

राजस्थान-सरकार

तकनीकी शिक्षा निदेशालय राजस्थान, जोधपुर

W-6, गौरव पथ, रेजिडेन्सी रोड, जोधपुर (राज.)

फोन- 0291-2434271 फैक्स नं- 2430398

Visit us: www.dte.rajasthan.gov.in

e-mail ID: dte_raj@yahoo.com

क्रमांक :- एफ.27(333)/ई-5/2017-18/18286

दिनांक :-16-11-2017

-: अल्पकालीन ई-निविदा सूचना संख्या 01/2017-18 :-

राजस्थान के राज्यपाल महोदय की ओर से अधोहस्ताक्षरकर्ता द्वारा राज्य के विभिन्न राजकीय पोलिटेक्निक महाविद्यालयों में उपकरण, मशीनरी, स्टील फर्नीचर, लकड़ी फर्नीचर इत्यादि की आपूर्ति करने के लिए निर्धारित प्रपत्र में बोनाफाईड विनिर्माता/थोक विक्रेता/सोल वितरक/निर्माता/प्राधिकृत डीलर/डीलर/सोल विक्रय/ विपणन एजेंट से ई-टेंडरिंग प्रक्रिया के अंतर्गत रुपये 900.00 लाख की ऑन लाईन निविदाएँ आमंत्रित की जाती है। निविदाएँ में दी जाने वाली दरें दिनांक 31.3.2018 तक मान्य होगी :-

आईटम संख्या	निविदा का विवरण	अनुमानित मात्रा	अनुमानित लागत (लाखों में)	धरोहर राशि (₹)	निविदा शुल्क (अप्रतिदेय)	निविदा डाउनलोड प्रारम्भ की दिनांक व समय	निविदा अपलोड करने एवं निर्धारित शुल्क जमा करने की अन्तिम दिनांक व समय	तकनीकी निविदा खोलने की तिथि व समय
1	फिजिक्स, केमेस्ट्री		4.00	8000	200	5.12.2017 10.00 A. M.	21.12.2017 10.00 A. M.	22.12.2017 11.00 A. M.
2	क्रंकीट, मेटेरियल टेस्टिंग, पी.एच.ई., सोईल, सर्वे लेब, एप्लाइड लेब		45.00	90000	400	5.12.2017 10.00 A. M.	21.12.2017 10.00 A. M.	22.12.2017 11.00 A. M.
3	मेट्रो लोजी लेब		50.00	100000	400	5.12.2017 10.00 A. M.	22.12.2017 10.00 A. M.	23.12.2017 11.00 A. M.
4	ओटो मोबईल, आर.ए.सी. लेब		10.00	20000	400	5.12.2017 10.00 A. M.	22.12.2017 10.00 A. M.	23.12.2017 11.00 A. M.
5	आई. सी. , फ्लूड, वैल्विंग लेब		20.00	40000	400	5.12.2017 10.00 A. M.	22.12.2017 10.00 A. M.	23.12.2017 11.00 A. M.
6	कारपेन्ट्री, फिटिंग, वैल्विंग लेब		10.00	20000	400	5.12.2017 10.00 A. M.	22.12.2017 10.00 A. M.	23.12.2017 11.00 A. M.
7	डिजिटल माइक्रोप्रोफेसर लेब		45.00	90000	400	5.12.2017 10.00 A. M.	26.12.2017 10.00 A. M.	27.12.2017 11.00 A. M.
8	इलेक्ट्रॉनिक्स लेब		18.00	36000	400	5.12.2017 10.00 A. M.	26.12.2017 10.00 A. M.	27.12.2017 11.00 A. M.
9	इलेक्ट्रॉनिक्स वर्कशॉप		18.00	36000	400	5.12.2017 10.00 A. M.	26.12.2017 10.00 A. M.	27.12.2017 11.00 A. M.
10	इन्स्ट्रुमेंटेशन लेब		30.00	60000	400	5.12.2017 10.00 A. M.	26.12.2017 10.00 A. M.	27.12.2017 11.00 A. M.
11	पॉवर इलेक्ट्रॉनिक्स		30.00	60000	400	5.12.2017 10.00 A. M.	27.12.2017 10.00 A. M.	28.12.2017 11.00 A. M.
12	मेजरमेंट एण्ड इन्स्ट्रुमेंटेशन, मशीन लेब		9.00	18000	400	5.12.2017 10.00 A. M.	27.12.2017 10.00 A. M.	28.12.2017 11.00 A. M.

निविदा प्रपत्र अनुसार

आईटम संख्या	निविदा का विवरण	अनुमानित मात्रा	अनुमानित लागत (लाखों में)	धरोहर राशि (₹)	निविदा शुल्क (अप्रतिदेय)	निविदा डाउनलोड प्रारम्भ की दिनांक व समय	निविदा अपलोड करने एवं निर्धारित शुल्क जमा करने की अन्तिम दिनांक व समय	तकनीकी निविदा खोलने की तिथि व समय
13	इलेक्ट्रीकल वर्कशॉप		30.00	60000	400	5.12.2017 10.00 A. M.	27.12.2017 10.00 A. M.	28.12.2017 11.00 A. M.
14	इंगलिश लेंगवेज लेब		50.00	100000	400	5.12.2017 10.00 A. M.	28.12.2017 10.00 A. M.	29.12.2017 11.00 A. M.
15	स्टील फर्नीचर		50.00	110000	400	5.12.2017 10.00 A. M.	28.12.2017 10.00 A. M.	29.12.2017 11.00 A. M.
16	बुडन फर्नीचर		12.00	24000	400	5.12.2017 10.00 A. M.	28.12.2017 10.00 A. M.	29.12.2017 11.00 A. M.
17	मैकेनिकल ब्रॉच उपकरण		44.00	88000	400	5.12.2017 10.00 A. M.	28.12.2017 10.00 A. M.	29.12.2017 11.00 A. M.
18	सिविल ब्रॉच उपकरण		19.00	38000	400	5.12.2017 10.00 A. M.	01.01.2018 10.00 A. M.	02.01.2018 11.00 A. M.
19	इलेक्ट्रीकल ब्रॉच उपकरण		19.00	38000	400	5.12.2017 10.00 A. M.	01.01.2018 10.00 A. M.	02.01.2018 11.00 A. M.
20	डिजिटल लेब उपकरण		22.00	44000	400	5.12.2017 10.00 A. M.	01.01.2018 10.00 A. M.	02.01.2018 11.00 A. M.
21	कम्प्युनिकेशन लेब		100.00	200000	400	5.12.2017 10.00 A. M.	04.01.2018 10.00 A. M.	05.01.2018 11.00 A. M.
22	थर्मल, मशीन लेब		100.00	200000	400	5.12.2017 10.00 A. M.	04.01.2018 10.00 A. M.	05.01.2018 11.00 A. M.
23	कम्प्यूटर		100.00	200000	400	5.12.2017 10.00 A. M.	04.01.2018 10.00 A. M.	05.01.2018 11.00 A. M.
24	इलेक्ट्रोनिक्स ब्रॉच उपकरण		65.00	120000	400	5.12.2017 10.00 A. M.	04.01.2018 10.00 A. M.	05.01.2018 11.00 A. M.
			900.00	1800000				

- विभिन्न निविदाओं के संबंध में विस्तृत शर्तें एवं अन्य विवरण उपकरण के पूर्ण स्पेशिफिकेशन कार्यालय समय में वेब साईट www.dte.rajasthan.gov.in, www.dipronline.org एवं www.sppp.rajasthan.gov.in (पोस्टल अधिनियम) पर देखा जा सकता है। निविदा प्रपत्र को वेब साईट www.eproc.rajasthan.gov.in से डाउनलोड/अपलोड किया जा सकता है।
- ऑन लाईन निविदा प्रक्रिया में वे ही संवेदक भाग ले सकेंगे जिनके पास **Digital Signature Certificate** होने के साथ ही उक्त वेब साईट पर पंजीकृत होंगे।
- निविदा शुल्क व धरोहर राशि का पृथक पृथक डिमाण्ड ड्रॉफ्ट सहायक निदेशक, प्राविधिक शिक्षा निदेशालय राजस्थान, जोधपुर के नाम से देय होगा एवं ई-टेंडरिंग प्रक्रिया शुल्क के डिमाण्ड ड्रॉफ्ट राशि रुपये 1000/- का **M.D., R.I.S.L.** जयपुर के नाम से देय हो इस कार्यालय में निविदा खोलने के निर्धारित समय तक जमा करना अनिवार्य है। अन्यथा निविदा नहीं खोलने की पूर्ण जिम्मेवारी फर्म की होगी।
- किसी भी प्रकार के स्पष्टीकरण अथवा शुद्धिकरण की नवीनतम जानकारी हेतु निविदा प्रपत्र डाउनलोड करने वाले निविदादाता नियमित रूप से उक्त वेब साईट का अवलोकन करते रहे।
- उपकरण, मशीनरी, स्टील/लकड़ी फर्नीचर की आपूर्ति संबंधित संस्थानों में 50 दिवस में करनी होगी। अन्यथा नियमानुसार एल. डी. चार्जज की कटौति की जायेगी।
- निर्धारित तिथियों को राजकीय अवकाश होने निविदाएँ उसके अगले कार्य दिवस को उक्त निर्धारित समय पर खोली जायेगी।

7. सशर्त निविदा स्वीकार नहीं होगी।
8. समस्त विवादों का न्यायिक क्षेत्र जोधपुर (राजस्थान) रहेगा।
9. राज्य में राजस्थान लोक उपापन पारदर्शिता अधिनियम-2012 व नियम-2013 प्रभावशील हैं। अतः निविदा पर उक्त अधिनियम व नियम के सभी प्रावधान प्रभावशील होंगे।
10. किसी भी निविदा को पूर्ण/आंशिक स्वीकार करने अथवा बिना कारण बताये अस्वीकृत करने के समस्त अधिकार विभाग के पास सुरक्षित रहेंगे। जिसके संबंध में फर्म से किसी प्रकार के प्राप्त पत्रों पर विचार नहीं किया जायेगा।
11. निविदा में दर्शाये आईटमों की मात्रा एवं आपूर्ति अवधि घटाई/बढ़ाई जाने के समस्त अधिकार विभाग के पास सुरक्षित रहेंगे। जिसके संबंध में फर्म से किसी प्रकार के प्राप्त पत्रों पर विचार नहीं किया जायेगा।
12. प्रत्येक उपकरण की दर एक ही अंकित (टेक्स/अन्य चार्जज जोडकर) करने में प्राथमिकता प्रदान करे।
13. निविदा के साथ दिये जाने वाले समस्त दस्तावेज पूर्ण रूप से भरे जायेंगे।
14. वेट/सीएसटी चुकता प्रमाण पत्र (31.3.2017 तक) संलग्न करें।
15. निविदा के साथ दिये जाने वाले दस्तावेजों के अनुसार पूर्ण भरे हुए एवं आवश्यकता अनुसार समस्त दस्तावेज संलग्न करें। अन्यथा निविदा खोलने के संबंध में विभाग द्वारा लिया गया निर्णय अन्तिम होगा।
16. अगर आपको क्रयादेश जारी किया जाता है तो क्रयादेश में वर्णित आपूर्ति अवधि में उपकरण इत्यादि की आपूर्ति करावें। अगर किन्ही परिस्थितियों के दृष्टिगत आप समयावधि में आपूर्ति नहीं कर सकते है तो आपूर्ति अवधि समाप्त होने से पहले विभाग को लिखित में सूचित करेंगे। अन्यथा संस्था प्रधान द्वारा आपूर्ति स्वीकार नहीं की जायेगी। नियमानुसार निदेशालय द्वारा आपूर्ति अवधि बढ़ाने के पश्चात् ही फर्नीचर की आपूर्ति करावें।
17. राजस्थान की लघु औद्योगिक इकाईयों जो निविदित आईटम के लिये पंजीकृत है, द्वारा Form EM-II उद्योग आधार मेमोरेण्डम & Annexure-II की प्रति प्रस्तुत करने पर धरोहर राशि अनुमानित लागत ½ % एवं निविदा शुल्क निर्धारित दर का 50 % देय होगा। इस संबंध में निविदा आईटम EM-II उद्योग आधार मेमोरेण्डम esa सम्मिलित होने के आशय का पृथक शपथ पत्र साथ में संलग्न करना अनिवार्य होगा।
18. डाक द्वारा विलम्ब के लिये विभाग जिम्मेवार नहीं होगा।
19. क्रय किये जाने वाले उपकरण, मशीनरी, स्टील फर्नीचर एवं लकड़ी फर्नीचर की आपूर्ति संबंधित राजकीय पोलिटेक्निक महाविद्यालय में निर्देशानुसार करनी होगी। इसके लिये अलग से भुगतान देय नहीं होगा।
20. उपकरण/मशीनरी निविदा से संबंधित एनेक्चर-एच में किसी भी आईटम में Sample required लिखा गया है उस आईटम से संबंधित सेम्पल निविदा शुल्क, धरोहर राशि एवं प्रोसेसिंग फीस डी. डी. के साथ जमा करवाना होगा। अन्यथा उस आईटम को Tender में CONSIDER नहीं किया जायेगा जिसकी पूर्व जिम्मेवारी फर्म की होगी।



निदेशक, तकनीकी शिक्षा,

GOVERNMENT OF RAJASTHAN

DIRECTORATE OF TECHNICAL EDUCATION RAJASTHAN, JODHPUR

W-6, GAURAV PATH, JODHPUR. Phone- 0291-2434271 Fax- 2430398

Visit us: www.dte.rajasthan.gov.in e-mail ID: dte_raj @yahoo..com

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BID DOCUMENT FORM

1. Name of item :- _____
2. Name & full address of the firm submitting the bid along with Tel. No., Fax No. & e-mail/
Mobile No.
M/s :
Full Address :
Tel. No./FAX/Mobile :
e-mail :
3. Addressed to :- **Director (Education), Directorate of Technical Education Rajasthan,
Jodhpur- 342011** (e-mail :- dte_raj@yahoo.com)
4. Reference : e-Tender Notice No...../2017-18 Dated
5. The Processing fee of Rs. 1000/-, Bid fee and Bid Security (EMD) as per tender notice has been deposited vide separate demand drafts as per enclosed scanned copies.
6. All documents required as per bid documents are enclosed.
7. Goods will be delivered within the stipulated delivery period from the date of the supply order at Jodhpur or the designated place mentioned in the work order.
8. I/ We agree to abide by all the Terms & conditions mentioned in e-Tender Notice No.- /2017-18 dated issued by the Department and also agree to further Terms & Conditions including special conditions of the said tender notice given in the attached sheets (all the pages of which has been signed with stamp by me/ us in token of my/our acceptance of the terms & condition mentioned therein) If any page of the tender document is inadvertently left without seal and signature, it will be deemed as signed and sealed.

**SIGNATURE OF THE BIDDER
WITH SEAL AND DESIGNATION**

* The words bid or tender and bidder or tenderer where ever mentioned in attached documents are synonyms and having same meaning.

GOVERNMENT OF RAJASTHAN
DIRECTORATE OF TECHNICAL EDUCATION RAJASTHAN, JODHPUR
Instruction to Bidders for Online Bidding (e-Tendering)

Information to be disseminated to prospective bidder regarding on line Bidding.

1.	The Bid document can be downloaded from web site http://eproc.rajasthan.gov.in & submitted online in electronic format on same web site.
2.	Office address :- Director (Education), Directorate of Technical Education Rajasthan, Jodhpur-342011 Phone- 0291-2434271 Fax- 2430398 e-mail ID: dte_raj@yahoo.com
3.	To participate in online Bids, Bidders will have to possess Digital Signature Certificate (type II or type III) as per information Technology Act-2000 using which they can sign their electronic bids, Bidder can procure the same from any CC approved certifying agency, i.e. TCS safecrypt, Ncode etc. or they may contact e-procurement Cell Department of It & C, Government of Rajasthan for further assistance: Bidder who already have a valid Digital Certificate need not required to procure a new Digital Certificate. Contact No. : 0141-4022688 (Help desk 10 am to 6 pm on all working days) E mail: eproc@rajasthan.gov.in Address: e-Procurement Cell, RISL, Yojna Bhawan, Tilak Marg, C-Scheme, Jaipur.
4.	Before electronically submitting the Bid, it should be ensured that all Bid papers including conditions of contract etc. are digitally signed by the Bidder and filled up as per the Bid Guidelines.
5.	Training for the bidders on the usage of e-tendering System is also being arranged by RISL on regular basis. Bidders interested for training may contact e-Procurement Cell, RISL for booking the training slot.
6.	Bidders are also advised to refer “Bidders mannul” available under “Downloads” section for further details about the e-tendering process.
7.	RISL Processing fees is Rs. 1000.00[in addition to Bid form Fees & Bid Security (EMD)] which are as per e-tender notice (refer circular no. 19/2011 dated 30.09.2011)
8.	Bid security (Earnest Money) and Bid fees (in the form of Bankers Cheque/ demand draft in favour of Assistant Director, Directorate of Technical Education Rajasthan, Jodhpur payable at Jodhpur) and processing fees (by way of Demand draft in favour of MD, RISL, Jaipur payable at Jaipur) to be submitted physically at the office of undersigned up to the stipulated time & date of opening of Technical Bid, failing which the e-tender will not be admitted.
9.	The following documents must be attached with Technical Bid (First Cover in pdf) failing which Bid is liable to be rejected. <ol style="list-style-type: none"> a. Scanned copies of BC/DD’s of Bid fee, Processing fee & Bid security (EMD). b. Scanned copies of Bid document form along with Conditions of tender (SR-16) & Special Terms & Conditions duly signed and sealed. c. G.S.T. registration certificate and G.S.T. declaration (as per Annexure F) . d. Instructions to bidders document duly signed & sealed by the bidder e. Scanned copy of Power of attorney for authorised signatory to sign the tender document. f. All the technical specification and details of the tendered item and technical specification in tabular form must be submitted as indicated at Annexure - H g. Price charging certificate as per (Annexure G). h. Declaration by the tenderer (SR 11). Annexure -E i. Scanned copy of PAN card. j. Annexure A, B, C & D duly signed with seal. <p style="text-align: center;">Signature of bidder with seal</p>

	<p>k. Scanned copy of form Entrepreneurial Memorandum Part-II/ Udyog Aadhar and Annexure –I to avail benefit of EMD at reduced rate for SSI unit(If required). A separate affidavit (Annexure-K) in support for inclusion of all tendered items in the Entrepreneurial Memorandum Part-II/Udyog Aadhar issued by Industries Department must be submitted along with the bid .</p> <p>l. Prescribed check list</p> <p>m. Format of RTGS/NEFT as per Annexure –J</p> <p>n. Any other documents which the bidder wants to submit and/ or any document as per tender.</p> <p>o. Certificate of Annual Turnover from Chartered Accountant.</p> <p>p. Authorization certificate in Annexure-L (if applicable)</p> <p><u>Note: The bidder must upload scanned copies of all the originally down loaded documents (Duly filled and seal-signed) of this tender only.</u></p> <p>Second cover (Financial/Price bid/BOQ-xls) should contain details of price quoted in BOQ.</p> <p>In absence of the above or wrongly placing the required documents in any other cover or not mentioning the desired information at the specified place/ column, the bid may not be considered and will be rejected. The provisions of RTPP Rules 2013 & RTPP Act 2012 will prevail in this regard.</p>
10.	Incomplete & conditional Bid in any respect will be rejected without any information.
11.	The Director (Education), Directorate of Technical Education Rajasthan, Jodhpur has reserve the right to reject all/ any part of Bid received from the firms/ Bidders without assigned any reason thereof.

Director (Education)

I/we have carefully read and understood above instruction

Signature of bidder with seal

SPECIAL CONDITIONS OF TENDER

01. The bidders are requested to submit their bids prior to last date of submission to avoid Non-submission of their bids up to prescribed date due to non-availability of / hanging of website at last moments. The date of submission of bids will not be extended if system is hang up in last hours or congestion.
02. In case, the date fixed for opening of the tenders be declared as a public holiday, the bid shall be opened on the next date on which office re-opens after such holiday(s).
03. Physical submission of bids is not allowed.
04. Tenders shall be valid for a minimum period of **90 days** after the date of opening of tender. Tender mentioning a shorter validity period than specified are likely to be rejected.
05. The bidders who are interested in bidding can download tender documents from **www.eproc.rajasthan.gov.in** up to the stipulated date & time.
06. The bids will have to be Digitally signed by the bidder and submitted online in two covers in electronic format only on website **www.eproc.rajasthan.gov.in**
07. Furnishing of tender offer shall be strictly in the manner as prescribed in Instructions to bidder and terms & conditions of tender, failing which the tender is liable for rejection.
08. The following documents are to be uploaded in **Two covers** of the bid

(A) TECHNICAL BID (First cover-pdf) :

- a. Scanned copies of BC/DD's of Bid fee, Processing fee & Bid security (EMD).
- b. Scanned copies of Bid document form along with Conditions of tender (SR-16) & Special Terms & Conditions duly signed and sealed.
- c. G.S.T. registration certificate and G.S.T. declaration (as per Annexure F) .
- d. Instructions to bidders document duly signed & sealed by the bidder
- e. Scanned copy of Power of attorney for authorised signatory to sign the tender document.
- f. All the technical specification and details of the tendered item and technical specification in tabular form must be submitted as indicated at Annexure - H
- g. Price charging certificate as per (Annexure G).
- h. Declaration by the tenderer (SR 11). (Annexure E).
- i. Scanned copy of PAN card.
- j. Annexure A, B, C & D duly signed with seal.
- k. Scanned copy of form Entrepreneurial Memorandum Part-II/Udhyog Adhar and Annexure -I to avail benefit of EMD at reduced rate for SSI unit(If required). **A separate affidavit (Annexure-K) in support for inclusion of all tendered items in the Entrepreneurial Memorandum Part-II /Udyog Aadhar issued by Industries Department must be submitted along with the bid. (Format attached at annexure-K)**
- l. Prescribed check list

Signature of tenderer with seal

- m. Fomat of RTGS/NEFT as per Annexure -J
- n. Any other documents which the bidder wants to submit and/ or any document as per tender.
- o. Certificate of Annual Turnover from Chartered Accountant.
- p. Authorisation certificate in Annexure-L (if applicable)

Note: The bidder must upload scanned copies of all the originally down loaded documents (Duly filled and seal-signed) of this tender only.

In absence of the above or wrongly placing the required documents in any other cover or not mentioning the desired information at the specified place/ column, the bid may not be considered and will be rejected. The provisions of RTPP Rules 2013 & RTPP Act 2012 will prevail in this regard.

(B) FINANCIAL BID (Second cover-xls) :

It should contain details of price quoted in BOQ.

Note:- The Financial bid of only Technically qualified bidders will be opened. The date of opening of financial bid will be displayed on www.eproc.rajasthan.gov.in .

- 09. The tenderers shall quote F.O.R. destination prices only. indicating the Freight inclusive of unloading and stacking and Insurance charges in Financial/Price Bid/BOQ. They will also indicate the prevailing rates of G.S.T (whether inclusive or exclusive) in the quoted prices. If the Financial/Price Bid/BOQ is not filled completely, the offer is likely to be ignored.
- 10. Material/Equipment on order shall be required to be dispatched on "Freight paid basis".
- 11. Before electronically submitting the tenders, it should be ensured that all tender documents enlisted above including conditions of contract are signed & sealed on each & every page by the authorized representative of the firm after filling requisite information/details desired in the specification & Qualifying Requirement.
- 12. The complete set of documents must be then furnished **duly digitally signed through DSC of bidders company** and submitted on www.eproc.rajasthan.gov.in in time as per **checklist** provided with the tender document . The checklist along with relevant page nos. shall also be submitted with the tender.
- 13. All tenders, in which any of the prescribed conditions are not fulfilled or which have been vitiated by errors in calculations, totaling or other discrepancies or which contain over writing in figures or words or corrections not initialed and dated, may be liable to rejection.
- 14. Payment shall be made to supplier/contractor through RTGS/NEFT for quick and safe transfer of funds across the country. The charges for transfer through RTGS/NEFT shall be on the part of supplier/ contractor. The supplier/ contractor shall furnish particulars to the payment making authorities of DTE in prescribed format to be provided by the purchaser. **(Annexure- J)**
- 15. No conditional tenders shall be accepted and will be rejected summarily forthwith.
- 16. The DTE reserves the right to cancel the tender at any time without assigning any reasons. The DTE does not bind himself to accept the lowest or any tender or any part of the tender and shall not assign any reason(s) for the rejection of any tender or a part thereof.

Signature of tenderer with seal

- 17. No refund of tender fee is claimable for tenders not accepted or forms not submitted.

18. Payment of Bill will be made by **Director (Education), Technical Education, Jodhpur** after the receipt of material and found to entire satisfaction and as per specification and good conditions mentioned there in supply order.
19. The supply will be accepted only on working day in the office working hours.
20. The Tenderer would provide Guarantee for an appropriate period from the date of delivery of the said goods in good conditions. During Course of Guarantee period, the items will have to got repaired/replaced FREE OF COST at Concerning Institute.
21. Quantity of items can be increased/decreased/cancelled. Department is competent to accept/refuse the Tender/Tenders without quoting any reason thereof.
22. **The Samples where ever mentioned in technical specification (Annexure-H) must be submitted in this Directorate alongwith physical submission of D.D. of EMD.**
23. **The Scanned copies of Catalogue/Literature and/or Authorisation Certificate (Duly seal-signed by the bidder) where ever demanded in technical specification (Annexure-H) must be uploaded alongwith the bid otherwise concerned items will not be considered for technical evaluation.**
24. **The Average Annual Turnover of the bidder for last three financial years (2014-15 to 2016-17) or any year of the last three year will be minimum Two times of the tender cost as per NIT but minimum Turnover of the bidder must be more than Rs. 20.00 Lacs. A certificate issued by the Chartered Accountant (Showing the Annual Turnover of last three years) with their Signature, Registration No. & Seal must be submitted along with the bid.**
25. **All applicable statutory deductions regarding GST, income tax etc. are to be made from the suppliers bill.**
26. All other Terms and conditions shall be as specified in the Rajasthan Transparency in Public Procurement Act, 2012, Rajasthan Transparency in Public Procurement Rule, 2013 and will prevail.

Enclosed : As Above

**Join. Director/Assistant Director
for DIRECTOR (EDUCATION)
TECHNICAL EDUCATION RAJASTHAN
JODHPUR**

Signature of tenderer with seal

GOVERNMENT OF RAJASTHAN
DIRECTORATE OF TECHNICAL EDUCATION RAJASTHAN, JODHPUR
W-6, GAURAV PATH, JODHPUR. Phone- 0291-2434271 Fax- 2430398
Visit us: www.dte.rajasthan.gov.in e-mail ID: dte_raj@yahoo.com

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"CONDITIONS OF TENDER AND CONTRACT FOR OPEN TENDER"

Note : Tenderers should read these conditions carefully and comply strictly while sending their tenders.

1. Tenders are hereby invited in e-tender system for purchase of
Tenders are to be submitted online in electronic format on website <http://eproc.rajasthan.gov.in>. The tender document/specification can be downloaded from above mentioned website
- 1.1 **“Tenders by Bonafide Dealers”** :- Tenders shall be given only by Bonafide Dealers in the goods. They shall therefore, furnish a declaration in the S.R. form 11. (Copy enclosed).
- 2.1 Any change in the constitution of the firm, etc. shall be notified forthwith by the contractor in writing to the purchase officer and such charge shall not relieve any former member of the firm, etc. from any liability under the contract.
- 2.2 No new partner/partners shall be accepted in the firm by the contractor in respect of the contract unless he/they agree to abide by all its terms, conditions and deposit with the purchase officer a written agreement to this effect. The contractors receipt for acknowledgement or that of any partners subsequently accepted as above shall bind all of them and will be sufficient discharge for any of the purpose of the contract.
3. **G.S.T. REGISTRATION:** No Dealer who is not registered under the **G.S.T.** Act prevalent in the state where his business is located shall tender. The **G.S.T.** registration number should be quoted & self attested copy of **G.S.T.** Registration should be enclosed with tender.
4. Tenderer will have to submit copy of PAN CARD duly attested by the Tenderer without which tender may not be considered.
5. Tender forms shall be filled in ink or typed. No Tender filled in pencil shall be considered. The Tenderer shall sign the Tender form at each page and at the end including amendment sheet enclosed in token of acceptance of all the terms and conditions of the tender.
6. Rate shall be written both in Words and Figures. There should not be errors and or over writing. Correction if any, should be made clearly and initialed with dates. The Rates should mention element of the G.S.T. separately.
7. All Rates quoted must be F.O.R. Destination and should include all incidental charges except octroi. G.S.T., which should be shown separately. In case of Local supplies the rates should include all taxes etc. and no cartage of Transportation charges will be paid by the Government and the delivery of the goods shall be given at the premises of purchase officer/F.O.R. Destination Stores as mention in tender Document. Goods to be purchased are for the purpose of official use. Hence, octroi is not payable. The rates, therefore, should be exclusive of octroi and local tax. In case goods to be purchased are for the purpose of resale or use as manufacture of any goods for sale. the Rates shall inclusive of octroi and local tax. In the former case a certificate in the prescribed form will be furnished along with the supply order.

Signature of tenderer with seal

8. **COMPARISON OF RATES** : Due to applicability of G.S.T. in place of V.A.T. the comparison of rates between firms of Rajasthan & out of Rajasthan will be made as per applicable rules (if any) made by the State Government up to the date of opening of financial Bid.
9. **PRICE PREFERENCE** : Price preference will be given to the goods produced or manufactured by industries of Rajasthan over goods produced or manufactured by industries outside Rajasthan as per purchase of stores (as per Finance Department Notification no. F1 (8)/FD/GF&AR/2011 dated 19.11.2015 or as per any amendment made by the State Government there after) Rules.
 - 9.1 Preference to Local Industries Registered with the Director of Industries. Rajasthan, Jaipur over the Tendering Units, outside the State of Rajasthan as per the policy approved by the government will be operative.
 - 9.2 Under the different situations between local tendering unit of S.S.I. Rajasthan and outside the State of Rajasthan the policy as laid down by the Government will be operative & rule amended up to date shall be applicable. (Amended vide Finance Department Order No. F-15 (1) FD/CSPO/9608/2000 Date 21/03/2000).
10. **VALIDITY** : Tenders shall be valid for a period of **90 days** from the date of opening of Tender.
11. The approved supplier shall be deemed to have carefully examined the conditions, specifications, size, Make and drawings, etc. of the goods to be supplied. If he has any doubts as to the meaning of any portion of these conditions or of the specifications, drawing, etc. he shall before signing the contract, refer the same to the purchase officer and get clarification
12. The contractor shall not assign or sublet his contract or any substantial part there of to any other agency.
- 13.1 **SPECIFICATIONS** : All article supplied shall which strictly confirm to specifications. Trade mark laid down in the Tender form and wherever articles have been required according to ISI specifications. Those articles should confirm strictly to those specification and should bear such marks.
- 13.2 The supply of articles marked with a struck/at serial number shall in addition, confirm strictly to the approved samples. The supply shall be of the very best quality and description. The decision of the confirm to the specification and are in accordance with the samples. If any, shall be final and binding on the tenderers.
- 14.1 **WARRANTY/GUARANTEE CLAUSE** : The Tenderer would give guarantee that the goods/stores/ articles would continuous to confirm to the description and quality as specified for a minimum period of **12 Months** from the date of delivery of the said goods/ stores/articles to be purchased and that not with standing the fact that the purchaser may have inspected and/or approved the said good/stores if during the aforesaid period of 12 months. The said goods/stores/articles to discovered to confirm to the description and quality aforesaid or have determined (and the decision of the purchase officer in that behalf will be final and conclusive). The purchaser will be entitled to reject the said goods/stores/articles or such portion there of as may be discovered not to confirm to the said description and quality, on such rejection the goods/articles/stores will be at the seller's risk and all the provision relating to rejection of goods. etc. shall apply. The tenderer shall if so called upon to do replace the goods, etc.

Signature of tenderer with seal

or such portion there of as is rejection by the purchase officer, otherwise the tenderer shall pay such damage as may arise by reason of the breach of the condition here in contained. Nothing here in contained shall prejudice any other right of the purchase officer in that behalf under this or otherwise.

- 14.2 In case of machinery and equipment also guarantee will be given as mentioned in clause (i) above and the tenderer shall during the guarantee period replace the parts if any remove any manufacturing defect if found during the above period so as to make machinery and equipment operative. The Tenderer shall also replace machinery and equipments in case it is found defective which cannot be put to operations due to manufacturing defect etc.
- 14.3 In case of machinery and equipment specified by the purchase, officer the tenderer shall be responsible for carrying out annual maintenance and repairs on the terms and conditions as may be agreed. The Tenderer shall also be responsible to ensure adequate regular supply of spare parts needed for as specific type of machinery and equipments whether under their annual maintenance and repairs rate contract or otherwise. In case of change of model he will give sufficient notice to the purchase officer who may like to purchase spare parts from them to maintain, the machinery and equipment in perfect condition.
- 15.1 **INSPECTION:** The purchase officer or his duly authorized representative shall at all reasonable time have access to the suppliers premises and shall have the power at all reasonable time to inspect and examine the material and workmanship of the goods/equipments/machineries during manufacturing process or afterwards as may be decided.
- 15.2 The tenderer shall furnish complete address of the premises of his office, godown and workshop where inspection can be made together with name and address of the person who is to be contacted for the purpose. In case of those dealers who have newly entered in business a letter of introduction from their bankers will be necessary.
16. **SAMPLES:** Tender for articles marked within the schedule shall be accompanied by two set of samples of the articles tendered properly packed. Such samples if submitted personally will be received in the office. A receipt will be given for each samples by the officer receiving the samples. Samples if sent by train, etc. should be dispatch freight paid and the R.R. or G.R. should be sent under a separate registered cover. Samples for catering food items should be given in a plastic box or in polythene bags at the cost of the tenderer.
17. Each samples shall be marked suitable either by written on the sample or on a slip or durable paper securely, fastened to the sample the name of the tenderer and serial number of the item, of which it is a sample in the schedule.
18. Approved samples would be retained free of cost up to the period of six month after the expiry of the contract. The government shall not be responsible for any damage, wear and tear or loss during testing, examination etc. during the period these samples are retained. The samples shall be collected by the tenderer on the expiry of the stipulated period. The Government shall in no way make arrangements to return the samples. The samples uncollected within 9 months after expiry of contract shall be forfeited by the government and no claim for their cost etc. shall be entertained.
19. Samples not approved shall be collected by the unsuccessful tenderers. The government will not be responsible for any damage, wear and tear or loss during testing examination etc. During the period these samples are retained. The uncollected samples shall be forfeited and no claim for their cost etc. shall be entertained.

Signature of tenderer with seal

20. Supplies when received shall be subject to inspection to ensure whether they confirm to the specifications or with the approved samples. Where necessary or prescribed or practical, tests shall be carried out in government laboratories, reputed testing house. Like Shri Ram Testing house, New Delhi and the like another supplies will be accepted only where the articles confirm to the standard of prescribed specifications as a result of such tests.
21. **DRAWLS OF SAMPLES :** In case of tests, samples shall be drawn in four sets in the presence of tenderer or his authorized representative and properly sealed in their presence. Once such set shall be given to them, one or two will be sent to the laboratories and/or testing house and the third or fourth will be retained in the office for reference and record.
22. **TESTING CHARGES :** Testing charges shall be borne by the Government. In case urgent testing is desired to be arranged by the tenderer or in case of test results showing that suppliers are not up to the prescribed standards or specifications, the testing charges shall be payable by the tenderer.
- 23.1 **REJECTION :** Article not approved during inspection or testing shall be rejected and will have to be replaced by the tenderer at his own cost within the time fixed by the purchase officer.
- 23.2 If however due to exigencies of government work, such replacement either in whole or in part, is not considered feasible, the purchase officer after giving an opportunity to the tenderer of being heard shall for reasons to be recorded, deduct a suitable amount from the approved rates. The deduction so made shall be final.
24. The rejected articles shall be removed by the tenderer within **15 days** of intimation of rejection after which purchase officer shall not be responsible for any loss, shortage or damage and shall have the right to dispose of such articles as he thinks fit, at the tenderer's risk and on his account.
25. The tenderer shall be responsible for the proper packing so as to avoid damage under normal conditions of transport by sea, rail and road or air and delivery of the material in good condition to the consignee at destination. In the event of any loss and breakage or leakage or any shortage the tenderer shall be liable to make good such loss and shortage found at the check/inspection of the materials by the consignee. No extra cost on such account shall be admissible.
26. The contract for the supply, can be repudiated at any time by the purchase officer, if the supplies are not made to his satisfaction after giving an opportunity to the tenderer of being heard and recording of the reasons for repudiation.
27. Direct or Indirect canvassing on the part of the tenderer or his representative will be disqualification.
- 28.1. **DELIVERY PERIOD**
The Tenderer whose tender is accepted shall arrange supplies within a period as mentioned below from the date of supply order-

S.No.	Items	Quantity	Delivery Period
			50 Days

- 28.2. At the time of award of contract, the quantity of goods, works or services originally specified in the bidding documents may be increased, but such increase shall not exceed 50% of the quantity specified in the bidding documents. It shall be without any change in the unit prices or other terms and conditions of the bid and the bidding documents.

Signature of tenderer with seal

- 28.3 If the procuring entity does not procure any subject matter of procurement or procures less than the quantity specified in the bidding documents due to change in circumstances, the bidder shall not be entitled for any claim or compensation except otherwise provided in the bidding documents.
- 28.4 Repeat orders for extra items or additional quantities may be placed on the rates and conditions given in the contract. Delivery or completion period may also be proportionately increased. The limits of repeat order is 50% of the value of goods or services of the original contract.
- 29.1 EARNEST MONEY:** Tender shall be accompanied by an earnest money as mentioned in tender notice, without which tenders will not be considered. The amount should be deposited in either of the following forms in favour of **Assistant Director, Technical Education Rajasthan, Jodhpur.**
1. Cash through Treasury Challan deposited under head
 - 8443-Civil deposit**
 - 103-Security deposits**
 2. Bank Drafts/Bankers Cheques of the schedule Bank.
- 29.2 **REFUND OF EARNEST MONEY :** The Earnest Money of unsuccessful tenderes shall be refunded soon after a final acceptance of tender.
- 29.3 **PARTIAL EXEMPTION FROM EARNEST MONEY :-** Firms which are registered with Director of Industries. Rajasthan shall furnish the amount of earnest money in respect of items for which they are registered as such subject to their furnishing registration certificate in original or Self Attested Photostat copy issued from the Director of Industries, Rajasthan at the rate of 0.5 % of the estimated value of the tender shown in N.I.T.
- CLAUSE :-**
- i. Micro and Small Enterprises which have obtained an acknowledgement of EM-II/Udhyog Aadhar from the concerned District Industries Centre, shall make payment of earnest money @ 0.5% (Half Percent) of the value of the quantity offered for supply by them in respect of item(s) for which acknowledgement of EM-II/Udhyog Aadhar has been issued to them.
 - ii. Such Enterprises shall be required to pay security deposit @1% of the value of stores ordered to be supplied on furnishing of an attested copy of acknowledgement of EM-II/Udhyog Aadhar with an affidavit of Rs. 50/- non judicial stamp by enterprise in prescribed format. {vide FD Circular No. 24/2010 dated 19.10.2010}
- 29.4 The Central Government and Government of Rajasthan under taking need not furnish any amount of earnest money.
- 29.5 The earnest money/security deposit lying with the department/office in respect of other tenders awaiting approval or rejected or on account of contracts being completed will not be adjusted towards Earnest Money/Security Money for the fresh tenderer. The earnest money may however, be taken into consideration in case tenders are re-invited.

Signature of tenderer with seal

30. **FORFEITURE OF EARNEST MONEY** : the Earnest Money will be forfeited in the following cases :
- i. When tenderer withdrawls or modifies the offer after opening of tender but before acceptance of tender.
 - ii. When tenderer does not execute the agreement, any other formality require by Department, if any, prescribed within the specified time.
 - iii. When tenderer does not deposit the security Money after the supply order is given.
 - iv. When he fails to commence the supply of the items as per supply order within the time prescribed.
 - v. If the bidder breaches any provision of code of integrity prescribed for bidders specified in the Act and chapter VI of RTPP rules 2013.

AGREEMENT AND SECURITY DEPOSIT (Performance Security) :-

- 31.1 i. Successful tenderer will have to execute an agreement in the **Form 17** (on non-judicial Stamp Paper of the value @ 0.25% of the purchase order amount (Minimum Rs 500/- and maximum Rs 25000/-) within a period of 15 days of issue of order and deposit security equal to 5% of the value of the stores for which tenders are accepted within 15 days from the date of dispatch on which the acceptance of the tender is communicated to him.
- ii. No interest will be paid by the department **on** the security money.
 - iii. The Earnest Money deposited at the time of tender will be adjusted towards security amount. The security money amount shall in no case be less than the earnest money.
 - iv. Performance security shall be furnished in any one of the following forms-
 - (a) deposit through **eGRAS**.
 - (b) Bank Draft or Banker's Cheque of a scheduled bank.
 - (c) National Savings Certificates and any other script/instrument under National Savings Schemes for promotion of small savings issued by a Post Office in Rajasthan, if the same can be pledged under the relevant rules. They shall be accepted at their surrender value at the time of bid and formally transferred in the name of procuring entity with the approval of Head Post Master.
 - (d) Fixed Deposit Receipt (FDR) of a scheduled bank. It shall be in the name of procuring entity on account of bidder and discharged by the bidder in advance. The procuring entity shall ensure before accepting the Fixed Deposit Receipt that the bidder furnishes an undertaking from the bank to make payment/premature payment of the Fixed Deposit Receipt on demand to the procuring entity without requirement of consent of the bidder concerned. In the event of forfeiture of the performance security, the Fixed Deposit shall be forfeited along with interest earned on such Fixed Deposit.

Signature of tenderer with seal

- (e) Any other instrument as mentioned in Rajasthan Transparency in Public Procurement Rules 2013.
 - v. Performance security furnished in the form specified in clause (b) to (e) of sub-rule {31.1(iv)} shall remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the bidder, including warranty obligations and maintenance and defect liability period.
- 31.2 i. Firms register with the Director of Industries, Rajasthan in respect of stores for which they are registered subject to their furnishing the registration certificate to original form the Director of Industries or a Photo Copy or a copy their of duly attested by any gazette officer will be partially exempted from earnest money and shall pay deposit @ 1% of the estimated value of tender.
- ii. Central govt. & Govt. of Rajasthan under taking will exempted from furnishing security amount.
- 31.3 FORFEITURE OF SECURITY DEPOSIT:** Security amount in full or part may be forfeited in the following cases :
- a. When any Terms and conditions of the contract is breached.
 - b. When the Tenderers fails to make complete supply satisfactorily.
 - c. Notice of reasonable time will be given in case of forfeiture of security deposit. The decision of the purchase officer in this regard shall be final.
- 31.4 The expenses of completing and stamping the agreement shall be paid by the tenderer and the department shall be : furnished free of charge with one executed stamped counter part of the agreement.
32. i. All goods must be sent freight paid through rail or goods transport. If goods are sent freight to pay, the freight together with Departmental charge 5% of the freight will be recovered form the suppliers bills.
- ii. R.R. should be sent under registered cover through bank only.
- iii. In case supply is desired to be sent by the purchase officer by passenger train. the entire railway freight will be borne by the department.
- iv. Remittance charges on payment made shall be borne by the tenderer.

33. INSURANCE

- i. The goods will be delivered at the destination godown in prefect condition. The supplier, if he so desired may be insure the valuable goods against lost by theft destruction or damage by fire, flood under exposure to whether or otherwise viz. (war rebellion, roit etc.) The insurance charges will be borne by the supplier and state will not be required to pay such charges, if incurred.
- ii. The articles may also be got insured at the cost of the purchaser if so desired by the purchaser. In such cases, the insurance should invariably be with life Insurance Corporation of India or its subsidiaries.

Signature of tenderer with seal

34. PAYMENTS :

- i. Advance payment will not be made except in rare and special case. In case of advance payment being made it will be against proof of dispatch and to the extent as prescribed in financial power by rail/reputed goods transports companies etc. and prior inspection, if any. The balance in any will be paid on receipt of the consignment in good condition with the certificate to that effect endorsed on the inspection note given to the tenderer.
 - ii. Unless otherwise agreed between the parties payment for the delivery of the stores will be made on submission of bill in the proper form by the tenderer to the purchase officer in accordance with G.F. & A.R. all remittance charges will be borne by the tenderer.
 - iii. In case of disputed items. 10 to 25% of the amount shall be with held and will be paid on settlement of the dispute.
 - iv. Payment in case of these goods, which need testing, shall be made only when such tests have been carried out, test results received conforming to the prescribed specifications.
- 35.1 The time specified for delivery in the Tender form shall be deemed to be the essence of the contract are the successful tenderer shall arrange supplies with in the period on receipt of the firm order from the purchase office.
- 35.2
- | | |
|--|--------------|
| a. Delay up to the one fourth period of the prescribed delivery period. | 2.5 % |
| b. Delay exceeding one fourth but not exceeding half of the prescribed period. | 5.0 % |
| c. Delay exceeding half but not exceeding three fourth of the prescribed period. | 7.5 % |
| d. Delay exceeding three fourth of the prescribed period. | 10 % |
- 35.3 Fraction of a day reckoning period of delay in supplies shall be eliminated if it is less than half a day.
- 35.4 The maximum amount of liquidated damages shall be 10%.
- 35.5 If the supplier requires an extension of time in completion of contractual supply on account of occurrence of any hindrance, he shall apply in writing to the authority, which has placed the work-order for the same immediately on occurrence of the hindrance but not after the stipulated date of completion of supply.
- 35.6 Delivery period may be extended with or without liquidated damages if the delay in the supply of goods is on account of hindrances beyond the control of the tenderer.
- 36. RECOVERIES :**
- Recoveries of liquidated damages short supply breakage, rejected articles shall ordinary be made from bills. Amount may also be with held to the extent of short supply breakages, rejected articles and in case of failure in satisfactory replacement by the supplier along with amount of liquidated damages shall be recovered from his dues and the security deposit available with the department. In case recovery is not possible recourse will be taken under Rajasthan PDR Act. or any other law in force.
37. Tenderers must make their **own** arrangement to obtain import license if necessary.

Signature of tenderer with seal

38. If a tenderer imposes conditions which are in addition to or in conflict with the conditions mentioned in his tender is liable to summary rejection. In any case none of such conditions will be deemed to have been accepted unless specifically mentioned in the letter of acceptance of tender issued by the purchase officer.
39. The purchase officer reserves the right to accept any tender not necessarily the lowest, reject any tender without assigning any reasons and accept tender for all or any one or more of the articles for which tenderer has been given or distribute items of stores to more than one firm/supplier.
40. The tenderer shall furnish the following documents at the time of execution of agreement.
 - i. Attested copy of Partnership Deed in case of partnership firms.
 - ii. Registration No and Year of registration in case partnership firm is registered with register of firms.
 - iii. Address of residence and office telephone number in case of sale proprietorship.
 - iv. Registration issued by Registrar of companies in case of company.
41. If any dispute arise out of the contract with regard to the interpretation, meaning and breach of the term of the contract, the matter shall be referred to by the parties to the Head of the Department who will appoint his senior most deputy as the sole arbitrator of the dispute who will not be related to this contract and whose decision shall be final.
42. All legal proceedings, if necessary arise to the institute may by any of the parties (Government or contractor) shall have to be lodged in courts situated in Jodhpur, Rajasthan and not elsewhere.

DIRECTOR (EDUCATION)
TECHNICAL EDUCATION RAJASTHAN
JODHPUR

I/We have carefully read and understood above terms and conditions (from 1 to 42) of the tender and abide by them.

I/We have also certify that all the information and catalogue etc. of the tendered item has been enclosed and no information has been held back by us.

SIGNATURE OF THE TENDERER
With seal and designation

COMPLIANCE WITH THE CODE OF INTEGRITY AND NO CONFLICT OF INTEREST

Any person participating in a procurement process shall –

- a) not offer any bribe reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or to otherwise influence the procurement process.
- b) not misrepresent or omit that mislead or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation.
- c) not indulge in any collusion, Bid rigging or anti-competitive behavior to impair the transparency, fairness and progress of the procurement process.
- d) not misuse any information shared between the procuring entity and the Bidders with an intent to gain unfair advantage in the Procurement process.
- e) not indulge in any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the Procurement process.
- f) not obstruct any investigation or audit of a Procurement process.
- g) disclose conflict of interest, if any and
- h) disclose any previous transgressions with any Entity in india or any other country during the last three years or any debarment by any other procuring entity.

CONFLICT OF INTEREST :

The Bidder participating in a bidding process must not have a conflict interest.

A conflict of interest is considered to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliances with applicable laws and regulations.

A Bidder may be considered to be in conflict of interest with one or more parties in a bidding process if, including but limited to :

- a) have controlling partners/shareholders in common; or
- b) receive or have received any direct or indirect subsidy from any of them; or
- c) have the same legal representative for purposes of the Bid; or
- d) have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder or influence the decision of the Procuring Entity regarding the Bidding process; or
- e) the Bidder participates in more than one Bid in a bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the bidder is involved. however, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one Bid; or
- f) the Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Goods, Works or Services that are the subject of the Bid; or
- g) Bidder or any of its affiliates has been hired (or to proposed to be hired) by the Procuring Entity as engineer-in charge/consultant for the contract

Signature of tenderer with seal

**DECLARATION BY THE BIDDER REGARDING QUALIFICATIONS DECLARATION
BY THE BIDDER**

In relation to my/our Bid submitted to for procurement of in response to their notice inviting Bid No. Dated I/We hereby declare under Section 7 of Rajasthan Transparency in Public Procurement Act, 2012, that;

01. I/we possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the Procuring Entity;
02. I/we have fulfilled my/our obligation to pay such of the taxes payable to the Union and the State Government or any local authority as specified in the Bidding Documents;
03. I/we are not insolvent, in receivership, bankrupt or being wound up, not have my/our affairs administered by a court or a judicial officer, not have my/our business activities suspended and not the subject of legal proceedings for any of the foregoing reasons;
04. I/we do not have, and our directors and officers not have, been convicted of any criminal offence related to my/our professional conduct or the making of false statements or misrepresentations as to my/our qualifications to entire to a procurement contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;
05. I/we do not have conflict of interest as specified in the Act, Rules and the Bidding Document, which materially affects fair competition;

Date :

Signature of Bidder with seal

Place :

Name :

Designation :

Address :

GRIEVANCE REDRESSAL DURING PROCUREMENT PROCESS

The Designation and address of the First Appellate Authority is **Director (Education), Directorate of Technical Education Rajasthan, Jodhpur.**

The Designation and address of the Second Appellate Authority is **Secretary, Technical Education Rajasthan, Jaipur.**

01. Filing an appeal

If a Bidder or prospective bidder is aggrieved that any decision, action or omission of the Procuring Entity is in contravention to the provision to the provision of the Act or the Rules or the Guidelines issued there under, he may file an appeal to first Appellate Authority, as specified in the Bidding Document within a period of ten days from the date of such decision or action, omission, as the case may be, clearly giving the specific ground or grounds on which he feels aggrieved.

Provided that after the declaration of a Bidder as successful the appeal may be filed only by a Bidder who has participated in procurement proceedings.

Provided further that in case a procuring Entity evaluates the Technical Bids before the opening of the Financial Bids, an appeal related to the matter of Financial Bids may be filled only by a Bidder whose Technical Bid is found to be acceptable.

02. The officer to whom an appeal is filled under para (1) shall deal with the appeal as expeditiously as possible and shall Endeavour to dispose it of within thirty days from the date of the appeal.

03. If the officer designation under para (1) fails to dispose the appeal filed within the period specified in para (2), or if the Bidder or prospective bidder or the Procuring Entity is aggrieved by the order passed by the First Appellate Authority, the Bidder or prospective bidder or the Procuring Entity, as the case may be, may file a second appeal to Second Appellate Authority specified in the Bidding Document in this behalf within fifteen days from the expiry of the period specified in para (2) or of the date of receipt of the order passed by the First Appellate Authority, as the case may be.

04. Appeal not to lie in certain cases

No appeal shall lie against any decision of the Procuring Entity relating to the following matters, namely :

- a) determination of need of procurement;
- b) provisions limiting participation of Bidders in the Bid process;
- c) the decision of whether or not to enter into negotiation;
- d) cancellation of a procurement process;
- e) applicability of the provisions of confidentiality.

05. Form of Appeal

- a) An appeal under para (1) or (3) above shall be in the annexed Form along with as many copies as there are respondents in the appeal.

Signature of tenderer with seal

- b) Every appeal shall be accompanied by an order appealed against, if any, affidavit verifying the facts stated in the appeal and proof of payment of fee.
- c) Every appeal may be presented to First Appellate Authority or Second Appellate Authority, as the case may be, in person or through registered post or authorized representative.

06. Fee of filing appeal

- a) Fee for first appeal shall be rupees two thousand five hundred and second appeal shall be rupees ten thousand, which shall be non-refundable.
- b) The fee shall be paid in the form of bank demand draft or banker's cheque of a Scheduled Bank in India payable in the name of Appellate Authority concerned.

07. Procedure for disposal of appeal

- a) The first Appellate Authority or Second Appellate Authority, as the case may be, upon filing of appeal, Shall issue notice accompanied by copy of appeal, affidavit and documents, if any, to the respondents and fix date of hearing.
- b) On the date fixed for hearing, the First Appellate Authority or Second Appellate Authority, as the case may be shall,-
 - (i) here all the parties to appeal present before him; and
 - (ii) peruse or inspect documents, relevant records or copies thereof relating to the matter.
- c) After hearing the parties, perusal or inspection of documents and relevant records or copies thereof relating to the matter, the Appellate Authority concerned shall pass an order in writing and provide the copy of order to the parties to appeal free of cost.
- d) The order passed under sub-clause (c) above shall also be placed on the State Public Procurement Portal.

Signature of tenderer with seal

**MEMORANDUM OF APPEAL UNDER THE RAJASTHAN TRANSPARENCY IN
PUBLIC PROCUREMENT ACT, 2012**

Appeal No. of

Before the(First/Second Appellate Authority)

01. Particulars of appellant :

(i) Name of Appellant :

(ii) Official address, if any :

(iii) Residential address :

02. Name and address of the respondent(s) :

(i)

(ii)

(iii)

03. Number and date of the order appealed against
and name and designation of the officer/authority
who passed the order (enclosed copy), or a
statement of a decision, action or omission of
the Procuring Entity in contravention to the provisions
of the act by which the appellant is aggrieved :

04. If the Appellant proposes to be represented by a
representatives, the name and postal address of
the representative :

05. Number of affidavits and documents enclosed with the appeal :

06. Ground of appeal :

.....
.....
.....

(supported by an affidavit)

07. Prayer

:.....
.....
.....

Place :

Date :

Appellant's Signature

ADDITIONAL CONDITIONS OF CONTRACT

01. Correction of arithmetical errors :

Provided that a Financial Bid is substantially responsive, the Procuring Entity will correct arithmetical errors during evaluation of Financial Bids on the following basis :

- (i) if there is discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Procuring Entity there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected.
- (ii) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- (iii) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (i) and (ii) above.

If the Bidder that submitted the lowest evaluated Bids does not accept the correction of errors, its Bid shall be disqualified and its Bid Security shall be forfeited or its Bid Securing Declaration shall be executed.

02. Procuring Entity's Right to Vary Quantities :

- (i) At the time of award of contract, the quantity of goods, works or services originally specified in the Bidding Document may be increased or decreased by a specified percentage, but such increase or decrease shall not exceed twenty percent, of the quantity specified in the Bidding Document. it shall be without any change in the unit prices or other terms and conditions of contract.
- (ii) If the Procuring Entity does not procure any subject matter of procurement or procures less than the quantity specified in the Bidding Document due to change in circumstances, the Bidder shall not be entitled for any claim or compensation except otherwise provided in the Conditions of Contract.
- (iii) In case of procurement of Goods or services, additional quantity may be procured by placing a repeat order on the rates and conditions of the original order. However, the additional quantity shall not be more than 50% of the value of Goods of the original contract and shall be within one month from the date of expiry of last supply, if the suppliers fails to do so, the Procuring Entity shall be free to arrange for the balance supply by limited Bidding or otherwise and the extra cost incurred shall be recovered from the Suppliers.

03. Dividing quantities among more than one Bidder at the time of award (In case of Procurement of Goods) :

As a general rule all the quantities of the subject matter of procurement shall be procured from the Bidder, whose Bid is accepted. However, when it is considered that the quantity of the subject matter of procurement to be procured is very large and it may not be in the capacity of the Bidder, whose Bid is accepted, to deliver the entire quantity or when it is considered that the subject matter of procurement to be procured is of critical and vital nature, in such cases, the quantity may be divided between the Bidder, whose Bid is accepted and the second lowest Bidder or even more Bidders in that order, in a fair, transparent and equitable manner at the rates of the Bidder, whose Bid is accepted.

Signature of tenderer with seal

"DECLARATION BY THE TENDERERS" (S.R. 11)

I / We declare that I am / We are bonafide
/Manufacturer/Whole Sellers/ Sole Distributors/ Authorised Dealer/ Dealers/ Sole Selling/
Marketing Agent in the Good/Stores/Equipments/Furniture's for which I/We have Tendered.
(STRIKE OFF WHICHEVER IS NOT APPLICABLE)

If, this Declaration is found to be incorrect then without prejudice to any other action that
may be taken, my/our security may be forfeited in full and the Tender if any to the extent accepted
may be cancelled.

SIGNATURE OF THE TENDERER
With seal and designation

"G.S.T. DECLARATION"

I, Certify that the goods on which **G.S.T.** has been charged have not been exempted under the **G.S.T. Act**, or the Rules made there under and the amount charged on account of **G.S.T.** is not more than what is payable under the relevant provisions of the **G.S.T. Act** or the Rules made there under.

Certify that we M/s
..... are registered as Manufacturer/Dealer in the
..... (State or Union Territory) under **G.S.T.** Registration No.
.....

SIGNATURE OF THE TENDERER
With seal and designation

PRICE CHARGING CERTIFICATE

I/We hereby certify that the rate offered in Financial bid are reasonable and justified and we are not marketing lower rates to other department on condition of the tender and contract.

SIGNATURE OF THE BIDDER
WITH SEAL AND DESIGNATION

FORMAT OF AFFIDAVIT

(On non-judicial Stamp Paper of Rs- 50/- vide FD Circular No. 24/2010 dated 19.10.210)

I S/o
Aged Years Residing at
Proprietor/Partner/Director of M/s do
hereby solemnly affirm and declare that :

- a) My/Our above noted enterprise M/s has
been issued acknowledgement of Entrepreneurial memorandum Part-II by the District
Industries Centre The acknowledgement No is Dated
and has been issued for manufacturer of following items :
- (i)
 - (ii)
 - (iii)
 - (iv)
 - (v)
- b) My/Our above noted acknowledgement of Entrepreneurial memorandum Part-II has not
been cancelled or withdrawn by the Industries Department and that the enterprise is
regularly manufacturing the above items.
- c) My/Our enterprise is having all the requisite plant and machinery and is fully equipped to
manufacture the above noted items.

Place :

Signature of Proprietor/ Director
Authorised Signatory with Rubber Stamp & Date

(ATTESTED BY FIRST CLASS MAGISTRATE OR NOTARY PUBLIC)

**REAL TIME GROSS SETTLEMENT (RTGS) / NATIONAL ELECTRONIC FUND
TRANSFER (NEFT)**

From: M/s.
.....
.....

To,

The Director (Education),
Directorate of Technical Education Rajasthan,
Jodhpur.

Sub:- RTGS / NEFT Payments.

We refer to remittance of our payments using RBI's RTGS/NEFT. Our payments may be made through the above system to our under noted account at our cost :-

Name of Firm	:	
Full Address	:	
Mobile Number	:	
mail ID for Payment Information	:	
PAN Number	:	
Bankers Name	:	
Branch Name	:	
9 Digit Code of Bank (Appearing on the MICR Cheque issued by the Bank	:	
Account Type with Code	:	
Account Number (as appearing on Cheque Book)	:	
IFSC Code for RTGS	:	

Signature of Bidder
with Stamp & Address

FORMAT OF AFFIDAVIT

(On Non-judicial Stamp Paper of Rs. 50/-)

I.....S/o.....Aged.....
years, residing at Proprietors/Partner/Director
of M/s.....do hereby
solemnly declare that:

- a. all items tendered by me/us in NIT No...../2017-18 issued by Director(Edu.), Directorate of Technical Education, Jodhpur are included in Entrepreneurial Memorandum part-II/Udhyog Aadhar issued to our firm by the Industries Department of Rajasthan.
- b. the rebate in tender fee & earnest money is applicable to our firm as per rules made for SSI units.
- c. if any discrepancy is found later our tender will be liable for rejection including forfeiture of earnest money/security money deposit along with any legal action as per the tender terms & conditions.

Place :

Signature of Proprietor/ Director
Authorized Signatory with Rubber Stamp & Date

Authorisation certificate to be submitted by Principal manufacturer

It is certified that M/s..... (Name & address of tenderer) is our authorised Distributer/ Dealer. They are authorised to submit tender for (Name of item) to Director (Training), Directorate of Technical Education, Jodhpur (Rajasthan) against their Tender Notice No..... Dated-on behalf of us.

The equipment/ Instrument/Machine is guaranteed for the period as mentioned in tender and during the guarantee period the authorised Distributer/Dealer shall replace the parts or rectify any manufacturing defect found in the machine. They are also responsible for after Sale-service during the life time of equipment/instrument/machine. In case of change of authorised Distributer/ Dealer the new authorised Distributer/Dealer will be responsible for guarantee and after sale-service. In case of failure we will be responsible for providing after sale service.

**Signature of Principal Manufacturer
with rubber stamp**

Note:- This authorisation certificate should be typed & signed by the principal manufacturer on his original letter pad and scanned copy of which must be up loaded with tender otherwise concerned item of the tender will not be considered for technical evaluation.

CHECK LIST

**List of required Schedules/documents to be submitted online duly signed/ digitally
Signed by Authorized Signatory**

S. No.	Particulars as per specification	Description of required document	Details of documents to be uploaded by bidder along with relevant page Nos.
(i) COVER – I : Details of Tender Fee/Bid Security/Tender Processing Fee etc. (.pdf)			
01	Cost of Tender Document	Proof of depositing cost of tender specification documents (DD/ Banker's Cheque).	
02	Details of Bid security (EMD)/ Registration/ exemption certificate (EM-II)	Proof of depositing Bid Security (DD/Banker's Cheque/vendor Registration certificate / copy of EM-II with annexure H & affidavit	
03	Tender processing fee	Proof of depositing DD/ Banker's Cheque towards e- tender processing fee.	
04	Authorization of Digital Signature (if applicable)	Power of Attorney for authorized signatory to sign the tender document digitally	
05	G.S.T. Declaration (Annexure-F)	Yes/No	
06	VAT Registration Certificate	Yes/No	
07	Copy of PAN Card	Yes/No	
08	Bid document form duly signed & sealed	Yes/No	
09	Special conditions of tender	Yes/No	
10	Tender form SR-16	Yes/No	
11	Declaration regarding Bonafide dealer SR-11 (annexure-E)	Yes/No	
12	Annexure A, B, C, D,G,J	Yes/No	
13	Technical specifications in annexure-H	Yes/No	
14	Annual Turnover certificate from Chartered Accountant.	Yes/No	
15	Annexure - I&K for SSI Unit (if applicable)	Yes/No	
16	Authorisation of manufacturer (Annexure-L) (if applicable)	Yes/No	
(iii) COVER – II : Financial/Price Bid/BOQ (.xls)			
01	Price bid/BOQ	Details of Price quoted of the material offered in Price bid/ BOQ	

Signature of tenderer with seal

TECHNICAL SPECIFICATION

- 01. The scanned copy of this annexure (original downloaded) duly completed and seal signed by the bidder must be uploaded otherwise bid should not be considered. Any supplementary information may be uploaded separately.**
- 02. The samples where-ever mentioned in specifications must be submitted in this Directorate along with physical submission of DD's of EMD etc, otherwise concerned item will not be considered for technical evaluation.**
- 03. Scanned Copies of Original Literature/Leaflets/Catalogue etc. must be enclosed in support of your Make and Specifications otherwise concerned items will not be considered for Technical Evaluation.**
- 04. The delivery period will be 50 Days.**
- 05. The Material will be Supplied F.O.R. at Principal Government Polytechnic College, as per order List.**
- 06. Authorization Certificate of manufacturer where-ever mentioned in specifications must be submitted in prescribed format (Annexure-L) otherwise concerned item will not be considered for Technical Evaluation.**
- 07. All the required literature/ leaflets/Catalogues, authorization certificates must be submitted with the tender.**
For the all Items.
- 08. All the material supplied should be new and no item can be supplied which is refurbished.**

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
1	<p>Programmable Function Generator 20 MHz</p> <ul style="list-style-type: none"> • Fully compliant to LXI Class C specification • 20 MHz Sine and Square waveforms • Pulse, Ramp, Triangle, Noise, and DC waveforms • 14-bit, 50 MSa/s, 64 k-point arbitrary waveforms • AM, FM, PM, FSK, and PWM modulation types • Linear & logarithmic sweeps and burst operation • 10 mVpp to 10 Vpp amplitude range • Graph mode for visual verification of signal settings • Connect via USB, GPIB and LAN <p>Waveforms Standard Sine, Square, Ramp, Triangle, Pulse, Noise, DC Built-in arbitrary Exponential rise, Exponential fall, Negative ramp, Sin(x)/x, Cardiac Waveforms Characteristics Sine Frequency Range 1 µHz to 20 MHz Amplitude Flatness (relative to 1 kHz)</p>	1	1	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p> < 100 kHz 0.1 dB 100 kHz to 5 MHz 0.15 dB 5 MHz to 20 MHz 0.3 dB Harmonic distortion < 1 V PP ≥ 1 VPP DC to 20 kHz -70 dBc -70 dBc 20 kHz to 100 kHz -65 dBc -60 dBc 100 kHz to 1 MHz -50 dBc -45 dBc 1 MHz to 20 MHz -40 dBc -35 dBc Total harmonic distortion DC to 20 kHz 0.04% Spurious (non-harmonic) DC to 1 MHz -70 dBc 1 MHz to 20 MHz -70 dBc + 6 dB/octave Phase noise (10 kHz offset) -115 dBc / Hz, typical Square Frequency range 1 μHz to 20 MHz Rise/Fall time < 13 ns Overshoot < 2% Variable duty cycle 20% to 80% (to 10 MHz) 40% to 60% (to 20 MHz) </p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	Asymmetry (@ 50% duty) 1% of period + 5 ns Jitter (RMS) 1 ns + 100 ppm of period Ramp, Triangle Frequency range 1 μHz to 200 kHz Linearity < 0.1% of peak output Variable Symmetry 0.0% to 100.0% Pulse Frequency range 500 μHz to 5 MHz Pulse width 20 ns minimum, (period ≤ 10s) 10 ns resolution Variable edge time < 13 ns to 100 ns Overshoot < 2% Jitter (RMS) 300 ps + 0.1ppm of period			
2	Microstrip antenna trainer 10.5GHz DRO stabilized MESFET transmitter & Receiver; 0.1% Accuracy; CW/ASK (DC-15KHz Ext) Modulation, 1mW RF Level, SMA Connector; -	1	1	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>80dBm Sensitivity; Microwave power level measurement in dBm & dBuV; 0.1dB Resolution; TTL Demod; 16x2 backlit LCD for angular Position and power level; 0-359 degrees Stepper motor controlled monopod rotator; 1000 memories for angular positions and RF levels for quick recall; 1, 5, 10, 45 degrees Angular; Automatic rotation in user steps with RS232 Datalogging facility; Monopole; Dipole; Slot WG narrow wall; Slot WG broad wall; Helix LHCP & RHCP; Patch; 1X2 Patch Array; 2X2 Patch Array; 4X4 Patch Array; Parabolic Dish; Conical Horn; Dielectric Rod; Open waveguide; Software with RS232 interface with polar plotting software with log, linear cartesian and polar plots, Multiple pattern overlay, Double cursor measurement, Zoom, Colour editing, 1000 location editor, Absolute/Relative,3dB/10dB beam-width measurement.</p>			
3	<p>CAMCORDER</p> <ul style="list-style-type: none"> • Large Capacity 80GB HDD (up to 61 Hrs of SD Recording) • 60X Optical & 2000X Digital Zoom • Carl Zeiss® Vario-Tessar® Lens 	01	01	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<ul style="list-style-type: none"> • On-Board Video Light • Face Detection & Face Index • SteadyShot Image Stabilisation • Built-In Zoom Mic • DVDirect Express & Direct Copy • HDD & Memory Card Storage options • Quick Start-up 			
4	<p>TELEVISION LCD 42"</p> <p>Screen Size : 42 (107cms), 16:9 TV System : Analog: B/G, D/K, I, M Video Signal : 480/60i, 480/60p, 576/50i, 576/50p, 720/50p, 720/60p, 1080/50i, 1080/60i, 1080/24p (HDMI™ only), 1080/50p (HDMI™ / Component), 1080/60p (HDMI™ / Component) Colour System : NTSC 3.58, NTSC 4.43 (AV only), PAL, SECAM</p> <p>Picture</p>	02	02	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	Display Resolution : Full HD 1080 (1920x1080) Video Processing : BRAVIA Engine™ 3 Backlight Module : Edge LED Live Colour™ : Yes Intelligent Picture Intelligent Picture PLUS Digital Noise Reduction : Yes MPEG Noise Reduction : Yes Advanced Contrast Enhancer (ACE) : Yes 24P True Cinema™ :Yes Viewing Angle : 178° (Right/Left), 178° (Up/Down) Screen Format TV: Full/ Normal/ Wide Zoom/ Zoom, PC: Full 1/ Full 2/ Normal Picture Mode : Vivid/ Standard/ Custom/ Cinema/ Photo/ Sports/ Game/ Graphics CineMotion/Film Mode/Cinema Drive Yes			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>3D Comb Filter : Yes</p> <p>Audio Bass Booster : Yes Sound Mode : Dynamic/ Standard/ Clear Voice Surround Mode : Cinema/ Music/ Sports/ Game Dolby® Dolby® Digital Simulated Stereo : Yes Stereo System : NICAM/ A2 Audio Output Power : 16W (8W x 2)</p> <p>Terminals HDMI™ / Audio In : 2 (Rear) USB 2.0 : 1 (Side) Composite Video Input(s) : 2 (Rear/ Hybrid) Component Video (Y/Pb/Pr) Input(s) : 1 (Rear/ Hybrid)</p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>RF Connection Input(s) : 1 (Rear) HD15 PC Input / Audio : 1 (Rear) Analog Audio Input(s) : 3 (1 Side/ 2 Rear) Audio Out : 1 (Rear) Headphone Out ; 1 (Side)</p> <p>Other Features BRAVIA Sync : Yes FM Radio : Yes Control for HDMI (HDMI CEC) : Yes USB Play : Yes Picture Frame Mode : Yes Scene Select : Photo/ Music/ Cinema/ Game/ Graphics/ Sports/ General Parental Control : Yes Sleep Timer : Yes Teletext : Yes (1000 pages)</p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	PAP (Picture And Picture) : PAP (Fixed) PIP (Picture In Picture) : Yes OSD Language : English, Simplified Chinese, French, Russian, Arabic, Persian, Thai, Vietnamese Swivel / Tilt : Yes			
5	DIGITAL STILL CAMERA 16 MEGA PIXELS,10X OPTICAL ZOOM DISPLAY FACE DETECTION 6.8 cm(2.7") INTELLIGENT LCD SCREEN ADVANCED MOVIE MODE(MPEG,MOVIE EDITING,ZOOM DURING MOVIE) Make : Sony/CANON/NIKON	01	01	
6	Plasma TV Trainer 1. The main circuit board is soldered on single PCB. 2. The students can visually observe the electronic circuits and mechanical parts easily. 3. The block diagram is printed on single PCB. 4. Fault creation facilities are provided by switches.	1	1	

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	<p>5. About more than 5 faults can be demonstrated on this trainer.</p> <p>6. Section wise different colored screen printed circuit on the PCB for easy understanding of functions of different Sections.</p> <p>7. Typical ICs are provided on sockets.</p> <p>8. Explanation, Observation, Alignment and adjustment of internal and External controls is possible at a glance due to single PCB.</p> <p>9. Easy identification of different parts of PTV at a glance.</p> <p>10. Easy measurement of Voltages and observation of waveforms at any point. Also typical voltages and waveforms are provided.</p> <p>11. A manual having 10 practical is provided with this trainer.</p> <p>12. The whole circuit of PTV is explained section wise in detail in the manual.</p>			
7	<p>Pattern Generator for HDTV</p> <p>HDPG100 is high performance PC/HDTV test pattern generator that provides over 20 most-often-used test</p>	1	1	

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	<p>patterns that can be used as an industrial-standard signal source for testing, broadcasting and troubleshooting. It is ideal for use with LCD, PDP, CRT monitors or projectors that equipped with PC or DVI input.</p> <ol style="list-style-type: none"> 1. Output format : digital RGB data bit stream 2. Interface : 24-pin DVI connector. 3. Output resolutions 4. Test patterns : 27 like Color bar, Multiburst, Circle, Crosshatch etc. 5. OSD : Indicates output resolution and refresh rate. 6. Reset : Output can be reset to one of the two factory default modes 1024x768 or 720p. 7. Selectable output refresh rate : up to 85 Hz. 8. Cabinet : Compact size with sturdy metal case. 9. Easy to operate push buttons. 			
8	<p>➤ Dual Channel Adjustable Regulated Power Supply Dual Channel Adjustable Regulated Power Supply (5A) shall have following</p>	05	05	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>specifications; High Performance and efficient Power Supply.</p> <ul style="list-style-type: none"> • Auto track Series & Parallel Function. • LED Panel bring Backlight. • Protection Cover for knobs. • 2 channels adjustable & 1 channel fixed with three adjustable 2.5V, 3.3V & 5V range. • Continuous adjustable Voltage & Current. • Output Voltage Range CH1 : 0~30V CH2 : 0~30V CH3 : 2.5V / 3.3V / 5V • Output Current Range CH1 : 0~5A CH2 : 0~5A CH3: 3A • AC Input Voltage AC220V ±10 %, 50Hz • Display Precision Voltage : ±0.5 % + 2 bit Current : 0.01A ±2bit • Ripple and Noise ≤1mVrms • Load Stability ≤0.01 % + 5mV • Voltage Stability ≤0.01 % + 2mV 			

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	<ul style="list-style-type: none"> • Output Power 315W • Protection Method Current-Limited Lower Voltage Protection • Working Method Constant Current and Constant Voltage • Cooling Mode Strong wind cooling • Environment parameter Relative damp < 80%, • Temperature of operating environment 0 ~ 40°C • Dimension 370 x 250 x 160 mm 			
9	<p>SINGLE POWER SUPPLY Single Channel Programmable Regulated DC Power Supply (3 A) with USB Interface shall have following specifications;</p> <ul style="list-style-type: none"> • High-resolution, 10mV, 1mA. • High-stability, low-drift. • Software to control it remotely. • OVP, OCP & OTP to protect power supply. • Output rating storage facility. 	10	10	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<ul style="list-style-type: none"> • Interface : USB • Technical Specifications <ul style="list-style-type: none"> • Output Voltage Range 0 ~ 30V , Output Current Range 0 – 3A • Load Effect Voltage : 0.01% + 3mV (I ≤ 3.0A) , Current : 0.2% + 3mA (I ≤ 3.0A) • Power Effect Voltage : 0.01% + 3mV Current : 0.01% + 3mA • Resolution Voltage 10mV Current 1mA (2mA when rate current > 3A) • Set Accuracy (25±5°C) : Voltage ≤ 0.1% + 20mV Current ≤ 0.5%+5mA (+10mA when rate voltage > 3A) • Ripple (20Hz~20MHz) Voltage Ripple ≤ 1mVrms(≤2mVrms>3A) Current ≤ 3mArms(≤ 6mA when rate current > 3A) • Temp. Coefficient (0~40°C) Voltage 300PPm+3mV Current : 300PPm+3mA • Output Resolution Voltage 10 mV Current : 			

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	<p>1mA(2mA when rate current > 3A)</p> <ul style="list-style-type: none"> • Read-back temp. coefficient Voltage $\leq 300\text{PPm}+10\text{mV}$ Current $300\text{PPm}+10\text{mA}$ • Drift Voltage $300\text{PPm}+10\text{mV}$ Current $300\text{PPm}+10\text{mA}$ • Interface USB 			
10	<p>Analog Multimeter (Small) Features</p> <ul style="list-style-type: none"> • Multi-color analog display with mirrored scale • High-impact thermoplastic case • Low cost, multi-function • Audible continuity • Battery test • Built-in stand • Low-cost analog • High-impact thermoplastic case • Decibel measurement • 61-610 CAT II 600V 	20	20	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model																		
	<p>• 2-year warranty Specification</p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="width: 15%;"></th> <th style="width: 30%;">Range & Resolution</th> <th style="width: 55%;">Accuracy</th> </tr> </thead> <tbody> <tr> <td>AC Voltage</td> <td>10 / 50 / 250 / 500 V</td> <td>±4.0% Full Scale</td> </tr> <tr> <td>DC Voltage</td> <td>10 / 50 / 250 / 500 V</td> <td>±3.0% Full Scale</td> </tr> <tr> <td>DC Current</td> <td>500μ / 50m / 250m A</td> <td>±3.0% Full Scale</td> </tr> <tr> <td>Resistance</td> <td>1 M Ω Full Scale 5 k Ω Mid Scale</td> <td>±3.0% Arc Length</td> </tr> <tr> <td>Decibels</td> <td>-20 to +56dB</td> <td>-</td> </tr> </tbody> </table>		Range & Resolution	Accuracy	AC Voltage	10 / 50 / 250 / 500 V	±4.0% Full Scale	DC Voltage	10 / 50 / 250 / 500 V	±3.0% Full Scale	DC Current	500μ / 50m / 250m A	±3.0% Full Scale	Resistance	1 M Ω Full Scale 5 k Ω Mid Scale	±3.0% Arc Length	Decibels	-20 to +56dB	-			
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	Battery Test - -			
11	<p>Integrated Analog / digital circuit Design Station With Virtual Instrumentation Lab Virtual instrumentation lab with below features board includes all of the test and measurement equipment needed to design and test analog and digital circuits of all types. Built around a large solderless breadboard, the EE board includes oscilloscopes, waveform generators, power supplies, voltmeters, reference voltage generators, and thirty-two digital signals that can be configured as a logic analyzer, pattern generator, or any one of several static digital I/O devices. All of these instruments can be connected to circuits built on the solderless breadboards using simple jumper wires. in a single “all in one” device. Students can complete, test, and analyze real circuit designs as a part.</p> <p>The EE board is powered by the free, PC-based WaveForms™ software that</p>	5	5	

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	<p>makes it easy to acquire, store, analyze, produce and reuse analog and digital signals. WaveForms™ runs well on virtually any notebook PC, including low-cost Netbooks. A high-speed USB2 connection ensures all EE board instruments respond in near real-time.</p> <p>WaveForms™ data files are stored using standard formats, making it easy to share data between instruments, and to export data to word processors or graphics editors. This means well documented student lab/project reports can be completed using standard office tools, and submitted electronically.</p> <p>4-channel, 40MSa Oscilloscope 4-channel voltmeter 2 programmable reference voltages 2-channel Arbitrary Waveform Generator Triple-Output Power Supply (two programmable) 32-Channel Logic Analyzer 32-Channel Pattern Generator</p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	Discrete digital I/O's (buttons, switches, LEDs, etc)			
12	<p>WAVEFORM Software</p> <p>It should seamlessly connects to the Electronics Explorer and provides a clean, easy to use graphical interface for each instrument. With WaveForms, it should be easy to acquire, store, analyze, produce, and reuse analog and digital signals.</p> <ul style="list-style-type: none"> • Designed exclusively for use with the Electronics Explorer Board. • Easy to use graphical interface for all EEBoard instruments • Powerful multi-triggering options • Import/Export file options for all instruments • PC-based virtual Input/Output devices • AC/DC coupling, +/- 20V input range, realtime FFT and XY functions data display (FFT, XY, Zoom and others), data export in multiple formats <p>Oscilloscope feature</p> <p>4 channel, 40MSps, 10-bit converter w/ up to 16Kbyte buffer depth, powerful triggering options, AC/DC coupling, +/- 20V input range, realtime FFT and XY</p>	5 user	5 user	

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	<p>functions data display (FFT, XY, Zoom and others), data export in multiple formats</p> <p>Logic Analyzer feature 32 channel, 100MSps, up to 16KSa/pin buffer depth, internal/external clock and trigger, multiple visualization options of all signals, data export in multiple formats</p> <p>Arbitrary Waveform Generator feature 2 channels, 40MSps, 14-bit converter, up to 32Kbyte buffer depth, 4MHz bandwidth, 10V p-p, standard, complex(damped and swept, AM/FM modulated) & user-defined waveforms</p> <p>Digital Pattern Generator feature 32 digital channels shared with logic analyzer, 2KSa/pin buffer depth, standard (clock, counters, constant, random, walking values) and custom patterns</p> <p>Power Supplies & Voltmeters feature Programmable, high power supplies with independent voltage and current limit settings of up to 2A, configured as simple, low frequency signal generators, two fixed 5V & 3.3V supplies, 4 channels voltmeter, two +/-10V reference voltages,</p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>input protection up to 200V, 1.2M Static I/O feature PC-based virtual I/O devices including push buttons, LEDs, switches, seven segment displays, sliders and progress bars</p>			
13	<p>2.7 GHz FREQUENCY COUNTER: ※ Frequency and Period Measurement ※ High Resolution at Both High and Low Frequency ※ 0.01Hz~2.7GHz Frequency Range(GFC-8270H) ※ 10mV rms High Sensitivity ※ 100nHz Resolution for 1Hz Input ※ Variable Trigger Level Control ※ Microprocessor Controlled Intelligent Counter</p> <p>DISPLAY : 8 digits with Hz, kHz, MHz, GHz, s, ms, μs, and overflow GATE TIME : Variable from 10ms to 10s, or 1 period of input depending on</p>	01	01	

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	<p>whichever is greater ACCURACY : \pm(resolution \pm timebase error) CHANNEL A Range DC coupling: 0.01Hz ~ 120MHz AC coupling: 30Hz ~ 120MHz Sensitivity : 10mV typical, 50mV maximum Coupling : AC or DC, selectable Filter : Low pass, selectable in or out for channel A (-3dB point, nominal 100kHz) Impedance : 1MΩ // 40pF Attenuator : 1/1 or 1/20dB Trigger Level : -2.5VDC ~ +2.5VDC Adjustment Resolution : For frequency measurement, the maximum resolution is 100nHz for 1Hz and 0.1Hz for 100MHz inputs respectively. For period measurement, the maximum resolution is 10ns for 1Hz input, and 0.1x10⁻¹⁵s for 100MHz inputs respectively. Display Accuracy : 7 digits for 1 sec gate time 6 digits for 100ms gate time 5</p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>digits for 10ms gate time Period Range : 8ns ~ 100ns (at least 7 digits displayed per gate time) CHANNEL B Range : 50MHz ~ 2.7GHz Sensitivity : <50mVrms (10mVrms typical) for GFC-8270H Coupling : AC only TIME BASE : Aging Rate : 1ppm per month Temperature : 5ppm, 23°C + 5°C Line Variation : 0.005ppm for + 10% variation POWER SOURCE : AC 100V/120V/220V/230V ±10%, 50/60Hz</p>			
14	<p>DISTORTION METER ※ Automatic level & distortion measurements ※ Auto or Hold function selectable ※ 0.1% ~ 100% in 7 distortion measuring ranges ※ 20Hz ~ 20kHz in 3 continuous ranges</p>	01	01	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>※ 400Hz, 1kHz, 10kHz 3 frequency spots ※ 1mVrms ~ 300Vrms in 12 ACV measuring ranges</p> <p>DISTORTION MEASUREMENT Range : 0.1% ~ 100% full scale in 7 ranges (auto ranging) Fundamental Frequency Range : 20Hz ~ 20kHz in 3 continuous ranges with fine adjustment tuning 3 spots for 400Hz, 1kHz, 10kHz Input Level : 100mVrms ~ 300Vrms Automatic Level Control Range : ±10dB Fundamental Rejection : > 80dB Second Harmonic Accuracy : ±1dB at basic frequency 20Hz ~ 20kHz Residual Distortion : < 0.03% including hum and noise</p> <p>AC VOLTAGE MEASUREMENT Range : 1mVrms to 300Vrms full scale in 12 ranges (auto-ranging) Frequency Response : 20Hz ~ 200kHz ±1dB</p>			

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	Input Impedance : 100kΩ ±10%, <70pF (unbalanced) Accuracy : ±3% of full scale (@ 1kHz) Residual Noise : < 10uV (input short circuit) Output Level : X:1Vrms, Y:500Vrms at meter full scale Output Impedance : Approx. 600Ω POWER SOURCE : AC 100V/120V/220V/240V ±10%, 50/60Hz			
15	LCRQ Bridge Meter ※ Test Frequency: 12Hz~200kHz ※ 0.05%~0.1% Basic Accuracy ※ 100 Sets Memory for Save/Recall of Settings ※ R/Q, C/D, C/R, L/Q, Z/θ, L/R Test Modes ※ Absolute Value, Δ Value, and Δ% Measurement Display ※ 240 x 128 dot Matrix LCD Display ※ Displays Condition and Test Result Simultaneously TEST FREQUENCY : 12Hz ~ 200kHz	05	05	

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	<p>TEST SIGNAL LEVELS : 5mV ~ 1.275Vrms (5mV/step) DC BIAS Internal : 2V DC BIAS External : 0 ~ 35V DISPLAY RANGE (**) Resistance : R 0.00001Ω ~ 99999kΩ Capacitance : C 0.00001pF ~ 99999uF Inductance : L 0.00001mH ~ 99999H Quality Factor : Q 0.0001 ~ 9999 Dissipation Factor : D 0.0001 ~ 9999 Impedance : Z 0.00001Ω ~ 99999kΩ for LCR-821 Phase Angle (Degree) : θ -180.00° ~ 180.00° for LCR-821 TEST MODE R/Q, C/D, C/R, L/Q, Z/θ, L/R for LCR-821 only EQUIVALENT CIRCUIT Parallel or series selectable MEMORY : 100 memory blocks total AVERAGE : 1 to 255 times</p>			

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	TEST SPEED MODE : SLOW, MEDIUM and FAST DISPLAY MODE : Value, Δ, Δ % DISPLAY : 240 x 128 dot matrix C.C.F.L back light LCD INTERFACE (STANDARD) Standard Interface : RS-232C POWER SOURCE Line Voltage Range : 100V - 240V, 47-63Hz/400Hz			
16	LINEAR I.C. TESTER Micro-processor based, multifunctional and powerful linear IC testing system. It covers a comprehensive list of more then ICs, which are commonly used in industry. Conducts exhaustive functional tests on ICs OUT OF CIRCUIT and indicates results as "IC PASS" or "IC FAIL" Can perform {continuous} testing on ICs to detect intermittent faults. Covers an ever-increasing list of more then 700 Analog ICs, Which are commonly	02	02	

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	<p>used in industry. Has exhaustive inbuilt self-diagnostics to indicate system health and indicate which part of the system has the problem. Range of Linear ICs includes ADCs, DACs, OPAMPs, Opto-Couplers, VCOs, Comparators, Voltage Followers, Analog Switches, Waveform generators, Transistor Arrays, PLLs, Line Drivers/ Receivers, Voltage Regulators, Timers, Sample and Holds, PWM Generators ...etc. All ICs are tested on a single 40 pin universal ZIF socket. Potential free test socket, when not in use. Have inbuilt protective inter-locks to avoid damage against any fault to IC under test or the system due to improper usage. [e.g, reverse insertion] Display : 16 character by 2 rows Backlit LCD.</p>			
17	3 ¾ Digit Digital Multimeter with USB Interface	20	20	

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	<p>3³/₄ Digital Multimeter with USB Interface shall have following specifications;</p> <ul style="list-style-type: none"> • USB interface can connect to computer • Large LCD analog bar graph display. • Unit symbol display • Metallic screen board with strong antimagnetic and anti-interferential function • Auto power off and alarm when stopped used after 15 minutes. <p>Full function protection anti-high voltage circuit design</p> <ul style="list-style-type: none"> • Software to acquire the reading into the PC. • Different functions can be controlled by PC. • Technical Specification <p>o Function</p> <p>Range</p> <p>Accuracy</p> <ul style="list-style-type: none"> o DC Voltage 400mV/4V/40V/400V/1000V ±(0.5%+4) o AC Voltage 400mV/4V/40V/400V/750V ±(0.8%+10) 			

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	<ul style="list-style-type: none"> o DC Current 400uA/4000uA /40mA/400mA/4A/10A ±(0.10%+10) o AC Current 400uA/4000uA /40mA/400mA/4A/10A ±(1.5%+10) o Resistance 400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ ±(0.8%+4) o Frequency 4Hz/40Hz/400Hz/4kHz/40kHz/400kHz/4MHz/30MHz ±(0.1%+4) o Capacitance 50nF/500nF/5uF/50uF/100uF ±(3.5%+8) o Temperature (-20 ~ 1000)°C ±(1.0%+5) • Special Function such as Diode test, Low battery indication, Continuity buzzer, Data hold, Auto power off, Bar graph display, RS232 / USB interface jack, Function protection, 			

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	<p>Shockproof protection shall be there.</p> <ul style="list-style-type: none"> • Frequency /duty cycle(0.1%~99.9%), • Input impedance 10MΩ • Sampling rate 3 times/s • AC Frequency response (40-400)Hz • Operation way Auto range • Max. display 3999 • LCD Size 70×50mm • Power 3V (1.5V×2) 			
18	<p>AF Output Power Meter</p> <p>Instrument designed to measure directly the power delivered by an AF circuit such as an amplifier to a terminating load of known impedance. This instrument incorporates a fully solid state circuitry operated on 4 pen lite batteries, draws not more than 1mA current ensuring long life of batteries. Functionally, the system is selectable power, resistors in series with a specially designed audio Frequency transformer terminated by the meter circuitry. The power can be directly read in ‘Watts’ or ‘dBs’ as the meter scales are calibrated in ‘Watts’ as</p>	2	2	

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	<p>well as in ‘dBs’ This low cost equipment is rigid enough to be used as a general purpose test equipment by hobbyists, laboratories & manufacturers.</p> <p>FEATURES</p> <p>01. Battery check facility.</p> <p>02. Highly sensitive and easy to operate.</p> <p>03. Supplied in elegant metal cabinet.</p> <p>SPECIFICATIONS</p> <p>01. POWER RANGES: 0.01mW-1mW, 10mW, 100mW, 1W, 10W and 100W full scale.</p> <p>02. dB MEASUREMENT : From -20dBm to +52dBm in 6 range of 0, +10, +20, +30, +40 and +50 dBm (0dBm = 1 mW).</p> <p>03. IMPEDANCE RANGES : Eleven switch selected impedances viz. 4, 8, 16, 25, 50,75, 100, 150, 400, 600 and 10K Ohms.</p> <p>04. IMPEDANCE ACCURACY: ±3% at 1KHz.</p> <p>05. POWER ACCURACY : For I/P ½ FSD: 6% of reading when measured at</p>			

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	<p>1KHz at normal ambient temp. (15°C to 45 °C). For I/P 1/10 of FSD to 1/2 FSD: 6% of reading ± 3% of FSD when Measured at 1KHz at normal ambient temp.(15°C to 45 °C).</p> <p>06. FREQUENCY CHARACTERISTICS : Referred to 1KHz. 20 Hz to 20KHz ± 1dB.</p> <p>07. INPUT SUPPLY: ± 3V (1.5V x 4 pencil cells).</p> <p>08. METER SIZE : 115 mm X 55mm (4½ "X 2 ¼") with resolution of 1 in 100</p>			
19	<p>DIGITAL I.C. TRAINER</p> <p>1. Power supply : 230V AC, + 10 %</p> <p>2. Built in Power Supply : +5V,500mA regulated.</p> <p>3. Clock generator : Variable from 1Hz to 1KHz in 3 ranges</p> <p>4. Logics provided : NAND gates - 4 nos. (IC7400)</p> <p>NOR gates - 4 nos. (IC7402)</p> <p>AND gates - 4 nos. (IC7408)</p> <p>OR gates - 4 nos. (IC7432)</p> <p>EX-OR gates - 4 nos. (IC7486)</p>	5	5	

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	<p>NOT gates - 6 nos. (IC7404) JK flip flop - 2 nos. (IC7473) `D' flip flop - 2 nos. (IC7474) Counter - 1 nos. (IC7493) Counter - 1 nos. (IC7490) Shift register - 1 nos. (IC7495) Binary adder - 1 nos. (IC7483) Decoder - 1 nos. (IC74138) Encoder - 1 nos. (IC74151) Magnitude comparator - 1 nos. (IC7485) Monostable - 2 nos. (IC74121)</p> <p>5. Pulsar Switches : 1 Nos Bounce less with LED indication. 6. High /Low switches : 10 Nos provided with LED indication to apply 0 and 1 level 7. LEDs : 8 Nos provided for output/input level 8. Displays : 1 nos. Seven segment LED display with decoder IC for BCD input.</p>			

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	<p>9. Terminals : All terminals (2mm sockets) soldered Properly to avoid loose connections.</p> <p>10. All ICs provided on sockets and possible to replace without desoldering.</p> <p>11. Standard 2 mm sockets are provided..</p> <p>12. Standard Accessories : 1. A Instructional Manual - 1 No. 2. Connecting wires - 20 Nos.</p> <p>13. The true value of component is printed on component side.</p> <p>14. The PCB with components on front side is fitted in elegant wooden box having lock and key arrangement</p> <p>15. The acrylic cover is fitted on PCB to safeguard parts. It has holes for alignment and repair.</p> <p>16. All parts are soldered on single pin TAGS on single PCB of size 12" x 9" with complete circuit diagram</p> <p>Screen printed in multi colour.</p>			
20	<p>Integrated Analog / digital circuit Design Station</p> <p>With Virtual Instrumentation Lab</p> <p>Virtual instrumentation lab with below features</p>	5	5	

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	<p>board includes all of the test and measurement equipment needed to design and test analog and digital circuits of all types. Built around a large solderless breadboard, the EE board includes oscilloscopes, waveform generators, power supplies, voltmeters, reference voltage generators, and thirty-two digital signals that can be configured as a logic analyzer, pattern generator, or any one of several static digital I/O devices. All of these instruments can be connected to circuits built on the solderless breadboards using simple jumper wires. in a single “all in one” device. Students can complete, test, and analyze real circuit designs as a part.</p> <p>The EE board is powered by the free, PC-based WaveForms™ software that makes it easy to acquire, store, analyze, produce and reuse analog and digital signals. WaveForms™ runs well on virtually any notebook PC, including low-cost Netbooks. A high-speed USB2 connection ensures all EE board instruments respond in near real-time.</p> <p>WaveForms™ data files are stored using standard formats, making it easy to share data between instruments, and to export data to word processors or graphics editors. This means well documented student lab/project reports can be</p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>completed using standard office tools, and submitted electronically.</p> <p>4-channel, 40MSa Oscilloscope 4-channel voltmeter 2 programmable reference voltages 2-channel Arbitrary Waveform Generator Triple-Output Power Supply (two programmable) 32-Channel Logic Analyzer 32-Channel Pattern Generator Discrete digital I/O's (buttons, switches, LEDs, etc)</p>			
21	<p>WAVEFORM Software</p> <p>It should seamlessly connects to the Electronics Explorer and provides a clean, easy to use graphical interface for each instrument. With WaveForms, it should be easy to acquire, store, analyze, produce, and reuse analog and digital signals.</p> <ul style="list-style-type: none"> • Designed exclusively for use with the Electronics Explorer Board. • Easy to use graphical interface for all EEBoard instruments • Powerful multi-triggering options 	5 user	5 user	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<ul style="list-style-type: none"> • Import/Export file options for all instruments • PC-based virtual Input/Output devices • AC/DC coupling, +/- 20V input range, realtime FFT and XY functions data display (FFT, XY, Zoom and others), data export in multiple formats <p>Oscilloscope feature</p> <p>4 channel, 40MSps, 10-bit converter w/ up to 16Kbyte buffer depth, powerful triggering options, AC/DC coupling, +/- 20V input range, realtime FFT and XY functions data display (FFT, XY, Zoom and others), data export in multiple formats</p> <p>Logic Analyzer feature</p> <p>32 channel, 100MSps, up to 16KSa/pin buffer depth, internal/external clock and trigger, multiple visualization options of all signals, data export in multiple formats</p> <p>Arbitrary Waveform Generator feature</p> <p>2 channels, 40MSps, 14-bit converter, up to 32Kbyte buffer depth, 4MHz</p>			

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	<p>bandwidth, 10V p-p, standard, complex(damped and swept, AM/FM modulated) & user-defined waveforms</p> <p>Digital Pattern Generator feature</p> <p>32 digital channels shared with logic analyzer, 2KSa/pin buffer depth, standard (clock, counters, constant, random, walking values) and custom patterns</p> <p>Power Supplies & Voltmeters feature</p> <p>Programmable, high power supplies with independent voltage and current limit settings of up to 2A, configured as simple, low frequency signal generators, two fixed 5V & 3.3V supplies, 4 channels voltmeter, two +/-10V reference voltages, input protection up to 200V, 1.2M</p> <p>Static I/O feature</p> <p>PC-based virtual I/O devices including push buttons, LEDs, switches, seven segment displays, sliders and progress bars</p>			
22	<p>Advanced Digital IC Trainer</p> <p>FEATURES:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Built in regulated power supply. <input type="checkbox"/> Covers basic logic gates, universal gates, flip-flops, counters, 	5	5	

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	<p>registers, multiplexer & de-multiplexer, seven segment display driver, parity generator / checker and code converters.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Easy interconnections between circuits <input type="checkbox"/> On board resources such as logic switches for providing inputs to digital ICs and LED indicators to check the outputs from the digital ICs. <input type="checkbox"/> Descriptive experimental manual and an interactive E-manual. <p>SPECIFICATIONS:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Basic logic gate IC's NOT (7404), OR (7432), AND (7408), NOR (7402), NAND (7400), EX-OR (7486), EX-NOR (74266) <input type="checkbox"/> NAND and NOR gates as Universal Logic Gates <input type="checkbox"/> TTL to CMOS and CMOS to TTL Interface <input type="checkbox"/> De-morgans theorem I and II <input type="checkbox"/> Boolean Equation <input type="checkbox"/> Half Adder, Full Adder, Half Subtractor, Full Subtractor <input type="checkbox"/> Basic Flip-Flops RS (using NOR), JK (7476), D (7474), MS-JK (7476), D (7474) and T (using JK) 			

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	<ul style="list-style-type: none"> <input type="checkbox"/> Ripple Counter (7490) <input type="checkbox"/> Synchronous Binary Counter (74191) <input type="checkbox"/> 4 Bit Ring Counter using 7476 <input type="checkbox"/> Decade / BCD counter using 7490 <input type="checkbox"/> Universal Shift register 74194 <input type="checkbox"/> 9 bit parity Generator / Checker (74280) <input type="checkbox"/> Multiplexer (74153) and Demultiplexer (74138) <input type="checkbox"/> BCD to seven segment decoder (7447) <input type="checkbox"/> 4 bit Comparator (7485) <input type="checkbox"/> Binary to Gray, Gray to Binary, Binary to BCD, BCD to Binary, BCD to Excess 3, Excess 3 to BCD <input type="checkbox"/> 16 switches to provide Logic 0 & 1 inputs <input type="checkbox"/> 16 LEDs to observe the output logic states <input type="checkbox"/> Manual clock to observe the counter operation <p>EXPERIMENTS:</p> <ul style="list-style-type: none"> <input type="checkbox"/> To verify the truth table and function of Basic Logic Gates <input type="checkbox"/> To verify NAND and NOR gates as Universal Logic Gates 			

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	<ul style="list-style-type: none"> <input type="checkbox"/> To study and Verification of TTL to CMOS and CMOS to TTL Interface <input type="checkbox"/> To verify De-morgans Theorem I and II <input type="checkbox"/> To verify Boolean Equation <input type="checkbox"/> To study and verify working and truth table of Half Adder, Full Adder, Half Subtractor and Full Subtractor <input type="checkbox"/> Design of Half adder and Half Subtractor using Multiplexer & De-multiplexer <input type="checkbox"/> To study the Behavior of Basic Flip-Flops (RS, JK, MSJK, D & T) <input type="checkbox"/> To study and design ripple/ Asynchronous counter using JK flip-flop <input type="checkbox"/> To study the Synchronous Binary Counter using Ic74191 <input type="checkbox"/> To design 4 bit ring counter using JK flip-flop <input type="checkbox"/> To verify decade / BCD counter using 7490 <input type="checkbox"/> To study Universal Shift Register using IC 74194 <input type="checkbox"/> To study 8 bit Parity Generator / Checker using IN 74280 <input type="checkbox"/> To study Multiplexer 74153 and Demultiplexer 74138 <input type="checkbox"/> To study BCD to Seven Segment Decoder 7447 <input type="checkbox"/> To study 4 bit Comparator 7485 <input type="checkbox"/> To study Binary to Gray, Gray to Binary, Binary to BCD, BCD to Binary, 			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	BCD to Excess 3 and Excess 3 to BCD Converters <input type="checkbox"/> To Study 4-Bit binary Adder			
23	2/3 Bit Simultaneous Type A/D Converter board 1. Power supply requirement : 230V AC, 50 Hz. 2. Built in IC based power supply. 3. Sampling Pulse Signal generator - TTL Level 4. On Board AF Modulating signal generator - Sine wave 5. Converter type : Simultaneous type (Parallel Comparator) 6. LED display for output bit display. 7. Standard Accessories : 1. A Training Manual	05	05	
24	Ramp type A/D Converter board 1. Power supply requirement : 230V AC, 50 Hz. 2. Built in IC based power supply. 3. Sampling Pulse Signal generator - TTL Level 4. Converter type : Ramp type ADC 5. LED display for output bit display. 6. Standard Accessories : 1. A Training Manual	05	05	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
25	Successive Approximate A/D converter board. 1. Power supply requirement : 230V AC, 50 Hz. 2. Built in IC based power supply. 3. Sampling Pulse Signal generator - TTL Level 4. On Board AF Modulating signal generator - Sine wave 5. Converter type : Successive approximation type ADC 6. LED display for output bit display. 7. Standard Accessories : 1. A Training Manual	05	05	
26	4 Bit DAC Resistive Network divider board 1. Power supply requirement : 230V AC, 50 Hz. 2. Built in IC based power supply. 3. Converter type : Weighted Resistor DAC 4. LED display for output bit display. 5. Standard Accessories : 1. A Training Manual	05	05	
27	4 Bit DAC Resistive Ladder Network board 1. Power supply requirement : 230V AC, 50 Hz. 2. Built in IC based power supply.	05	05	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	3. Converter type : R-2R Resistive ladder DAC 4. LED display for output bit display. 5. Standard Accessories : 1. A Training Manual			
28	Low Cost 8085 Microprocessor kit. Specifications: <ul style="list-style-type: none"> • 8085 @ 6.144Mhz Memory Capacity should be 64K on board. (16K Monitor EPROM, 16K Scratch Pad RAM, 32K User Ram with Battery back up) • Followings On board peripherals strictly available to user including 8279(user should interface their keyboard, display for their experiment) 8255- 1no. , 8155- 1no.,8253- 1no.,8259- 1no, 8279- 1no. 8251- 1no. • Operated on 5V including serial comm. • 27 keys, 8 digit 0.5" Display Supplied with Power • Three 28 pin sockets provided for memory expansion upto a max. of 56 K. 	05	05	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<ul style="list-style-type: none"> • Versatile Keyboard/Display controller using 8279. • Built-in audio cassette interface. • Programmable timer. • Support for following cards: • 8212, 8255, 8253, 8251, 8279, D.C. motor controlled card, stepper motor control card, 8 channel ADC, DAC, LDBR, Traffic control card, serial display card, elevator simulator card, logic interface card, Thumbwheel card. • Powerful 8085 interrupt capabilities. • Highly reliable multi-function keypad. • All address, data and control and hardware interrupt lines are brought out on a 50 pin FRC connector for system interfacing and Expansion, instead of the 56 pin STD connector • Three 16 bit Timer/Counter channels are available on-board, using 8253. • These channels are available on a 10 pin FRC connector. • Supplied with software to connect the kit with Computer. 			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<ul style="list-style-type: none"> • RAM sockets are provided with battery back up. • Supplied in attractive polished wooden enclosure. <p>A. Switch Mode Power Supply for above Kit. B. Cables & connectors for above Kit.</p>			
29	<p>8085 Training & Development System With LCD Display</p> <p>Specifications:</p> <ul style="list-style-type: none"> • Comes with 40 character X 2 lines LCD display • Provision to connect 16 X 2 LCD, 20 X 4 LCD on the same kit. • Having two modes of operation <ol style="list-style-type: none"> 1) LOCAL MODE 2) REMOTE MODE • High performance 8085A CPU @ 3 MHz. • 16 K powerful monitor FIRMWARE. Including all standard commands, codes, functions and utility subroutines. 	5	5	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<ul style="list-style-type: none"> • 32 K user RAM 62256. • Three 28 pin sockets provided for memory expansion upto a maximum of 16 K. • Versatile Keyboard/Display controller using 8279. • 46 parallel I/O lines, 22 from 8155 and 24 from 8255. • PC interface for Kit : Through RS-232 as well as On-board USB Interface. • Built-in audio cassette interface. • Programmable timer. • Powerful 8085 interrupt capabilities. • Highly reliable multi-function keypad. • All address, data and control and hardware interrupt lines are brought out on a 50 pin FRC connector for system interfacing and Expansion, Instead of the 56 pin STD connector • Three 16 bit Timer/Counter channels are available on-board, using 8253. • These channels are available on a 10 pin FRC connector. 			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<ul style="list-style-type: none"> • RAM sockets are provided with battery back up. • Program Uploading and downloading facility. • Supplied in a box. • Power Supply for the kit. • Cables & connectors for above Kit. 			
30	<p>8086 based Microprocessor Trainer with LCD Display & ASCII Keyboard interface.</p> <p>Specification :</p> <ul style="list-style-type: none"> • 8086 CPU operating @ 8 MHz in maximum mode. • Socket provision for co-processor.(8087) • 8284 A clock generator. • 8288 A bus controller. • Provision to connect Detachable 28 keys Hexkey pad divided into two 	5	5	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>groups , 16 for hex enter & 12 for different function entry and display PCB.</p> <ul style="list-style-type: none"> • On board Printer interface. • 64 KB Powerful monitor firmware, expandable up to 128 KB. • 40 characters x 2 lines LCD display . • With Highly reliable multi-function 103 keys keyboard • On-board 8254 timer / counter chip. Timer are accessible to user through 7 pin connector. • 48 TTL I/O lines using two 8255 PPI chips and all signals terminated on two 26 pin FRC connectors. • Printer interface provided through another 26 pin FRC connectors. • RS-232C compatible serial port using 8251, serial signals terminated on 9 pin D-type male connector • On board Output Power supply for Interfacing cards +5V, - /+ 12V, +30V & Gnd. • On-board 8259 PIC. 			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<ul style="list-style-type: none"> • All address, data and control lines of 8086 are terminated on 50 & 20 pin FRC connectors for system interfacing and expansion. • Assembly Language environment with inbuilt assembler & dis-assembler. • Terminal emulation software included. • On board exhaust FAN should be provided . • Attractive metallic enclosure and operational manuals. • In build Power supply : Specially designed 230 VAC input switch mode power supply • Should have following routines : Read Keyboard, LCD display, MODIDT which can be used by user. 			
31	UNIVERSAL PROGRAMMER 1. USB or parallel port interface with auto-switch power 2. Support 5V and 3.3V low voltage devices, 1.8V chip support through low voltage adapter.	02	02	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>3. Less then 2 seconds per Mbit Programming speed for high density flash chip.</p> <p>4. No adapter required for DIL chip up to 48-pin</p> <p>5. 48-pin universal pin driver and current limit</p> <p>6. Auto-sense/ Self programming with statistical report</p> <p>7. Device insertion /continuity check</p> <p>8. Universal adapter for 44-pin PLCC/ QFP/ TQFP/PSOP and 40/48 TSOP</p> <p>9. Supports OS : Windows 95 / 98 / ME / NT / 2000 / XP / Vista(32bit) / 7(32bit) (Parallel port) Windows 98SE / ME / 2000 / XP / Vista(32bit) / 7(32bit / 64bit) (USB port)</p> <p>10. Automatic EPROM/ Flash ID search</p> <p>11. Serialization for Memory/μP chip</p> <p>12. Memory buffer H / L byte swap</p> <p>13. Project file save / load function</p> <p>14. User-selectable verify Vcc with one or two-pass verify voltage</p> <p>15. Automatic file format detection and conversion</p> <p>16. User-changeable programming parameters</p> <p>17. 1 year warranty</p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	18. Software update via web			
32	<p>8255 PROGRAMMABLE PERIPHERAL INTERFACE STUDY CARD</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> Using 8255 all possible modes can be experimented. <input type="checkbox"/> <input type="checkbox"/> PA0-PA7, PB0-PB7, PC0-PC7 indicators and test lug inputs with handshake signal names are provided. <input type="checkbox"/> <input type="checkbox"/> Experiments for both polled and interrupt driven data transfer is possible with links for interrupts. <input type="checkbox"/> <input type="checkbox"/> User's Manual with Sample Programs. <p>(B) 8257 DIRECT MEMORY ACCESS STUDY CARD</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> Distinct coloured LED indicators provided for every possible signal of the peripheral. <input type="checkbox"/> <input type="checkbox"/> User links and lugs are provided for inputs. <input type="checkbox"/> <input type="checkbox"/> Legends for every LED indicator/lug. <input type="checkbox"/> <input type="checkbox"/> Selection of I/O address through jumper. <input type="checkbox"/> <input type="checkbox"/> RST5.5, RST6.5, RST7.5 are provided on-board for interrupt driven modes. 	02 each	02 each	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p><input type="checkbox"/> <input type="checkbox"/> User's Manual with Sample Programs.</p> <p>(C) 8259 PROGRAMMABLE INTERRUPT CONTROLLER STUDY CARD</p> <p><input type="checkbox"/> <input type="checkbox"/> Two 8259's on-board enables the user to study all the possible modes including the cascaded mode.</p> <p><input type="checkbox"/> <input type="checkbox"/> LED indicators/ Test lug inputs for IR0-IR7 and CAS0-CAS3 of both 8259's, to indicate branching to ISR.</p> <p><input type="checkbox"/> <input type="checkbox"/> Status indicator for SP/EN to observe buffered and nonbuffered mode. Polled mode is also possible.</p> <p><input type="checkbox"/> <input type="checkbox"/> RST5.5, RST6.5,RST7.5 are provided on-board.</p> <p><input type="checkbox"/> <input type="checkbox"/> User's Manual with Sample Programs</p> <p>(D) LBDR: LATCH, BUFFER, DECODER, RAM STUDY CARD.</p> <p><input type="checkbox"/> Three different types of latches.</p> <p><input type="checkbox"/> Two 2 to 4 line decoders..</p> <p><input type="checkbox"/> LED indicators to indicate the latched data.</p> <p><input type="checkbox"/> It is possible to observe how exactly a memory location is accessed.</p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<input type="checkbox"/> LED indicators to observe the data written in and read out of the memory. <input type="checkbox"/> To observe A0-A7 address bus of the memory, LED indicators are provided. (E) ELEVATOR SIMULATOR CARD. <input type="checkbox"/> Provides experimental hardware and software for simulating the operation of an elevator using different coloured LEDs and keys to simulate Request Keys in an Elevator. The simulated speed of the Elevator can be controlled through software. <input type="checkbox"/> User's Manual with Sample Programs (F) DISPLAY INTERFACE STUDY CARD. <input type="checkbox"/> Provides 4 seven segment LED displays controlled by serial data output on a PIO line from the kit. Serial to parallel conversion is done by using 74164 shift registers. <input type="checkbox"/> User's Manual with Sample Programs			
33	LOGIC PROBE WITH POWER SUPPLY Technical Specifications :	08	08	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>Operating Voltage : 5V ± 3% regulated DC at 150mA Ripple <3mV</p> <p>Logic State Indications :</p> <ol style="list-style-type: none"> 1. High Level `1' : `H' (HIGH) 2. Low Level `0' : `L' (LOW) 3. Open / Floating state : `O' (OPEN) 4. Pulses : `P' (PULSES). <p>Logic Families : TTL/CMOS.</p> <p>Frequency : Upto 50MHz for TTL/CMOS.</p> <p>Recognized voltage levels by logic probe at an operating voltage of 5V ± 3% Ripple <3mV</p> <ol style="list-style-type: none"> 1. High Level Threshold : > 3.0V. 2. Low level Threshold : < 0.8V 3. Open / Floating level : 0.8V to 3.0V (Approx) 4. Overload protection : upto 25V source. 5. Sink current : Less than 15mA <p>Supply Current</p> <p>Taken by the probe : Less than 150mA.</p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>Shortest Pulses which can be detected By the Probe : 40nano sec. Pulse detection is retriggerable and hence continuous pulses or clock will be indicated by `P`. Positive going pulse will be indicated by letter `L` followed by letter `P` and then `L` again. Negative going pulse will be indicated by letter `H` followed by `P` and then `H` again. The indicator `O` Occurs in floating with a level lying between about 0.8V to 3V. Specification for Power supply : Input : Switch selectable Mains / Battery input of 230V ± 10% 50Hz. or 6V DC (Using 4x1.5V cell type 1050 Eveready). Output Voltage : 5V ± 3% regulated D.C. Ripple Level : Less than 3mV RMS. Output Current Capacity : 150mA.</p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	Accessories included : Mains cord, Operating and Experimental Manual (hard and soft copy) for each experiment			
34	LOGIC PULSER Technical Specifications : Output High Pulse Voltage : 2.0V at 500mA. Output Low Pulse Voltage : <0.8V at 500mA. Pulse Width : 500 nanosecond. Maximum Current drawn by pulser : 10mA. Operating Voltage : 5V DC. Accessories included : Mains cord, Operating and Experimental Manual (hard and soft copy) for each experiment	05	05	
35	EPROM ERASER UVE (Ultra Violet Eraser with Timer) EPROM ere with different time of erasing (20min. to 1 hr.)	1	1	
36	DIGITAL I.C. TESTER	1	1	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>Micro-processor based, multifunctional and powerful IC testing system. It covers an ever increasing list of more than 800 Digital ICs , which are commonly used in the electronics industry.</p> <p>Conducts exhaustive functional test on ICs OUT OF CIRCUIT and indicates results as IC good OR IC bad</p> <p>Can perform Repeated {continuous}testing of to detect intermittent faults.</p> <p>Has Auto-search facility to identify unknown or unidentifiable ICs and provide functional equivalents for them, if any.</p> <p>Range of digital ICs includes TTL, COMS logic ICs Micro-Processors, Peripherals Monostables, Static Rams, Line drivers/receivers, Transistor arrays, Serial EEPROMs,NVRams Etc.</p> <p>Facilities to test Analog devices like OP-AMPs, Comparators, Timers,Analog Switches</p> <p>All ICs tested on a 40 pin universal ZIF socket.</p>			

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	<p>Potential free test socket, When not in use. Has inbuilt protective inter-locks to avoid damage against any fault to IC under test or the system due to improper usage.[e,g, reverse insertion] DISPLAY 9 digit or bright red 7 segment LED.</p>			
37	<p>550 MHz AMFM signal generator</p> <p>AM/FM Signal generator has been designed using the state of the art technology for testing of equipment in 100kHz to 600 MHz band. The output signal can be frequency and amplitude modulated with internal and external signals. The frequency of output signal can be adjusted continuously with coarse and fine control and displayed on a 16 X 2 LCD frequency counter. Very low leakage enhances the usable low amplitude signal range and low harmonic contents puts it in a higher class of instruments.</p> <p>Frequency Coverage from 0.1 to 600 MHz * 16 X 2 LCD Frequency with 10KHz resolution</p>	05	05	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<ul style="list-style-type: none"> * Accurate frequency indication * Phase locked Loop for minimum drift * Very low leakage and harmonics * FM/AM Internal/ External Facility * Rugged Compact and Fully Solid State <p> Frequency : 100 Khz to 600 MHz on fundamental Freq. Indication : 16 X 2 LCD, 5 Digit Resolution : 10KHz, continuous tuning RF output : 0.4 Vrms Impedance : 50 Ohms nominal AM Depth(Optional): 0 to 30% cont. variable Modulation : 1KHz Internal / External FM Deviation : 0 to 10 Mhz cont. variable Modulation : 1KHz Internal / External Power Supply : 220V + 10% 50 Hz AC Accessories : Mains Lead, BNC-BNC </p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
38	10 MHZ Function Generator with DDS USB <ul style="list-style-type: none"> • Direct Digital Synthesis[DDS] technology. • Simple & Clear Front panel design. • VFD florescent display Interface. • USB Interface. • Types: 16 waveforms including sine, square, ramp, double pulse, noise, DC and so on • Length: 1024 points • Sampling Rate: 100 MSa/s • Amplitude Resolution: 8 bits • Harmonic Distortion: (1 Vpp) ≤ -40 dBc (<5 MHz) , ≤ -35 dBc (≥ 5 MHz) • Total Distortion of Sine: $\leq 1\%$(20 Hz ~ 20 kHz, 20 Vpp) • Rising/Falling Edge Time: ≤ 35 ns Overshoot: ≤ 10 % • Duty Cycle of Square: 0.1%~99.9%(limited by edge time) • Symmetry of Ramp: 0.0%~100.0% 	02	02	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
39	<p>Low Distortion Audio Generator *Frequency from 10Hz ~ 1MHz *0.02% Low Sine Wave Distortion (GAG-810 Only) *6 Steps Output Attenuator *EXT SYNC Function SINE WAVE CHARACTERISTIC Frequency Range 10Hz ~ 1MHz, 5 Ranges Frequency Indicator Dial Scale Frequency Accuracy $\pm 3\% + 1\text{Hz}$ (at x10, x100) Output Voltage 5 Vrms (600Ω load) Frequency Response 10Hz ~ 1MHz $\pm 0.5\text{dB}$(at 600Ω load) Reference Frequency (1kHz) Distortion Factor 500Hz ~ 20kHz: $\leq 0.02\%$ (GAG-809 : $\leq 0.1\%$)</p>	05	05	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>100Hz ~ 100kHz: $\leq 0.05\%$ (GAG-809 : $\leq 0.3\%$) (x 10 range for 100Hz, x 1k range for 100kHz) 50Hz ~ 200kHz: $\leq 0.3\%$ 20Hz ~ 500kHz: $\leq 0.5\%$ 10Hz ~ 1MHz: $\leq 1.5\%$</p> <p>SQUARE WAVE Output Voltage $\geq 10\text{Vp-p}$ (no load) Overshoot $\leq 2\%$ (at 1kHz, max output) Rise & Fall Time $< 200\text{nS}$ Duty Ratio $50\% \pm 5\%$</p> <p>EXT. SYNCHRONIZATION Synchronizing Range $\pm 1\%/\text{Vrms}$ Max. Allowable 15V (DC + AC peak)</p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	Input Input Impedance 150kΩ OUTPUT Output Impedance 600Ω Output Attenuator 0, -10, -20, -30, -40, -50dB 6 ranges (accuracy±1dB at 600Ω load) POWER SOURCE AC 100/120/220/230V±10 %, 50/60Hz			
40	ETCHING MACHINE For fast single and double sided PCB etching. Useful etching area : 250mm x 300mm (10' x12"). Tank Capacity : 20 Litres. Includes a heater and air flow	02	02	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	compressor. All construction materials are corrosion free. Heater : Titanium – non corrosive with thermostat control Timer : 0 - 4.0 minutes Electrical Power : 230V/50Hz, 5A Socket required			
41	DOUBLE SIDED U.V.EXPOSURE UNIT A tabletop double sided exposing unit for high resolution exposure of PCBs. Maximum Size : 300mm x 255mm (12" x 10") U.V. Tubes : 2 x 4 (8 Watts) actinic tubes with single/double side option Chokes : Electronic Type Timer : 0 - 10 minutes Electrical Power : 230 V - 50Hz, 5A Socket required	02	02	
42	MAGNIFYING GLASS LAMP	05	05	
43	PCB SHEARING MACHINE - Benchtop Guillotine type shearing machine to cut PCB's and Laminates. Compact structure with central handle allows ease of cutting. Width : 300mm (12 ") Size : 400mm X 350mm	02	02	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
44	CHEMICALS & RAW MATERIAL FOR PCB LAB. Tank 1 Chemical Conditioner 11.5 Liters Tank 2 Chemical Mild Etch 09.0 Liters Tank 3 Chemical Acid Dip 09.0 Liters Tank 4 Chemical Catalyst 09.0 Liters Tank 5 Chemical Activator 09.0 Liters Tank 6 Chemical Accelerator 09.0 Liters Tank 7 Chemical Electroless Cu 06.5 Liters Tank 8 Chemical Antitarnish 09.0 Liters Tank 9 Chemical Acid soak 11.5 Liters Tank 10 Chemical Copper Plating 33.5 Liters Tank 11 Chemical Sulphuric Acid 06.5 Liters Tank 12 Chemical Tin Plating 33.5 Liters ANODES Copper (Phosphorised) 2 Nos. Tin (100% Pure) 2 Nos. Anode Bags 4Nos.	02 set	02 set	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	Photo sensitive film- 10 nos.			
45	PCB DRILLING MACHINE A compact tabletop High speed PCB drilling machine with a Quick Change Chuck <input type="checkbox"/> <input type="checkbox"/> Drill holding by precision chuck with lapped jaws <input type="checkbox"/> <input type="checkbox"/> Mains operated DC motor – Direct drive (no belt and pulley) <input type="checkbox"/> <input type="checkbox"/> 3 Step Speed Control <input type="checkbox"/> <input type="checkbox"/> Illumination of Work Area Motor Speed : upto 20,000 R.P.M. Range : 0.6 to 3.0 mm Base : Metal Working Area : 280 mm X 170 mm Electrical Power: 230V/50Hz, 5A Socket required	2	2	
46	ROLLER TINNING MACHINE a tabletop unit for Tin/Solder coating of PCB's . The machine is ideal for polytechnics & engineering colleges. A hand operated flywheel allows easy coating of boards.	1	1	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	Maximum PCB Width : 250mm (10") Maximum PCB Thickness : 6 mm Solder Bath Capacity : 5 Kgs. Heaters : 2 x 500 Watts Rollers : Silicon Coated Roller Revolution : Gear Flywheel Drive Bearings : Teflon Electrical Power : 230 V - 50Hz, 5A Socket required			
47	DYE/DEVELOPER (2 in 1 Unit) A unique tabletop unit which gives you the convenience of dying and Developing both in 1 machine. A Diaphragm pump agitates the developing solution chamber . A separate Dye chamber is also provided. Max. PCB Size : 250mm x 300mm (10" x 12") Tank Capacity : 2 Ltr. for Developer solution 2 Ltr. for Dye solution. Air pump : Diaphragm type compressor pump Mechanical Timer : 0-4 min. to operate air pump	1	1	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
48	PCB Drafting Aids Kit	5	5	
49	ARTWORK TABLE (Illuminated) Tabletop artwork and PCB inspection table with bottom illumination and diffused light. Area for work: 10" X 14"	1	1	
50	3 ¾ Digit Digital Multimeter with USB Interface 3 ¾ Digit Digital Multimeter with USB Interface 3¾ Digital Multimeter with USB Interface shall have following specifications; • USB interface can connect to computer • Large LCD analog bar graph display. • Unit symbol display • Metallic screen board with strong antimagnetic and anti-interferential function • Auto power off and alarm when stopped used after 15 minutes. Full function protection anti-high voltage circuit design • Software to acquire the reading into the PC.	5	5	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<ul style="list-style-type: none"> • Different functions can be controlled by PC. • Technical Specification <ul style="list-style-type: none"> o Function Range Accuracy o DC Voltage 400mV/4V/40V/400V/1000V ±(0.5%+4) o AC Voltage 400mV/4V/40V/400V/750V ±(0.8%+10) o DC Current 400uA/4000uA /40mA/400mA/4A/10A ±(0.10%+10) o AC Current 400uA/4000uA /40mA/400mA/4A/10A ±(1.5%+10) o Resistance 400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ ±(0.8%+4) o Frequency 4Hz/40Hz/400Hz/4kHz/40kHz/400kHz/4MHz/30MHz ±(0.1%+4) 			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>o Capacitance 50nF/500nF/5uF/50uF/100uF ±(3.5%+8)</p> <p>o Temperature (-20 ~ 1000)°C ±(1.0%+5)</p> <ul style="list-style-type: none"> • Special Function such as Diode test, Low battery indication, Continuity buzzer, Data hold, Auto power off, Bar graph display, RS232 / USB interface jack, Function protection, Shockproof protection shall be there. • Frequency /duty cycle(0.1%~99.9%), • Input impedance 10MΩ • Sampling rate 3 times/s • AC Frequency response (40-400)Hz • Operation way Auto range • Max. display 3999 • LCD Size 70×50mm 			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	• Power 3V (1.5V×2)			
51	TOOLS (Taparia/Gedore/Jhalani make) : 1 Insulated Combination Plier 6’’ 10 Nos. 2 Cutting Plier 6’’ 10 Nos. 3 Notch Plier 6’’ 10 Nos. 4 Screw Driver Set (5 pieces or more) 05 Nos. 5 Adjustable Frame for Hacksaw with Handle (Standard Size) 05 Nos. 6 Fixed Frame Hacksaw with handle and blade (Standard Size) 05 Nos. 7 Tanon Saw with Handle (Standard Size) 05 Nos. 8 Flat File 12’’ 02 Nos. 9 Round File 12’’ 02 Nos. 10 Triangular File 12’’ 02 Nos. 11 Chiesel 6’’ 02 Nos. 12 Ball Peen Hammer 250g, 500g, 100g, with wooden handle 01 each 13 Cross Peen Hammer 250g, 500g with wooden handle 01 each 14 Spanner Set Ring (8 pcs) 01 No. 15 Spanner Set (Flat) (8 pcs) 01 No.	04set	04set	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>16 Allen Key Set with Eleven Keys 01 No.</p> <p>17 Desoldering Pump 10 Nos.</p> <p>18. Electric Hand Drill Machine Cap. 6mm. 02 No.</p> <p>19. Soldering Iron 25Watts and 35W 20 Nos</p> <p>20. Electric Hammer Drill Machine with stand and motor cap. 10mm. with bit 01 set</p> <p>21. Bench Vice 4" Cap. 04 Nos.</p> <p>22. Bench Grinder ¼ HP Double wheel 01 No.</p>			
52	<p>Hand Coil winding Machine Winding Machine suitable to wind coils on formers. Layer by layer wire winding mode,wire gauge range from 18 SWG to 46 SWG Bed size : 15"x14" atleast Maximum winding area : 5½" x 5 ½" atleast Machine must have gauge setter, six bearings in pillar Housed in a suitable cabinet. Accessories: Manual(Hard and softcopy)</p>	05	05	
53	SMD Rework Station (Digitally controlled)	03	03	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>Input voltage : 230V AC ± 10% 50Hz. Hot Air soldering pencil : 24V AC, 80W. Easy Pick SMD De-soldering Gun : 24V AC, 100W With integrated vacuum pump. PTH Soldering Iron : 24V AC, 50W PTH De-soldering Gun : 24V AC, 65W. Air flow : 4 L/m Vacuum : 600mm/Hg self contained diaphragm type Temperature Range : 50°C to 450°C Control accuracy : ± 5°C for Hot Air Tools +1°C for Contact Tools. CONTROL : Control unit, Hot air soldering pencil, Easy pick De-soldering gun with integrated vacuum pickup, Vacuum Picker, Nozzle removing spanner, Stand 2 Nos. Teflon Tape, Sponges 2 Nos. Power cord, PCB Holder, Silicon Vacuum cups 3 Nos. for easy pick de-soldering gun, silicon</p>			

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>Vacuum cups for vacuum placer 3 Nos. Attachable tools : PTH Soldering handle, PTH De-Soldering gun, Tool Box, Glass tube, Soldering bits 4 Nos. PTH De-soldering nozzles 7 Nos., Nozzles clearing wire, filters 10 Nos. Silicon washers 2 Nos. Solder collecting strip.</p>			
54	<p>OrCAD PSpice Simulation and PCB Design Suite</p> <ul style="list-style-type: none"> ▪ OrCAD Capture ▪ OrCAD Capture CIS Option ▪ OrCAD PSpice A/D ▪ PSpice Advanced Analysis Option ▪ PSpice SLPS Interface Option ▪ Allegro PCB Editor and ▪ Spectra Autorouter ▪ OrCAD signal Explorer 	05 user	05 user	
55	Modular Component Storage Cabinets	10	10	

S.No	Item Name & Technical Specification	Churu	Total Qty.	(*) Specify variation in Specification if any, otherwise write "No variation" / as per Specification & write Make & Model
	<p>Technical specifications : No. of draws : 120 Standard Size of drawer : 70(W)x35(H)x145(D)mm. With lock and door. Indexing : Slip in name card facility on each box. Box Stop : At rear end to prevent the sort box falling down when pulled out. Handles : In front of each drawer. Cabinet material : Steel / Enamel / Hammer-tone finish. Mounting : Wall, Rack mounting or cabinet type. Visual classification : Of different category of components is done by using different colours Index cards. Partitioning : Into smaller compartments is done using partition plates.</p>			

Terms & Condition :-

1. F. O. R. Principal, Government Polytechnic College, Churu.
2. Delivery Period 50 days