



**SPONSORED RESEARCH, INDUSTRIAL CONSULTANCY & CONTINUING
EDUCATION CELL
NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA – 769 008, ODISHA**

Advertised Tender Enquiry

Department: Biotechnology and Medical Engineering

Tender Notification No: NITR/PW-SR/BM/2019/164

Dated: 11/11/2019

**To
Through
CPP Portal
(E-procurement)**

Important Dates

Event	Date	Time
Pre-bid Conference	NA	NA
Last date of submission of bid	02/12/2019	03:00 PM
Date of opening of techno-commercial bid	03/12/2019	03:00 PM

Dear Sir,

We intend to purchase the commodities specified below and invite quotations in accordance with the terms and conditions detailed in the bid document. If you are interested, kindly send your offer with prices and complete terms within the time mentioned above.

For any query, may contact to:

Attention

**Prof. Kunal Pal,
Department of Biotechnology and Medical Engineering
NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA – 769 008, ODISHA
Phone: (0661) – 2462289 / (0661) – 2462280,
Mobile No: +918249247377
Fax: 0661 – 2462999
E-mail: palk@nitrkl.ac.in / kpal.nitrkl@gmail.com**

Yours sincerely,

Name: Prof. K. Pal
Project Code: SR/19/BM/038

Encl:

- (1) Schedule of requirement, specifications, dates etc.**
- (2) Bid document containing detail terms and conditions.**

1. Schedule of requirements

Sl. No.	Description of Goods/Service	Quantity
01.	PCB fabrication unit (Detailed specification as per Annexure – I)	01 unit

2. Specifications and allied Technical Details

As per Annexure – I

3. Format of Quotation (tick appropriate box)

It is a two-part bid with separate techno-commercial and price bids.

4. The bid should be submitted through <https://eprocure.gov.in/eprocure/app>

5. Quotations should be valid for a period of **90** days from the date of opening of techno-commercial bid

6. Some important dates:

i.	Pre-bid Conference	Date: NA	Time: NA
ii.	Last date for submission of Bid:	Date: 02/12/2019	Time: 03:00 PM
iii.	Date of Opening of techno-commercial bid	Date: 03/12/2019	Time: 03:00 PM

7. **Warranty** of **01** years from the date of installation and **AMC** of **03** years after the completion of the warranty period must be provided.

8. **Technical Evaluation Criteria:** As per the detailed equipment technical specifications given in Annexure –I. If required, the bidder may be asked to provide clarification regarding the technical aspects.

Other Qualification criteria:

- i. Make, model and specification of each instrument should be given clearly.
- ii. All instruments have to be quoted.
- iii. Optional items should be quoted separately.
- iv. A scanned copy of the technical brochure of each instruments must be included in the bid.
- v. The bidder should have done at least 7 transactions of equal to or more than Rs. 50000.00 in the last 7 years with the Central Government Educational Institutes/ Universities/ R&D organizations/ PSUs. Necessary POs must be included in the bidding document.
- vi. A duly signed separate compliance sheet of the specification (at every point) mentioned in the technical part along with the deviation (if any). This compliance sheet will not be considered as the technical specification of the instrument.
- vii. Optional items to be compulsorily quoted by the bidder.

9. Financial Bid Evaluation Criteria:

- i. The price comparison will be made for the award of contract on the overall price basis.
- ii. Optional items (either all or in part(s) or neither) will be included in the overall price, depending on the availability of the funds.

10. (a) All prices to be quoted on FOR basis (NIT Rourkela) in INR.

(b) GST: GST should be charged at applicable rates against DSIR certificate.

11. Bid Security (EMD) and Tender Cost: EMD (Earnest Money Deposit) in the shape of DD (Demand Draft) for **INR 13,000/- (Rupees Thirteen thousand only)** and Tender cost (Non-refundable) in the form of DD for **INR 500/- (Rupees Five hundred only)** in favour of **"Director, NIT Rourkela" payable at Rourkela** from any Scheduled Commercial Bank except Co-operative and Gramin Bank. And DD for the EMD (Earnest Money Deposit) should remain valid for a period of 45 days beyond the bid validity period from the date of the opening of the tender. The EMD (Earnest Money Deposit) of unsuccessful bidders should be returned to them at the earliest and latest on or before the 30th days after the award of the contract. EMD (Earnest Money Deposit) and the tender cost should reach physically through **speed post/ registrar post / courier**, containing in an envelope & superscripted with subject, tender reference number addressing to **Registrar, NIT Rourkela -769008, Odisha; on or before 03/12/2019 at 03:00 PM.**

12. Performance Security: INR 32,500/- (Rupees Thirty-two thousand Five hundred only) in shape of Demand Draft (DD)/Bank Guarantee in favour of Director, NIT Rourkela and payable at Rourkela. And Performance security should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the suppliers, including warranty obligation. And EMD (Earnest Money Deposit) amount of successful bidder will be returned after the receipt of performance security in case of award of contract to successful bidder.

12. Please send your quotations through <https://eprocure.gov.in/eprocure/app>

13. For technical details, you may contact

<p>Prof. Kunal Pal Project Code: SR/19/BM/038 Department of Biotechnology and Medical Engineering., National Institute of Technology, Rourkela – 769 008 Phone: (0661) – 2462289 / (0661) – 2462280, Mobile No. +918249247377 Fax: 0661 – 2462999 E-mail: palk@nitrkl.ac.in / kpal.nitrkl@gmail.com</p>
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BID DOCUMENT

1. Instructions to the bidders

- 1.1 Bids are invited on behalf of the Director, National Institute of Technology (NIT), Rourkela – 769008, Odisha, from the intending bidders for supply of the goods/stores/equipments for the Institute as detailed in the enquiry letter.
- 1.2 The bidders should quote their offer/rates in BOQ in clear terms without ambiguity.
- 1.3 In case of any discrepancy between the rates in figures and that in words, the rate in words will be accepted as correct.
- 1.4 The last date for receipt of the bid is marked in the enquiry.
- 1.5 The Bid should be uploaded in <https://eprocure.gov.in/eprocure/app> Please follow the guideline of the site.
- 1.6 If a prospective bidder requires any clarification in regard to the bidding documents, he may make a request the concerned officer or faculty member at least 15 days before the deadline for receipt of bids.
- 1.7 Bids received after the deadline of receipt indicated in Para 1.4 above shall not be taken into consideration.
- 1.8 Each bidder shall submit only one bid. A bidder, who submits more than one bid, shall be disqualified and considered nonresponsive.
- 1.9 (In respect of high value plant, machinery etc. of a complex and technical nature). The bids may be submitted in two parts, viz., technical bid and financial bid.
- 1.10 The bidder has to sign in full at all pages of the scanned part of the bidding document. No over-writing in those pages are acceptable.
- 1.11 Bidders registered with any of the following agencies/ bodies as per Public procurement policy for Micro & Small Enterprises (MSE) order 2012 are exempted categories from payment of EMD provided that the registration Certificate issued by any one of these below mentioned agencies must be valid as on close date of tender. Micro small or medium enterprises who have applied for registration or renewal of registration with any of these agencies/bodies but have not obtained the valid Certificate as on close date of tender are not eligible for exemption.
 - i) Khadi and Village Industries Commission (KVIC)
 - ii) National Small Industries Corporation (NSIC)
 - iii) Any other body specified by Ministry of MSME/GOI

2. Conditions of the bid

- 2.1 The rates quoted should preferably be net, inclusive of all taxes and duties, packing, forwarding, freight, Insurance and all other incidental charges. In case these charges are quoted extra in addition to the quoted rates, the amount thereof or Ad Valorem rate must be specified. Packing, forwarding, freight etc., when quotes separately are reimbursable at actuals. If external agencies are employed, their receipts must be enclosed with the invoice.
- 2.2 Duties and Taxes are to be quoted separately. Ad Valorem rates thereof should be clearly indicated with reference to the relevant Acts and Rules.

It may be noted that the Institute is availing custom duty exemption in terms of Notification No. 51/96 – Customs dt. 23.07.1996, Notification No. - 47/2017- Integrated Tax (Rate) dt. 14.11.2017 and Notification No- 45/2017 – Integrated tax (Rate) dt. 14/11/2017 & Notification No. - 45/2017- Central tax (Rate) dt. 14.11.2017, Notification No. - 45/2017- Union Territory Tax (Rate) dt. 14/11/2017 [Vide DSIR, Ministry of Science and Technology, Government of India, Registration No.: TU/V/RG- CDE (227)/2016, dated: 13.11.2018]

- 2.3 The goods are required to be delivered at the indenting Department of NIT, Rourkela, and must be reached within **90 days** from the date of placement of the supply of order under the risk and arrangement of the bidder and offers with delivery beyond the above period shall be treated as unresponsive. In case the delivery time is higher, the same must be mentioned clearly in the quotation.
- 2.4 The bid should remain valid for a period of **90 days** from the date of opening. In case your offer has a different validity period that should be clearly mentioned in the quotation.
- 2.5 Conditional discount, if any, offered by the bidder shall not be considered at the time of evaluation.
- 2.6 The goods offered should strictly conform to the specification and technical details mentioned in Annexure 1.
- 2.7 The Institute may like to conduct pre-dispatch inspection of goods, where applicable.
- 2.8 Period of guarantee/warranty, where applicable, should be specified in the bid.
- 2.9 If the successful bidder, on receipt of the supply order, fails to execute the order within the stipulated period, in full or part, it will be open to the Director, NIT Rourkela to recover liquidated damage from the firm at the rate of 1 percent of the value of undelivered goods per month or part thereof, subject to a maximum of 5 percent of the value of undelivered goods. Alternatively, it will also be opened to the Director, to arrange procurement of the required goods from any other source at the risk and expenses of the bidder.
- 2.10 The successful bidder may be required to execute a contract, where applicable.
- 2.11 The bidder has to furnish up to date Income Tax Clearance Certificate along with the bid.
- 2.12 Payment (100 percent) will be made by Account Payee Cheque/Bank Draft, within 30 days from the date of receipt of the goods in good condition or receipt of the bill, commissioning of the equipment, where applicable, whichever is later/latest.
- 2.13 In case of Advance payment, the payment will be made on either in Foreign Demand Draft or Wire Transfer only. The proforma invoice copy need to be sent for advance payment.
- 2.14 In the event of any dispute arising out of the bid or from the resultant contract, the decision of the Director, NIT, Rourkela shall be final.
- 2.15 The bid document/resultant contract will be interpreted under Indian Laws.

Compulsory items:

#	Specifications	Number of units
1	PCB XY plotter	1
	<ul style="list-style-type: none"> • Material: Acrylic Plate, Aluminum Rod • Control Board: Mana SE or similar product • Communication Port: MircoUSB • Stepper Motor: 42H34S-1304A or similar product • Power Input: AC 110-240V 50/60Hz • Working Voltage: DC 12V • Working Current: DC 5A • System Support: Window 7/8/10 • Control Software System: EleksCAM or InkSpace • Working Accuracy: $\leq 0.01\text{mm}$ • Continuous Working Time: 10 Hours or more • Working Area: 28 x 20 cm or more • Drawing tool: Marker pen (to be provided) 	
2	PCB CNC milling machine with dust suction attachment	1
	<ul style="list-style-type: none"> • Frame Material: Aluminum Alloy • Working Area: 340x160 mm or more • Control Software for Spindle: GrblControl • Adapter Input Voltage: AC 110-240V 50/60Hz • Working Voltage: DC 24V • Spindle Motor: 775 Spindle Motor (12-36V) 24V: 7000r/min, 36V: 9000r/min • Stepper Motor: 42 Stepper Motor, Voltage: 12V, Phase Current 1.3A, Torque 0.25 N.m • Drill bits (to be provided) • Computer interface: USB 	
3	PCB laser CNC machine	1
	<ul style="list-style-type: none"> • Laser: to be provided (Laser power: 2500mW, Laser Wavelength: 445nm) • Material: Acrylic Plate, Aluminum Rod • Control Board: Mana SE or similar product • Communication Port: MircoUSB • Stepper Motor: 42H34S-1304A or similar product • Power Input: AC 110-240V 50/60Hz • Working Voltage: DC 12V • Working Current: DC 5A • System Support: Window 7/8/10 • Control Software System: EleksCAM or InkSpace • Working Accuracy: $\leq 0.01\text{mm}$ • Working Area: 30 x 40 cm or more 	
4	5 KVA online UPS-1 h backup	2
	<ul style="list-style-type: none"> • On-Line UPS Capacity: 5 KVA • Battery backup time at full load: 60 Minutes • Minimum VAH: 8193 VAH • Output waveform: Pure sine wave • Inbuilt OVCD (Over Voltage Cut-Off Device) With Surge Protection • Protection <ul style="list-style-type: none"> ➤ Short circuit protection: Yes ➤ Overload protection: Yes ➤ Over-temperature protection: Yes ➤ Input low/high voltage control: Yes ➤ DC low/high voltage trip: Yes • Batteries shall be supplied with rack • Installation and commissioning: Yes • Power Requirement: 220V AC, 50-60 Hz 	

5	Mini Bench Drill Press Machine With High-Speed Angle Drill	1
	<ul style="list-style-type: none"> • Mini Desktop Drill Press Bench • 0.3-4mm Drill Chunk • Bench Drill Stand • Carbide drill bits (Size: 1 mm (2 pcs), 1.5 mm (2 pcs), 2 mm (2 pcs), 2.5 mm (2 pcs), and 3 mm (2 pcs); Overall Length: 38mm or more) • Power Requirement: 220V AC, 50-60 Hz 	
6	SMD rework station	5
	<ul style="list-style-type: none"> • Autocut SMD rework station • Type: Hot Air Gun • Temperature Setting: 150 °C to 500 °C or better • Capacity: up to 24 L/min or more • Hot air temperature: 100 - 420°C • Air Pump – Diaphragm • Overload Protection Included: Yes • Number of Nozzle Included: 3 • Power Requirement: 220V AC, 50-60 Hz 	
7	Soldering station	2
	<ul style="list-style-type: none"> • 60 W Digital soldering Iron Station with Nichrome heating element • Variable temperature controlled • Temperature: 200 to 480 °C • Power Requirement: 220V AC, 50-60 Hz 	
8	Industrial PCB microscope	2
	<ul style="list-style-type: none"> • Image sensor: 34 megapixels or greater CMOS sensor • Pixel size: 1.335µm × 1.335µm or better • Image format: jpg/ tiff/ png • Video format: MOV/ MP4/ any other Windows compatible format • Frame rate: ≤60fps • Definition: FULL HD • Housing: metal • Lens: C/CS • Digital Zoom support • Brightness control: Auto/manual • Color: R/G/B adjustable • Film and record support • Cross cursor: Support multi-color, size adjustable • TF card interface: Max 64G • HDMI interface: Standard HDMI output (Type A) • USB interface: Standard USB2.0 interface (Type B) • 60-LED ring light source with the power box • 8 Inch Monitor: Type-TFT LED, Physical Resolution: 800 × 600, Display Ratio: 4: 3 • C-mount Lens: 0.5X C-mount adapter, Objective Magnification Power by 0.7 - 4.5X (about 10 - 180X on the display) • Camera Stand • Software • Language support: English • Power Requirement: 220V AC, 50-60 Hz 	
9	Etching station	2
	<ul style="list-style-type: none"> • Type of movement: Reciprocating • Speed control: Analog • The top plate should be fitted with anti-slip rubber mat • The top plate should be able to accommodate tray of size (At least): 34 cm x 27 cm x 8 cm • Plastic tray of size (Minimum): 34 cm x 27 cm x 8 cm • Power Requirement: 220V AC, 50-60 Hz 	

10	UV chamber for PCB masking	1
	<ul style="list-style-type: none"> • Cabinet material: Wooden • Internal size of the cabinet: 15 inch x 20 inch x 12 inch (Minimum) • UV light: 12 inch size, the wavelength in the range of 252 to 312 nm • Attached with 6 UV tubes • Power Requirement: 220V AC, 50-60 Hz 	
11	Air conditioning system	1
	<ul style="list-style-type: none"> • Air conditioning system for keeping the instrument in pollution and the dust-free environment with the following specification: Reputed brand, Split, Inverter, 2.0Ton, voltage stabilizer 	
12	±12V power supply	10
	<ul style="list-style-type: none"> • Type: Transformer-based • Fixed voltage portable power supply • Output voltage: DC ±12V • Current rating: 2 A • Power Requirement: 220V AC, 50-60 Hz 	
13	3D printer for making casings for the designed PCBs	1
	<ul style="list-style-type: none"> • Modelling technology: FDM • Printing size: 300 mm x 300 mm x 400mm or higher • Travelling speed: 180 mm/s or lower • Filament: 1.75 mm PLA, TPU, ABS • Layer thickness: 0.1-0.4 mm or better • Nozzle diameter: 0.4 mm • Print speed: 200 mm/s (max) • Precision: ±0.1 mm • File format: STL, OBJ, G-code, PROE, Solid-works • Working mode: Online or offline (SD card) • Operating software: CURA, Repetier-Host, simplify 3D or any other freeware • Printing platform: Glass top • Power Requirement: 100-265V AC, 50-60 Hz 	

Optional items

#	Specifications	Number of units
14	USB multifunction device	1
	<ul style="list-style-type: none"> • Two-channel USB digital oscilloscope (±25V, differential, 14 or higher-bit, 100MS/s+, 30MHz+ bandwidth) • Two-channel arbitrary function generator (±5V, 14 or higher -bit, 100MS/s+, 12MHz+ bandwidth) • 16-channel digital logic analyzer (3.3V CMOS and 1.8V or 5V tolerant, 100MS/s+) • Digital Bus Analyzers (SPI, I²C, UART, Parallel) • Single-channel voltmeter (AC, DC, ±25V) • Network Analyzer – Bode, Nyquist, Nichols transfer diagrams of a circuit. Range: 1Hz to 10MHz • Spectrum Analyzer – power spectrum and spectral measurements (noise floor, SFDR, SNR, THD, etc.) • Data Logger - Exportable data and plot functionality • Two programmable power supplies (0 to +5V, 0 to -5V) 	
15	Impedance measurement breakout board	1
	<ul style="list-style-type: none"> • 2-wire Impedance Analyzer • 50pF - 500µF or greater Capacitance Measurement Range • 10µH - 1000mH or greater Inductance Measurement Range • 1Hz - 15MHz or greater Excitation Frequency Range • Data Logger – Impedance and phase values in the testing frequency range • Compatible to USB multifunction device (Sl. No. 14) 	