



**NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA – 769008, ODISHA**

**ADVERTISED TENDER ENQUIRY**

**Department: Chemistry**

**Tender Notice No: NITR/PW/CY/2020/03**

**Date: 07/01/2020**

**Important Dates**

**To,**  
  
Bidding  
through  
**e-Procurement Portal of  
Ministry of HRD, Govt. of India  
(e-Wizard)**

<b>Event</b>	<b>Date</b>	<b>Time</b>
Pre-bid Conference	<b>21/01/2020</b>	<b>11:00 AM</b>
Last Date of submission of bid	<b>04/02/2020</b>	<b>11:00 AM</b>
Date of opening of bid(Cover- I and Cover-II)	<b>05/02/2020</b>	<b>11:00 AM</b>

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 clarification:

Attn.: Dr. Gokarneswar Sahoo  
Assistant Professor  
Department Of Chemistry  
NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA – 769008, ODISHA  
PH.NO:- 0661-2462669  
E-mail: [sahoog@nitrkl.ac.in](mailto:sahoog@nitrkl.ac.in)

Yours sincerely,

**Sd/-**  
Name: Prof. G. Sahoo  
Department of Chemistry

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
1.	<b>High Resolution Mass Spectrometer (HRMS)</b> (Detailed specification as per attached Annexure – I)	<b>01</b> (One)
2.	AMC for 5 years AMC after completion of warranty period.	<b>5 years</b>

## 2. Specifications and allied Technical Details

Details mentioned in Annexure –I  
GST and any other taxes should be clearly mentioned in the BOQ

## 3. Format of Quotation

It is a three-part bid with separate Cover-I: EMD & Tender Cost, Cover-II: techno-commercial bid and Cover-III: Price bid (BOQ). Please see e-Procurement Portal of Ministry of HRD Portal <https://mhrd.euniwizarde.com/> for instructions for the method of bidding.

4. The Bid should be submitted through <https://mhrd.euniwizarde.com/HomePage/ebidSites?siteName=mhrd>

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:	<b>Date: 21/01/2020</b>	<b>Time: 11:00 AM</b>
ii.	Last date for submission of bid :	<b>Date: 04/02/2020</b>	<b>Time: 11:00 AM</b>
iii.	Date of opening of bid(Cover- I and Cover-II)	<b>Date: 05/02/2020</b>	<b>Time: 11:00 AM</b>

7. **Warranty:** Minimum 5 years comprehensive warranty.

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

## 9. Other Qualification criteria:

- I. Complete technical specification of the instruments and its necessary parts and accessory items required for running the instrument.
- II. A complete design along with the clear indication/markings of the specification mentioned in the technical bidding document (wherever possible) of the instrument.
- III. Make, model and specification of the list of equipment as mentioned in schedule of requirement.
- IV. Scanned copy of the technical brochure and website reference of the same must be included in the bid.
- V. There must be a local maintenance center with the availability of the spares in India.
- VI. A declaration from the Principal stating that the spares will be made available for the equipment for at least 2 years from the date of installation.
- VII. 3 numbers of Scanned copy of PO (not older than 7 years) of similar or higher specification supplied within India (at least ONE from premier Government Institution and R & D Organization).
- VIII. A duly signed detailed User List (at least 5) with the concerned person's valid contact details, in India where the instrument is still in the operational condition must be provided.
- IX. A copy of the Authorization Certificate issued by the Principal in favour of the Indian agent along with a certified copy of the Agency Agreement between the foreign Principal and Indian agent. Both these certificates must be up-to-date.(if applicable).

- X. A letter in the official letter head of the principal declaring the Indian agent as their authorized agency to bid contain the official tender enquiry number as depicted in the CPP portal, must be included with the technical bid. (This must not be clubbed with Authorization Certificate)
- XI. 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.
- XII. Each bidder has to mandatorily quote for all the items as mentioned in BOQ.
- 10. Financial Bid Evaluation:** The comparison will be made for award of contract on the overall price basis quoted for delivery of all items upto NIT Rourkela.
- 11.** (a) If the price quoted in foreign value, the price should be CIF/CIP/DAP should be for delivery upto NIT Rourkela. (The quoted price in BOQ should include custom clearance charges, agent commission, transportation within India and all other charges)
- (b) **GST:** GST should be charge according to applicable rates (if applicable).
- 11. Bid security(EMD) and Tender Cost:**  
Bid Security(EMD) need to be submitted through online portal only for **INR 3,50,000/- (Rupees three lakh fifty thousand Only)** and **Tender Cost (Non-refundable)** need to be submitted through online portal only for **INR 1,000/- (Rupees One Thousand Only)**.  
Bid security 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 shall bear no interest. Any bid without accompanying with EMD & Tender Cost is liable to be treated as non-responsive and rejected.
- 12. Price Bid:** The financial bid indicating (item-wise) price for the item(s) mentioned in the technical bid should be submitted in provided BOQ(in Microsoft Excel Format) only .
- 13. Performance Security: 10% of the contract value** in shape of Bank Guarantee/Demand Draft (DD) in favor of Director, NIT Rourkela payable at Rourkela from any Scheduled Commercial Bank except Co-operative and Gramin bank. And performance security should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligation. Performance Security should be submitted within 15 days from the date of receipt of Order. 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.
- 14.** A Pre-bid conference will be held on 21/01/2020 at 11:00 AM in the **Seminar room, Department of chemistry, NIT Rourkela** for clarifying issues and clearing doubts, if any, about the specification & other allied technical details. The prospective bidders may attend the pre-bid conference at the appointed date, time and place.
- 15.** Please go through the enclosed "bid document" carefully for other bidding instructions.
- 16.** Please send you quotation through e-Procurement Portal of Ministry of HRD Portal <https://mhrd.euniwizarde.com/>
- 17.** For technical details, you may contact

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# NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA – 769 008, ODISHA

## **BID DOCUMENT**

### **1. Instructions to the bidders**

- 1.1 Bids are invited on behalf of the Director, National Institute of Technology (NIT), Rourkela – 769 008, 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://mhrd.euniwizarde.com/> 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. INSTRUCTIONS FOR ONLINE BID SUBMISSION**

The bidders are required to submit soft copies of their bid electronically on the e-Wizard Portal (<https://mhrd.euniwizarde.com>) using valid Digital Signature Certificates. Below mentioned instructions are meant to guide the bidders for registration on the e-Wizard Portal, prepare their bids in accordance with the requirements and submitting their bids online on the e-Wizard Portal. For more information, bidders may visit the e-Wizard Portal <https://mhrd.euniwizarde.com>

## **2.1 REGISTRATION PROCESS ON ONLINE PORTAL**

1. Bidders to enroll on the e-Procurement module of the portal <https://mhrd.euniwizarde.com> by clicking on the link "Bidder Enrollment". Enrolment on the e-wizard Portal.
2. The bidders to choose a unique username and assign a password for their accounts. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the e-Wizard Portal. Bidders to register upon enrolment their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India with their profile.
3. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse. Foreign bidders are advised to refer "DSC details for Foreign Bidders" for Digital Signature requirements on the portal.
4. Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / eToken.
5. Bidders must ensure that they have the latest version of Java installed in their local system.

## **2.2 TENDER DOCUMENTS SEARCH**

1. Various built in options are available in the e-Wizard Portal to facilitate bidders to search active tenders by several parameters. These parameters include Tender ID, organization, location, date, value, etc.
2. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the Online Portal.
3. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the Online Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
4. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

## **2.3 BID PREPARATION**

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.
3. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
4. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / PNG etc. formats. Bid documents may be scanned with 100 dpi with black and white option.

## **2.4 BID SUBMISSION**

1. Bidder to log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder to digitally sign and upload the required bid documents one by one as indicated in the tender document.

3. Bidder to select the payment option as Online" to pay the tender fee/ EMD wherever applicable and enter details of the instrument.
4. A standard BoQ format has been provided with the tender document to be filled by all the bidders. Bidders to note that they should necessarily submit their financial bids in the prescribed format and no other format is acceptable.
5. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
6. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data, which cannot be viewed by unauthorized persons until the time of bid opening.
7. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
8. Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
9. Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

## 2.5 AMENDMENT OF BID DOCUMENT

At any time prior to the deadline for submission of proposals, the institutions reserve the right to add/modify/delete any portion of this document by issuance of a Corrigendum, which would be published on the website and will also be made available to the all the Bidder who have been issued the tender document. The Corrigendum shall be binding on all bidders and will form part of the bid documents.

## 2.6 ASSISTANCE TO BIDDERS

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
2. e-Procurement support any queries relating to the process of online bid submission or queries relating to e-Wizard Portal in general may be directed to the **24x7 e-Wizard Helpdesk. The contact number for the helpdesk is 011-49606060, 23710092, 23710091, Er Sanjeet Kumar Jha (+91-8882495599), 9355030626. Amit Kumar Jha 9355030627, 9205898226**

### Email Support:

For any eProcurement Application Service Requests and Technical issues related to Document Uploads, Tender Publishing, Issue of Corrigendum, Encryption/Decryption Key issues, Bid Evaluation, Bidder Login issues, New Registration issues, Key Uploads, DSC Key installation, Bid Submission, system users may please mail to Sanjeet Kumar Jha [ewizardsanjeet.kumar@gmail.com](mailto:ewizardsanjeet.kumar@gmail.com)

## 3. Conditions of the bid

- 3.1 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.
- 3.2 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]**

- 3.3 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.
- 3.4 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.
- 3.5 Conditional discount, if any, offered by the bidder shall not be considered at the time of evaluation.
- 3.6 The goods offered should strictly conform to the specification and technical details mentioned in **Annexure I**.
- 3.7 The Institute may like to conduct pre-dispatch inspection of goods, where applicable.
- 3.8 Period of guarantee/warranty, where applicable, should be specified in the bid.
- 3.9 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.
- 3.10 The successful bidder may be required to execute a contract, where applicable.
- 3.11 The bidder has to furnish up to date Income Tax Clearance Certificate along with the bid.
- 3.12 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.
- 3.13 **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.**
- 3.14 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.
- 3.15 The bid document/resultant contract will be interpreted under Indian Laws.

**Technical Specifications for ESI-Mass Spectrometer & Accessories**

<b>S.No</b>	<b>Description</b>	<b>Technical Specification</b>
<b>1.</b>	<b>Ionization Source</b>	<p>A. The instrument must be equipped with combined/dual electrospray ionization (ESI) and atmospheric pressure chemical ionization (APCI) as standard. In case Vendors not having Combined / dual sources can also offer dedicated ionization source. Solid Probe Ionization source also must be included as an additional source. Sample introduction must be done either direct infusion with system fluidics or through LC. The Sample Introduction Technology must be associated with automated system parameter checking along with alerts generation. It must provide calibrant delivery system with programmable divert valve &amp; Automated Mass Calibration</p> <p>B. The combined/dual ionization or dedicated (ESI&amp; APCI) source must operate along with reference spray to facilitate automated accurate mass measurements within single LCMS experiment. The instrument should be capable of reference mass correction for MS and MS/MS operation without losing sensitivity. To facilitate automated accurate mass measurements within single LCMS experiment, the ionization source must incorporate a probe to introduce a reference mass and allow indexed sampling of the two sprayers to avoid interference between analyte and reference spectra. The ionization must be done both in a positive&amp; negative mode. In case of Alternative HRMS Technology such as Orbitrap internal calibration must be done with suitable calibrants.</p> <p>C. The ion source must be of Dual Orthogonal design. The cleaning of the source should be done without venting the system and facility to Vacuum Interlock should be provided. The Vacuum must remain intact during the cleaning, Source interchange or Servicing of the system. Vendors must assure the same in writing.</p>
<b>2.</b>	<b>Ion Optics</b>	The ion optics in the system should maximize sensitivity while maintaining system robustness. Neutral molecules and gas load must be actively exhausted for higher sensitivity of the system.
<b>3.</b>	<b>Desolvation Temperature</b>	<p>The upper limit of the desolvation temperature must be more than 500 degree C, which should be programmable and used in all the different probe usages including combined / dual / dedicated ESI, APCI, ASAP or the solid probe for every solvents &amp; compounds.</p> <p>The desolvation temperature setting should be capable enough to take care of flow rates to 1-2 mL/min from the fast chromatography System.</p>
<b>4.</b>	<b>Quadrupole: (For Both QTOF&amp; Equivalent Technology / Orbitrap)</b>	<p>A. Instrument should have Quadrupole for isolation followed by collision cell and appropriate assembly required for high resolution mass data. A suitable technology or device must be available to allow the source elements to be removed and cleaned without breaking instrument vacuum, maximizing instrument uptime. Precursor ion selection should be done using Quadrupole.</p> <p>B. Mass Range: The instrument must have a high mass filter (quadrupole) for efficient transmission of ions having mass range at least <math>\leq 50</math> to <math>\geq 30,000</math> m/z or higher in resolving &amp; non-resolving mode or better for QTOF Technology. For Equivalent system like Orbitrap technology, Quadrupole must be associated &amp; mass range must be higher having high mass filters. The routine maintenance should be tool free and user friendly.</p>
<b>5.</b>	<b>Time of Flight (TOF) or Equivalent Orbitrap</b>	<p>A. Analyzer: Geometry with quadrupole as Q1 followed by TOF with a collision cell in between should be present in case of Q ToF.</p> <p>B. The mass range of the Time of Flight (TOF) analyzer must be at least <math>\leq 50</math> to <math>\geq 30,000</math> m/z. For Equivalent High-Resolution Analyzer other than TOF, the mass range must be <math>\leq 50</math> to <math>\geq 5000</math> m/z.</p> <p>C. The TOF mass analyzer / equivalent must have linearity of response of Minimum 4 orders or better of magnitude whilst maintaining specified resolution for quantitation purposes.</p>



6.	<b>Resolution</b>	<p>A. The resolution of the TOF mass analyzer must be 45,000 FWHM or better around m/z 1000 and 35,000 FWHM or better of around 200 m/z. (Proof of Statement must be provided)</p> <p>B. For Equivalent HRMS Mass Analyzer / Orbitrap the resolution must be more than 1,40,000 at around 200 m/z.</p> <p>C. Data acquisition rate for QTOF must be 30 Spectra per second or better in MS and MS/MS mode independent of any conditions. (Proof of Statement must be provided)</p> <p>D. For Equivalent HRMS / Orbitrap the scan rate should be equal to or more than 12 Hz.</p>
7.	<b>Mass Accuracy &amp; Sensitivity</b>	<p>A. The mass accuracy of the system should be a minimum of less than 1 ppm, with both internal &amp; external calibration standards for both MS &amp; MS/MS modes on 10 consecutive repeat measurements on column analysis. (Proof of statement must be provided for S/N ratio) The instrument must be sensitive enough for detecting sub ppb/femtomole levels of compounds.</p> <p>B. Sensitivity: Full MS/MS mode <math>\leq</math> 100 femtogram or better on column, at S/N ratio <math>\geq</math> 500:1 or better (Proof of statement must be provided for S/N ratio)</p> <p>C. For other equivalent technology like Orbitrap, the Sensitivity Data must be mentioned in details &amp; must be high enough.</p>
8.	<b>Scan modes &amp; Capability</b>	<p>A. The instrument must be able to operate in MS, MS/MS product ion scanning, simultaneous MS and MS/MS scanning, UHPLC/Fast DDA Scan, TOF/equivalent MRM, Precursor Ion Scan, Neutral loss/gain scan. The software should be capable of data acquisitions whereby high and low collision energy data is acquired simultaneously to provide fragmentation data for all detectable molecular ions and TOF- MRM.</p> <p>B. For Equivalent HRMS / Orbitrap technology, scan modes or capabilities must be explained &amp; stated in details.</p>
9.	<b>Vacuum System</b>	<p>A high efficiency vacuum system with turbo pumps with rotary pumps or equivalent must be provided for making the instrument sensitive enough</p>
10.	<b>Software</b>	<p>A. The software should have capabilities to perform the following functions: Automated mass calibration, resolution, sensitivity check should be performed by software. Software tools for addressing Screening, Component Identification &amp; Structural Elucidation workflows. The data processing software must incorporate an elemental composition calculator as standard. Included into the calculator must be algorithms for isotope pattern modeling that allow data interpretation of actual isotope patterns. A goodness of fit from actual to theoretical isotopes must be included. The ability to filter out incorrect elemental composition calculations through the use of intelligent spectral interpretation algorithms must be incorporated. Software should give elemental formula with mass accuracy or ppm error and isotopic fit value.</p> <p>B. The model offered by the vendor should have capability to demonstrate the above mention parameter like fast LC, high resolution, high mass accuracy in one single run.</p>
11.	<b>Instrument &amp; Software Qualification Service &amp; Certification</b>	<p>The instrument must be Qualified along with the Software. Necessary reagents along with Documents must be provided for valid Instrument Qualification, Operational &amp; Performance Qualification of the instrument along with Specification check during the installation. The vendors must quote the Qualification kits with defined list of items along with valid Cat. No./Cas No/Product ID etc.</p>
12.	<b>Computer &amp; workstation</b>	<p>A. A Workstation should be provided for controlling the mass spectrometer, the LC and the auto-sampler with data acquisition &amp; for data processing and analysis with following specification:</p> <p>B. Memory / RAM: 50 GB or higher, Hard disk: 10 TB or higher</p> <p>C. CPU: Dual-Processor; Operating system: Windows10 64 - bit or latest at the time of supply.</p> <p>D. 27-inch LCD monitor.</p> <p>E. A laser jet Printer.</p> <p>F. All hardware and software including drivers, monitor, device interfaces</p> <p>G. cards/network must be preinstalled and preconfigured on the computer provided along with Microsoft office of latest version.</p>
13.	<b>Nitrogen generator</b>	<p>A noise free Nitrogen Gas Generator with in-built compressor along with other Gas cylinder should be provided to operate the system.</p>
14.	<b>UPS</b>	<p>The vendor must provide 10 KVA online UPS with a minimum 1 hr backup with the system.</p>

<b>FAST UHPLC SYSTEM:</b>		
<b>A liquid chromatography system as an inlet to the Mass Spectrometer with the following specifications:</b>		
The chromatography system should be capable of being operated both as a HPLC & Fast UHPLC by interchanging the column chemistries.		
<b>15.</b>	<b>Pump</b>	<p>A. Quaternary with an operating pressure of minimum 15000 psi or better.</p> <p>B. Automatic purging of pumps controlled by software.</p>
<b>16.</b>	<b>Flow Rate</b>	<p>A. The flow rate range should be 0.010 to 2 ml/min or higher in 0.001 mL increments.</p> <p>B. Flow rate accuracy: <math>\pm 1</math> or better</p> <p>C. Flow rate precision: <math>\leq 0.075</math> % relative standard Deviation or better.</p>
<b>17.</b>	<b>Degasser</b>	The instrument should have in-built Vacuum degasser facility with minimum four lines and should be efficient to remove dissolved air online.
<b>18.</b>	<b>System Delay Volume</b>	System Delay Volume should be less than $< 400$ ul, independent of system backpressure & with standard mixer for higher sensitivity. The total System band spread should be $\leq 15$ ul or better
<b>19.</b>	<b>Autosampler</b>	<p>A. Autosampler should be available with a capacity of approx. 100 vials or more of 2.0 ml or better capacity &amp; sufficient no. of spare sample vials must be provided. The autosampler should have cooling facility up to 4 degrees or greater and heating up to 40 degrees or greater.</p> <p>B. Programmable injection volume from 0.5 ul to 20 ul or better must be available with Integral, Active and programmable needle wash</p> <p>C. The carryover of the autosampler must be less than 0.002% or better.</p> <p>D. Compressibility Compensation should be Automatic &amp; Continuous.</p>
<b>20.</b>	<b>Column Oven</b>	Column Temperature Control should be from 20 deg. C to 90 deg. C or better.
<b>21.</b>	<b>Columns</b>	<p>A. Sub 2 microns (1.7um / 1.6um) C18 UHPLC/UPLC Columns for the analysis should be supplied with smaller dimensions with a pH level of 2 – 12.</p> <p>B. Sub 2 microns (1.7um / 1.6um) Hilic UHPLC/UPLC Columns for the analysis should be supplied with smaller dimensions with a pH level of 2 – 12.</p> <p>C. Solid-Core T3UHPLC/UPLC Columns for the analysis should be supplied with smaller dimensions with a pH level of 2 – 12.</p> <p>D. Column usage history tracking technology must be associated with the column so that all the information related to number of injections, solvent consumption, Temperature, Pressure etc. should be available electronically &amp; archives all of them so that the data can be acquired as when required &amp; must help to create a paperless laboratory.</p>
<b>22.</b>	<b>Warranty</b>	Warranty of the Entire instrument must be 5 years comprehensive except consumables of Computer and Printer, Gases etc. The Vendor must point out the consumable items where the warranty is not covering.
<b>23.</b>	<b>Others</b>	<p>A. One specialist operator must be provided at least for the first year, who will operate the instrument and train people at the user's site.</p> <p>B. The system must be attended within 48 hrs of reporting. The other gases along with regulators should also be supplied along with the system.</p> <p>C. Training and Installation: Installation must be done at user's site with no extra costs involved. A two week (at least) general entry- level training-cum- workshop and advanced-level training-cum- workshop must be arranged at the user's site by the vendor on experimental and data analysis part, with no extra cost involved in every year, for a period of 3 years</p> <p>D. Proof of Performance documents must be provided with the Compliance sheet. The vendors must submit/upload all the Technical Data Sheets as per their claim in original &amp; authenticated.</p> <p>E. Standards/reagents &amp; MS Grade Solvents required for successful installation must be supplied.</p> <p>F. The Vendor must submit at least 10 or more, latest customer details / PO copies / references of the same model supplied in India.</p>

<b>24</b>	<b>Training</b>	<p>A. <b>The Basic Operation &amp; The Basic Application Training</b> At least 4-5 days training on Basic operation along with the software, Instrumentation control, Acquiring Data, General Application Training includes the Data Interpretation, Small &amp; Large Molecule Applications, Organometallics at the time of installation.</p> <p>B. <b>Advanced Application Training</b> After 3-4 of the installation the follow up training for 4-5 days is needed for the Method Developments or Any Specific Applications upon our specific requirement including follow-up for the basic training.</p>
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The bidders may be asked to deliver presentation and provide clarifications regarding technical aspects during the technical bid evaluation. They must come prepared. A proper and detailed description regarding the quoted material and technology along with all other technical specifications must be provided in the technical bid.

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