

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY MANIPUR

(An Autonomous Institute under the MHRD, Government of India)

Mantripukhri, Imphal – 795002, Manipur, India. Phone: 0385-2421017, www.iitmanipur.ac.in



From:

Shri. U.C. Das,
Interim Registrar,
IIIT Manipur.
Ph: +91-361- 2582016
Email: registrar@iitg.ernet.in

To,

All
Interested Vendors

Ref. No: IIITM/NOTE/ECE-Lab-Eqp/94/2016-2017 Dt. 22/06/2017.

Subject: Notice Inviting Quotation for Supply & Installation of Lab Equipment's for the Department of Electronics and Communication Engineering, IIIT Manipur.

Dear Sir/Madam,

The Interim Registrar, Indian Institute of Information Technology Manipur invites quotations for supply of Lab Equipments as per the detailed technical specifications mentioned in **ANNEXURE-II**, in **double bid** as indicated in the in the CHECKLIST given below, is to be submitted in sealed envelopes to the undersigned on or before **13/07/2017 (15:00 HRS)**.

Please note:

1. **Tender document is divided into four parts i.e.**
 - I. Instruction to Bidders
 - II. Terms & Conditions (ANNEXURE - I)
 - III. Technical Specification of the Required Item (ANNEXURE – II)
 - IV. Compliance Certificate (ANNEXURE-III)
 - V. Performance Bank Guarantee (ANNEXURE-IV)
2. There is no tender fee and tender document is to be downloaded from our official website (i.e. www.iitmanipur.ac.in).
3. Duly filled, signed and sealed quotation along with the related documents as directed in the **instruction, Annexure - II and Terms & Conditions** is to be submitted.
4. The bid documents are not transferable and the seal and signature of the authorized official of firms must appear on all the papers and envelopes submitted.
5. Corrigendum/Addendum in regards to terms and condition and technical specification, if any, will be published/intimated in the IIIT Manipur website only at (www.iitmanipur.ac.in).

Kindly read both the Instructions and Terms & Conditions properly and see that instructions and terms are fully understood and complied. No correspondence shall be entertained in case your quotation is rejected on ground of not complying with NIQ instructions, terms & conditions.

The Interim Director IIITM will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for, or in executing, the Purchase Order. Fraudulent practice means a misrepresentation of facts in order to influence a procurement process and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial noncompetitive levels and to deprive IIITM of the benefits of free and fair competition. Corrupt practice means of offering, giving, receiving or soliciting of anything of value, pressurizing to influence the action of a public official in the process of this purchase execution.

In case of doubt please contact us at +91 361-258-2016/ +91 385-242-1017.

I. INSTRUCTION TO BIDDERS:

A. Important date, time and place:

1. **Last date & time of submission:** 13-07-2017, 15:00 HRS
2. **Date & time of opening bid:** 14-07-2017, 15:00 HRS
3. **Place of opening bid:** Conference Room, IIIT Manipur
4. **Late and delayed tender:** Late and delayed tender will not be accepted.
5. **Unscheduled holiday:** In case any unscheduled holiday occurs on the prescribed closing/opening date the next working day shall be the prescribed date of closing/opening.

B. Two Bids:

1. In two bids system quotations will have to be submitted in TWO PARTS i.e. (a) Technical Bid and (b) Price Bid, in two separate properly sealed covers; and both these covers will have to be again put in to a single sealed cover. Also, the address of the firm submitting the quotation and the Officer to whom the quotation is addressed, must appear distinctly on both the inner sealed covers, indicating also TECHNICAL BID/PRICE BID as may be applicable. Further, on both the inner sealed covers and the outer sealed cover, the following are to be written:

QUOTATION FOR SUPPLY OF(item name)

NIQ Ref. No.

LAST DATE OF SUBMISSION: **13-07-2017(15:00 HRS)**

To,

The Interim Director,

Indian Institute of Information Technology Manipur,

Imphal -795002, Manipur, India.

Email: snp@iitmanipur.ac.in

From: M/s

Phone No. :

Email ID :

2. **Submission of Compliance Certificate:** Duly filled and signed Compliance Certificate (as per format at ANNEXURE III) must be enclosed.
3. **Bid not transferable:** The bid documents are not transferable and the seal and signature of the authorized official of the firm's must appear on all the papers and envelopes submitted.
4. EMD 2% of the quoted value rounded off to nearest INR 100 through Demand draft in favour of Interim Registrar, IIIT Manipur;
5. **In the part relating to Technical Bid, the vendor must provide the followings:**
 - a. Details of the technical features of the offered equipment;
 - b. Standard technical literature on each of the items offered;
 - c. Dealership certificate on the offered products in case of dealer/s;
 - d. List of reputed organizations/institutions, where similar orders have been executed (copies of the purchase/work orders will have to be enclosed);
 - e. Up-to-date Sales Tax clearance certificate (*for vendors outside the State of Manipur*)/VAT Registration Certificate indicating also the TIN number (*for vendors from within the State of Manipur*) OF THE FIRM will have to accompany the quotation to be submitted;
 - f. Details of nature and maximum period of **warranty** offered by the vendor
 - g. After Sales Service: The name & address of the nearest available authorized service centre to IIIT, Manipur, should be stated in the quotation.

- h. A copy of the Price Bid, *WITHOUT THE PRICES*, will have to be provided as part of the technical bid document.

6. In the part relating to Price Bid, the vendor must provide the followings:

- a. Quantity, basic price (against item-wise details of specifications of each of the offered items);
- b. Prices of each of the optional accessories, as required by NIQ specifications and also may be relevant for an offered equipment, will have to be specifically stated in the quotation:
- c. Packing & Forwarding Charge, if any (as percentage of basic price as lump sum)
- d. Central/State Sales Tax/VAT (as percentage of basic price + Packing & Forwarding Charge, if any)
- e. Freight & insurance charge, if any [as percentage of (a) + (b) + (c) or as lump sum]
- f. Annual Maintenance Contract (AMC) rate (after expiry of warranty period) is to be clearly indicated – preferably in both comprehensive and non-comprehensive terms, *failure to which the offer may not be considered even if it turns out to be at the lowest price.*
- g. Installation & commissioning charge (including Service Tax), to be shown item-wise extra, if any.

ANNEXURE –I

TERMS & CONDITIONS: - Please note the term ‘both foreign & indigenous’ wherever mentioned means the term is applicable to both foreign & indigenous purchase.

1. **Rates:** Rates quoted for indigenous items should be on **FOR IIT Manipur, on DOOR DELIVERY basis**, with break-ups as per details below (*For import items please refer ‘Additional Terms for imported goods’ below*).

Sl No	Particulars	Rate
i.	Basic Price (Ex work)	
ii.	Sales Tax (CST/ VAT)	
iii.	Transportation Charge up to IIT Manipur Premises	
iv.	Transit Insurance Covering All Risk up to 10 Days After Delivery	
v.	Excise Duty Charge, if any	
vi.	Installation & Commissioning Charge, if any	
vii.	Grand Total on Door Delivery at IIT Manipur	
viii.	Annual Maintenance Contract Rate (After expiry of warranty period)	

Note: Vague terms like “packing, forwarding, transportation etc. extra” without mentioning the specific amount will not be accepted. Such offers shall be treated as incomplete and rejected. Bidders shall indicate their rates in clear/visible figures as well as in words and shall not alter/overwrite/make cutting in the quotation. In case of a mismatch, the rates written in words will prevail.

2. **Validity of Quotation:** Quoted rates must be valid for **120 days** from the last date of submission of quotation.
3. **Performance Bank Guarantee:** In case of quotations having quoted value Rupees five lacs (INR 5,00,000/-) and above, the successful bidder shall furnish an unconditional Performance Bank Guarantee (as per format at **ANNEXURE - IV**) valid till 60 (sixty) days after the warranty period from a scheduled Bank of India for 10% of the Purchase Order value within 21 days of placement of order failing which the contract shall be deemed as terminated. Where the performance bank guarantee is obtained by a foreign bank, it shall be got confirmed by a Schedule Indian bank and shall be governed by Indian Laws and be subject to the jurisdiction of courts at Imphal.
 - a. **By submitting the PBG, the vendor is understood to have guaranteed that,**
 - i. The Purchase Order (PO) shall be executed as per terms and conditions mentioned therein.
 - ii. The equipment shall function satisfactorily for a period up to 60 days after the warranty period.
 - iii. The equipment and components are free from poor workmanship, bad quality, and faulty designs.
 - iv. The vendor shall at his/their own cost rectify/replace the defects, if any, during the guarantee period.

- v. The guarantee is to the extent of 10% of the order value.
 - b. **Condition for invoking PBG:** In case of failure to comply with the guarantees above, IITM may terminate the contract / purchase order in whole or in part and forfeit the PBG. In addition, IITM may, at its discretion, procure upon such terms and in such manner as it deems appropriate, goods similar to the undelivered items/products and the defaulting supplier/vendor shall be liable to compensate IITM for any extra expenditure involved.”
4. **Warranty:** The quoted equipment’s and components must be warranted for a minimum of five years from the date of installation.
 5. **Literature a must:** All the quotations must be supported by the printed technical leaflet/literature and the specifications mentioned in the quotation must be reflected/supported by such printed technical leaflet/ literature. The model and specifications quoted should invariably be highlighted in the leaflet/literature for easy reference.
 6. **After Sales Service:** In case of imported goods, vendors should clearly state the available nearest after sales service centre and detail address in India, without which their offers shall be liable for rejection.
 7. **Dealership Certificate:** Dealers or Agents quoting on behalf of Manufacturer must enclosed valid dealership certificate.
 8. **Quality Certificates:** Valid certificate to prove that the products are genuine and of International standard, as mentioned below, must be enclosed:
 - a. Manufacturer’s certificate.
 - b. ISO/ISI certificate.
 9. **Delivery:**
 - a. **Time Limit:** within 45 days from the date of receipt of PO
 - b. **Delivery on working days:** Delivery must be made on working days. IIT Manipur shall not take or accept responsibility for items brought on holidays such as Saturday, Sunday and other declared holidays.
 - c. **Safe Delivery:** All aspects of safe delivery shall be the exclusive responsibility of the vendor. At the destination site, the package will be opened only in the presence of IITM user/representative and vendor's representative. The intact condition of the package and the seal/indicators for not being tampered with shall form the basis for certifying the receipt in good condition.
 - d. **Insurance:** If necessary the supplier is to establish ‘All Risk Transit Insurance’ coverage till door delivery
 - e. **Part Delivery:** Part delivery is not allowed.
 - f. **Penalty Delay delivery:** The date of delivery should be strictly adhered to otherwise the Director, IIT Manipur reserves the right not to accept delivery in part or full.
 10. **Short Shipment** (Both foreign & indigenous): If any short-shipment etc. is noticed, the same will be arranged immediately with all charges to this effect to be borne by supplier/Indian agent.
 11. **Genuine Pricing** (Both foreign & indigenous): Vendor is to ensure that quoted price is not more than the price offered to any other customer in India to whom this particular item has been sold, particularly to IIT/IIT/NIT and other Government Organizations. Copy of the latest price list for the quoted item, applicable in India, must be enclosed with your offer.
 12. **Conditional tenders not acceptable:** All the terms and conditions mentioned herein must be strictly adhered to by all the vendors. Conditional tenders shall not be accepted on any ground and shall be rejected straightway. Printed conditions mentioned in the tender bids submitted by vendors will not be binding on IIT Manipur.
 13. **Entry Tax:** Manipur Govt. Entry Tax – usually @4% [to be paid by IIT Manipur, not by the vendor], wherever applicable, will be added while evaluating cost status of the concerned equipment to be supplied by vendors from outside the State of Manipur.

14. **VAT/CST:** CST/VAT as applicable shall be paid by the supplier to the appropriate authority.
15. **Late and delayed tender:** Late and delayed tender will not be considered. In case any unscheduled holiday occurs on the prescribed closing/opening date the next working day shall be the prescribed date of closing/opening.
16. **Payment:**
- 100% Payment within 45 days from the date of successful delivery, installation and commissioning/ acceptance of goods at IIIT Manipur, generally through A/c payee cheque.
OR
 - 90% Payment against delivery and 10% payment after successful installation and/ or commissioning of the ordered goods at site.
- Please note: As per Institute's norm advance payment is not allowed for indigenous purchase.*
17. **Quotation by Fax/Mail not Acceptable (Both foreign & indigenous):** The offers submitted by telex/ telegram/ fax/ E-mail etc. shall not be considered. No correspondence will be entertained on this matter.
18. **PENALTY FOR DELAYED DELIVERY:** In case of supply order for the scientific equipments/ apparatus, the date of delivery should be strictly adhered to. In the event of delayed delivery, installation & commissioning i.e. after the expiry of the period as agreed by both the parties, the vendor shall be liable for a penalty deduction at a percentage of the value of the undelivered equipment subject to a maximum of 10% (ten percent) as detailed below:
@1% up to one week;
@2.5% up to two weeks;
@5% up to three weeks;
@10% for four weeks and above
For the purpose of this clause, part of the week is considered as a full week. In case of delayed delivery, the Director, IIIT Manipur reserves the right not to accept the subject consignment.
19. **Enquiry during the course of evaluation not allowed:** No enquiry shall be made by the bidder(s) during the course of evaluation of the tender till final decision is conveyed to the successful bidder(s). However, the Purchase Committee or its authorized representative (IIIT Manipur) can make any enquiry/seek clarification from the bidders. In such a situation, the agency shall extend full co-operation. The bidders may also be asked to arrange demonstration of the offered items, in a short period notice, as such the bidders have to be ready for the same.
20. The acceptance of the quotation will rest solely with the Director, IIIT Manipur, who in the interest of the Institute is not bound to accept the lowest quotation and reserves the right to himself to reject or partially accept any or all the quotations received without assigning any reasons.
21. **Force Majeure:** If the performance of the obligation of either party is rendered commercially impossible by any of the events hereafter mentioned that party shall be under no obligation to perform the agreement under order after giving notice of 15 days from the date of such an event in writing to the other party, and the events referred to are as follows:
c. Any law, statute or ordinance, order action or regulations of the Government of India,
d. any kind of natural disaster, and
e. strikes acts of the public enemy, war, insurrections, riots, lockouts, sabotage.
22. **Termination for default:** Default is said to have occurred.
a. If the equipment or any of its component is found having poor workmanship, faulty designs, poor performance and bad quality of materials used.
b. If the supplier fails to deliver any or all of the services within the time period(s) specified in the purchase order or any extension thereof granted by IIIT Manipur.
c. If the supplier fails to perform any other obligation(s) under the contract.
d. Under the above circumstances IIIT Manipur may terminate the contract / purchase order in whole or in part and forfeit the EMD/PBG as applicable. In addition to above, IIIT Manipur may at its discretion also take the following actions: IIIT Manipur may procure, upon such terms and in such manner, as it deems appropriate, goods similar to the undelivered items/products and the defaulting

supplier shall be liable to compensate IIIT Manipur for any extra expenditure involved towards goods and services obtained.

23. Applicable Law:

- a. The contract shall be governed by the laws and procedures established by Govt. of India and subject to exclusive jurisdiction of Competent Court and Forum in Imphal or India only.
- b. Any dispute arising out of this purchase shall be referred to the Director IIIT Manipur, and if either of the parties here to is dissatisfied with the decision, the dispute shall be referred to the decision of an Arbitrator, who should be acceptable to both the parties, to be appointed by the Director of the Institute. The decision of such Arbitrator shall be final and binding on both the parties.

ADDITIONAL TERMS FOR IMPORTED GOODS: - Following terms besides the fore mentioned terms will be applicable in case of foreign purchases:

24. **Rates:** Prices quoted must be for destination including freight and insurance charges inclusive of free delivery up to the door of department IIIT Manipur premises, as per details below.

Sl No	Particulars	Rate
i.	Basic Price (Ex work)	
ii.	FCA/FOB Dispatch Port,	
iii.	Total CIP/CIF Kolkata	
iv.	CIP IIIT Manipur Price (Freight and Insurance Charge from Kolkata to IIIT Manipur)	
v.	Grand Total on Door Delivery at IIIT Manipur	
vi.	Installation & Commissioning Charge, if any	
vii.	Custom Duty (Approximate)	
viii.	Agency Commission if any	
ix.	Annual Maintenance Contract rate (After expiry of warranty period)	

Note:

- a. Vague terms like “packing, forwarding, transportation etc. extra” without mentioning the specific amount will not be accepted. Such offers shall be treated as incomplete and rejected. Bidders shall indicate their rates in clear/visible figures as well as in words and shall not alter/overwrite/make cutting in the quotation. In case of a mismatch, the rates written in words will prevail.
- b. Rate of Foreign Exchange shall be the rate prevailing on the date of quotation opening.

25. **After Sales Service:** In case of imported stores, foreign manufacturing firms should indicate facilities available for after sales service in India without which their offers are liable to be ignored.

26. Delivery :

- a. Delivery of goods at IIIT Manipur, will have to be maximum within 95 (ninety-five) days from the date of issue of the Purchase Order.
- b. Delivery at Kolkata Airport only: As we do not have clearing agent in any other Airport/Seaport, delivery is to be made only at Kolkata.
- c. While transshipment will be allowed, part shipment will not be allowed.

27. Payment :

- a. **Above INR 5 Lacs:** By an irrevocable letter of Credit at CIF/CIP Kolkata value negotiable through any overseas branch of State Bank of India/ AXIS Bank with unrestricted provision.
- b. **Below INR 5 Lacs by FDD/Wire Transfer as given below:**
 - i. **Advance payment Against Bank Guarantee:** 90% of the price will be paid in advance against equivalent bank guarantee from a scheduled bank provided by the supplier/Indian Agent. The remaining 10% shall be released only after receipt and acceptance of materials in good condition or after satisfactory installation and commissioning of the equipment.
or
 - ii. **Payment Against Proof of Dispatch:** 90% of the price will be paid against delivery with receipt of proof of dispatch such as AWB, Invoice, Packing List, Insurance certificate, etc. The

remaining 10% shall be released only after receipt and acceptance of materials in good condition or after satisfactory installation and commissioning of the equipment.

or

- iii. **100% Payment Basis:** On request by the supplier/s 100% payment by FDD will be made. In this case on receipt of your Order Acknowledgement an FDD will be established for total ordered value, thereupon, a Xerox copy of the FDD will be sent to you which will enable you to send the materials. On satisfactory receipt and acceptance of the materials or satisfactory installation and commission of the equipment the Original FDD will be sent to you.

Please note: FDD/LoC will not be opened unless and until Letter of Acknowledgement in original is received at IIT Manipur, directly from the principal (Even in case of firms having subsidiary office in India). The Indian agents are therefore advised to submit quotation after consultation with their respective principals).

28. **Agency Commission:** The percentage of ex-works value to be paid to Indian agent in equivalent Indian currency as agency commission as applicable will have to be clearly stated in the quotation.
29. **After Sales Service:** For equipment to be imported the quotation will have to clearly state the available nearest after sales service centre and contact no. in India.
30. **Country of Origin:** While Country of Origin Certificate will not be insisted, the same however will have to be stated in the Original Invoice for payment through LoC.
31. **LoC Amendment:** LoC/FDD amendment charges due to mistake on the part of the supplier, if any, will have to be borne by the supplier.

Encl.: ANNEXURE

Encl.: CHECK LIST

ANNEXURE - II

TECHNICAL SPECIFICATIONS OF THE REQUIRED ITEMS: -

SI No	Digital Storage Oscilloscope (200 MHz)	Quantity
I.	<p>Annexure – II Part A: Technical Specifications</p> <p>1. Bandwidth: 200 MHz.</p> <p>2. No. of Analog Channels : 4</p> <p>3. Sampling frequency : ≥ 2 GS/s</p> <p>4. Memory depth : ≥ 1 Mpts</p> <p>5. Vertical resolution : ≥ 8 bits</p> <p>6. Waveform capture rate : $\geq 50,000$ wfm/s</p> <p>7. Rise Time - Should have maximum Precise Rise time: ≤ 1.75 ns</p> <p>8. Time base range : 2 ns/div to 50 s/div</p> <p>9. Input sensitivity range : 1 mV/div to 5 V/div</p> <p>10. Triggering : Edge, Pulse Width, Runt, Logic, Setup and Hold, Rise/Fall, Time</p> <p>11. Automatic search & navigation capability: Must available.</p> <p>12. Automatic Measurement: Maximum no. of automatic measurements (desirable min. of 29) for voltage, time & counter/frequency characteristics.</p> <p>13. Math Functions: Add, subtract, and multiply between any 2 channels.</p> <p>14. FFT Function: Must available.</p> <p>15. Display : Minimum 8.5-inch WVGA color TFT LCD</p> <p>16. Interface: 2 USB -2.0 High speed ports. Optional: GPIB, LAN and RS-232/422/845/UART</p> <p>17. Desirability : Must have Software control features</p> <p>18. Supplier should demonstrate the working of the system in our lab.</p> <p>19. Standard Warranty: ≥ 5 years.</p>	2

II.	Digital Storage Oscilloscope (1 GHz) + Spectrum Analyzer (1 GHz)	1
	Annexure – II Part B: Technical specifications	
	1. Bandwidth: 1 GHz (Upgradable up to 3 GHz)	
	2. No. of Analog Channels: 4	
	3. Sampling frequency: 5 GS/s	
	4. Memory depth : ≥ 10 Mpts	
	5. Vertical resolution : 8 bits	
	6. Waveform capture rate: $\geq 280,000$ wfm/s	
	7. Rise Time - Should have maximum Precise Rise time: ≤ 400 ps	
	8. Time base range: 1 ns/div to 1000 s/div	
	9. Input sensitivity range: 1 mV/div to 10 V/div	
	10. Triggering: Edge, Pulse Width, Runt, Logic, Setup and Hold, Rise/Fall Time.	
	11. Automatic search & navigation capability: Must available	
	12. Automatic Measurement: Maximum no. of automatic measurements (desirable min. of 29) for voltage, time & counter/frequency characteristics.	
	13. Math Functions: Add, subtract, and multiply between any 2 channels.	
	14. FFT Function: Must available.	
	15. Spectrum Analyzer: 9 kHz to 1 GHz (upgradable up to 3 GHz)	
	16. Digital Voltmeter (DVM) and Frequency Counter: 4-digit AC RMS, DC, and AC+DC RMS voltage measurements and 5-digit frequency counter.	
	17. Display : Minimum 9-inch WVGA color TFT LCD	
	18. Interface: 2 USB -2.0 High speed ports. Optional: GPIB, LAN, 10/100 Ethernet port, video out port.	
	19. Desirability : Must have Software control features	
20. Supplier should demonstrate the working of the system in our lab.		
21. Standard Warranty: ≥ 5 years.		

III.	<p>Function Generator + Arbitrary Waveform Generator (30 MHz)</p> <p>Annexure – II Part C: Technical Specifications</p> <ol style="list-style-type: none"> 1. No. of Channels: 2 2. Waveforms: Standard: Pulse, Sine, Square, Ramp, Noise, DC. Built-in arbitrary: ECG, exponential fall, exponential rise, Gaussian pulse, HaverSine, Lorentz, D-Tone, sinc (Sin X/X), etc. 3. Frequency Range: Sine: 1 μ Hz. to 30 MHz, Square 1 μ Hz. to \geq 25 MHz, Pulse: 1 μ Hz. to \geq 15 MHz, Frequency resolution – 1 μ Hz. 4. Total Harmonic Distortion (THD): \leq 0.075% (10 Hz to 20 kHz) 5. Square: 1 μHz to 30MHz with duty cycle: 0.01% to 99.99% & Jitter \geq 5 MHz: 200 ps, Rise and fall times \leq 10 ns. Pulse: 1 μ Hz. to \geq 15 MHz with duty cycle Pulse: 0.01% to 99.99% & Jitter \geq 5 MHz: 200 ps, Rise and fall time's \leq 10 ns. 6. Ramp: \leq1% of peak output and symmetry 0.0% to 100% 7. Gaussian Noise : 1mHz – 30 MHz 8. Burst Mode: 1 to 1×10^6 or Infinite. Start/stop phase - 0° to 360°, 0.1° resolution. Ca Frequency 2 mHz to 30 MHz. 9. Sweep Time: 1 ms to 500 s, Linear, Logarithmic, or Step. Hold & Return Time: 0 ms to 500 s. 10. Optional: Operating modes - Independent, Coupled Parameter(s), Combined (Ch 1 + Ch 2), Equal (Ch 2 = Ch 1), or differential (Ch 2 = -Ch 1). 11. Output Characteristics: 1 mV_{pp} to 10 V_{pp} into 50 Ω, 2 mV_{pp} to 20 V_{pp} into open circuit 12. Amplitude Accuracy: \pm 1% of setting \pm 1 mV_{pp} at 1 kHz, Amplitude resolution – 4 Digits 13. Modulation: AM, FM, PM, FSK, BPSK, PWM, SUM, Burst, Sweep, Modulation Source: Internal / External 14. Arbitrary Waveform Length: \geq 8 Mpts 15. Sample Rate : \geq200 MSa/s 16. Vertical Resolution: 14 bits 17. Interfaces: USB Host, USB Device, LAN, USB-GPIB 18. Web user interface: Remote operation and monitoring 19. Outputs: TTL Sync O/P function, Set up Save and Recall facility TTL-compatible 20. Graphical display: \geq 3.5- inch color TFT WQVGA with LED backlight 22. Supplier should demonstrate the working of the system in our lab. 23. Standard Warranty: \geq 5 years. 	2
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IV.	<p>Handheld Digital Multimeter</p> <p>Annexure – II Part D: Technical Specifications</p> <ol style="list-style-type: none"> 1. AC Voltage: 0.1mV - 750 V 2. DC Voltage: 0.1mV - 1000 V 3. Basic Accuracy (VDC): $\pm 0.3\%$ 4. Averaging/True RMS: True RMS 5. AC Current: 0.1 μA – 20 A 6. DC Current: 0.1 μA – 20 A 7. Resistance: 0.1 Ω - 40 MΩ 8. Capacitance: 0.01 nF – 100 μF 9. Frequency: 0.001 Hz to 10 MHz 10. Temperature (type K) : -4 to 1382°F (-20°C to 750°C) 11. Duty Cycle: 0.1% to 99.9% 12. Temperature (IR): 58 TO 518 °F (-50 to 270 °C) 13. Continuity: Must available 14. Diode Test: Must available 15. Built-in IR Thermometer with laser pointer for locating hot spots: Must available. 16. 4000 count large backlit dual LCD with easy-to read digits 17. Input fuse protection: Must available. 18. Auto power off and Data Hold: Must available 19. Auto-Ranging: Must available 20. Standard Warranty: ≥ 5 years. 	2
V.	Multi Output DC Power Supply	8

	Annexure – II Part E: Technical Specifications	
	No of Outputs: 4	
	1. Output Voltage: 0 to 30 V, 0 to 30 V, 3 to 6.5 V, 8 to 15 V	
	2. Output Current: 0 to 5 A, 0 to 5 A, 3 A (fixed), 1 A (fixed)	
	3. Load Voltage Regulation: 0.5 mV \pm 3 mV	
	4. Line Voltage Regulation: 0.1 mV \pm 3 mV	
	5. Load Current Regulation: 2 mA \pm 5 mA	
	6. Line Current Regulation: 2 mA \pm 3 mA	
	7. Ripple and Noise: CV \leq 1 mVrms & CC \leq 1 mArms	
	8. Overload and short circuit protection: Must Available	
	9. Display: Four 3-digit color-coded LED displays and four status LED lights	
	10. Handheld/Bench top: Bench top	
	11. Standard Warranty: \geq 5 years.	
VI.	Digital Oscilloscope (50 MHz)	6
	Annexure – II Part F: Technical Specifications	
	1. Bandwidth : 50MHz,	
	2. No. of Analog Channels : 2	
	3. Sampling Frequency : 1GS/s	
	4. Memory Depth: 100 Kpts	
	5. Vertical resolution: 8 bits	
	6. Waveform Capture Rate: 50,000 wfm/s	
	7. Rise Time - Should have maximum Precise Rise time: \leq 7 ns	
	8. Time base Range: 5 ns/div to 50 s/div	

	9. Input sensitivity range: 500 μ V/div to 10 V/div	
	10. Triggering : Edge, Pulse Width, Runt, Logic, Setup and Hold, Rise/Fall, Time	
	11. Automatic Measurement: Maximum no. of automatic measurements \geq 24.	
	12. Math Functions: Add, subtract, multiply, divide.	
	13. FFT Function: Must available.	
	14. Display : Minimum 7-inch high resolution TFT color display	
	15. Interface : 2 USB -2.0 High speed ports	
	16. Optional: Software control features Optional	
	17. Supplier should demonstrate the working of the system in our lab.	
	18. Standard Warranty: \geq 5 years.	
VII.	Function Generator + Arbitrary Waveform Generator (25 MHz)	6
	Annexure – II Part G: Technical Specifications	
	1. No. of Channels: 2	
	2. Waveforms: Pulse, Sine, Square, Ramp, White Gaussian Noise, Arbitrary waveform, TTL (Sync) and DC.	
	3. Frequency Range (Sine, Square, Pulse): 1 μ Hz. to 25 MHz for Sine, 1 μ Hz. to 12.5 MHz for Square, 1 μ Hz. to 12.5 MHz for Pulse.	
	4. Frequency Resolution: 1 μ Hz	
	5. Sample rate: 125 MSa/s	
	6. Vertical resolution: 14 bits	
	7. Total Harmonic Distortion: < 0.2% (10 Hz to 20 kHz, 1 Vp-p)	
	8. Square wave: 1 μ Hz to 12.5 MHz and Jitter < 1ns, Rise and fall times < 12 ns. Pulse: 7 ns, Pulse Width: 1 μ Hz to 12.5 MHz with pulse duty <1 MHz, 0.1% to 99.9% and Jitter < 1ns.	
	9. Ramp: 1 μ Hz to 1 MHz, symmetry: 0.0% to 100%.	

	10. Sweep Time: 1ms to 500s \pm 1%. Linear, Logarithmic.	
	11. Burst: 1 to 5×10^4 cycles, or infinite. Start/stop phase -360° to 360° .	
	12. Output Characteristics: 1 mV _{p-p} - 10 V _{p-p} into 50 ohms and 2 mV _{p-p} - 20 V _{p-p} into open circuit.	
	13. Amplitude Resolution: 4 Digits	
	14. Modulation: AM, FM, PM, FSK, PSK, PWM, Sweep and Burst.	
	15. Communication interface: Host and device, USB TMC compliance	
	16. Supplier should demonstrate the working of the system in our lab.	
	17. Standard Warranty: ≥ 5 years.	
VIII.	Bench Top Digital Multimeter	6
	Annexure – II Part H: Technical Specifications	
	1. Digits of resolution: 5 $\frac{1}{2}$	
	2. Math functions: Min/Max, relative, hold, compare, and dB functions.	
	3. AC Voltage: 200 mV to 750 V	
	4. DC Voltage: 200 mV to 1000 V	
	5. Basic Accuracy (VDC): $\leq 0.015\%$	
	6. AC Current: ≥ 10 A (Resolution 100 μ A)	
	7. DC Current: ≥ 10 A (Resolution 100 μ A)	
	8. Resistance: 100 Ω to 100 M Ω	
	9. Capacitance : 1 nF to 100 μ F	
	10. Frequency : 10 Hz to 300 KHz	
	11. Temperature: -250 to $400^\circ\text{C} \pm 1.5^\circ\text{C}$	
	12. Continuity: Must Available	
	13. Diode: Must Available	
	14. Display: Minimum 3.5-inch TFT LCD WVGA.	
	15. Input fuse protection: Must Available	
	16. Bench top: Yes	
	17. Standard Warranty: ≥ 5 years.	

ANNEXURE-III

COMPLIANCE CERTIFICATE: -

(A certificate of compliance to NIQ term to be enclosed in the Technical bid)

Sl. No.	NIQ Terms and Conditions	Yes/No
1.	Rate quoted as per instruction	
2.	AMC rate after warranty provided	
3.	Consumables, accessories and optional items price provided	
4.	Validity of quoted rate for 60 days agreed	
5.	Payment term agreed	
6.	Delivery terms agreed	
7.	Warranty period agreed	
8.	Literature: Printed literature provided	
9.	Dealership/distributorship certificate (in case of dealers/agents) provided	
10.	ISO/ ISI certification provided	
11.	CST/VAT number enclosed	
12.	Service tax Registration No. and PAN No. provided	
13.	Sales Service: address of after sales service nearest available centre to IIIT Manipur provided	
14.	Manufacturer certificate provided	
15.	Applicable law terms agreed	

Signature:

Name & Full Address of Vendor: M/s

Phone Nos.:

E-mail:

Official seal of the vendor

ANNEXURE - IV

PERFORMANCE BANK GUARANTEE: -

To:

The Interim Registrar,
Indian Institute of Information Technology Manipur,
Mantripukhri, Imphal-795002, Manipur, India.

WHEREAS (Name of Supplier) hereinafter called "the Supplier" has undertaken , in pursuance of Contract No:, dated: 20... to supply (Description of Goods and Services) hereinafter called "the order".

AND WHEREAS it has been stipulated by you in the said order that the Supplier shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the order.

AND WHEREAS we have agreed to give the Supplier a Guarantee:
THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of (Amount of the Guarantee in Words and Figures) and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the order and without cavil or argument, any sum or sums within the limit of (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the day of 20.....

Signature and Seal of Guarantors
.....
.....
.....
Date.....20....
Address:.....
.....
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