inductor	1mH China or equivalent	50	Nos.			
377	Inductor	2.2mH China or equivalent	50	Nos.			

378	Inductor	8mH China or equivalent	50	Nos.			
379	Inductor	10mH China or equivalent	50	Nos.			
380	Inductor	25mH China or equivalent	50	Nos.			
381	Inductor	50mH China or equivalent	50	Nos.			
382	Transistor (NPN)	2N3904 China or equivalent	50	Nos.			
383	Transistor (NPN)	2N3906 China or equivalent	50	Nos.			
384	ADC 0804	0804 China or equivalent	25	Nos.			
385	Op Amp	LM741 China or equivalent	25	Nos.			
386	Glass Fuse	4 Amp, 250 V China or equivalent	20	Nos.			
387	Glass Fuse	6 Amp, 250 V China or equivalent	25	Nos.			
388	Temperature Sensor	LM 35 China or equivalent	50	Nos.			
389	Light Sensor	LDR China or equivalent	50	Nos.			
390	Cable Tie 6"	6" China or equivalent	100	Nos.			
391	Cable Tie 12"	12" China or equivalent	100	Nos.			
392	Jumper Wire	Roll for bread board 1mm 250 meter of one roll China or equivalent	1	Roll			
393	DP to VGA Convertors	China or equivalent	10	Nos.			
394	Insulation Tape	Nitto / Osaka or equivalent 1 inch	5	Nos.			
395	CMOS Cell	CMOS 2032 China or equivalent	40	Nos.			
396	Battery Non-Rechargeable	9 Volt China or equivalent	20	Nos.			
397	Soldering Wire	60/40 0.8mm 100G Tin Lead Rosin Core Solder Flux Soldering Wire China or equivalent	1	Nos.			
DCCN Lab							
398	RJ 45 Connectors	Connector China or equivalent	150	Nos.			
399	Cable Tie 6"	Size: 6" China or equivalent	2	Nos.			

400	Thinner	500 ml Local or equivalent	1	Nos.			
401	Power Cables	2 Pin Power Cord Cables 220v China or equivalent	20	Nos.			
402	I/O Jack	Cat6e RJ45 Jack China or equivalent	50	Nos.			

C. BID EVALUATION CRITERIA

All bids shall be evaluated in accordance with the following evaluation criteria and other terms & conditions set forth in this bidding document.

1. The bids shall be evaluated to strictly ensure that the quoted brand/ model meet all the BoQ/ specification requirements given in the bidding document for each item.
2. In addition to the BoQ requirements, vendors must meet the vendor qualification criteria /company profile requirements (if any), as set forth in this tender document.
3. Supporting literature (where available / required) of the quoted brand/ model must be attached for verification & technical evaluation of the required specification by the technical committee. In case of any clash is found between the quoted model and the supported literature may lead to rejection of bid.

D. Special Terms and Conditions;

1. Bidders are requested to quote genuine / quality products without compromising on quality. The supplied products shall be inspected by our technical experts with respect to BoQs requirements and quality standards.
2. Bidders are advised to submit the bid on the prescribed BoQs (bidding documents) of COMSATS University Islamabad, Lahore Campus and clearly mention the Quoted Model / Brands as required in the BoQs with complete terms and conditions signed, stamped, otherwise your item(s) / bid may be rejected.
3. **Brand name / model must be mentioned against items where required failing which the bid / item (s) may be rejected. Manufacturing origin can only be accepted against items where mentioned specifically in the BoQ form.**
4. Multiple rates of an item may also lead to the rejection of bid / item.
5. Purchase / work order shall
6. be awarded on on Item Wise Basis as mentioned in BoQs.