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|  INDIAN INSTITUTE OF TECHNOLOGY PALAKKAD | Indian Institute of Technology Palakkad भारतीय प्रौद्योगिकी संस्थान पालक्काड STORES & PURCHASE SECTION Email: purchase@iitpkd.ac.in Telephone: 04923-226586/87 GSTIN: 32AAAAI9910J1ZR |
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Tender No. IITPKD/EE/AA/2021-22/022
Date of Publication: 12-10-2021
Date/Time of Closing: 02-11-2021, 1500 hours

Indian Institute of Technology Palakkad Invites Tender under Two-bid system for the:

**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF
 RAY TRACING SOFTWARE**

Conforming to the specifications as in BoQ Technical.

Tender Documents may be downloaded from the e-Wizard Portal <https://mhrd.euniwizarde.com/>. Aspiring Bidders who have not enrolled / registered in e-Wizard should enroll / register before participating through the website <https://mhrd.euniwizarde.com/>. Bidders are advised to go through instructions provided at “**Procedure for Submission of E-tender**”. [Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this e-Wizard Portal”].

Bidders can access tender documents on the website. For searching in the site, kindly go to Live Tenders option, Click “Advance Search” and select Department as ‘IIT Palakkad’. Thereafter, Click on “Search” button to view all IIT Palakkad tenders. Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <https://mhrd.euniwizarde.com/> as per the timeline below.

No manual bids will be accepted. All tender documents including Techno-Commercial, Technical and Financial bids should be submitted in the e-Wizard portal.

| S. No. | Events | Date and Time |
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| 1 | Publication of the Tender Document | 12-10-2021 |
| 3 | Last Date/Time for submission of ONLINE Bids | 02-11-2021, 1500 hours |
| 4 | Opening of Technical Bids | 02-11-2021, 1515 hours |

TERMS AND CONDITIONS

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| 1 | GENERAL | <p>(a) The responsibility of submission of the bids on or before the last date shall rest with the tenderer. The institute will hold no responsibility for the non-receipt of the bids or the bids received after the date/time specified. Any bid received by IITPKD after the bid submission deadline prescribed by IITPKD, shall be rejected and returned unopened to the Bidder.</p> <p>(b) Canvassing or offer of an advantage or any other inducement by any person with a view to influencing acceptance of a bid is an offence under the Laws of India. Such action will result in the rejection of bid, in addition to other punitive measures.</p> <p>(c) Each bidder shall submit only one bid, either by himself or as a partner in a joint venture or as a member of the consortium. If a bidder or if any of the partners in a joint venture or any one of the members of the consortium participate in more than one bid, the bids (of both the individual and the partnership/consortium/joint venture) are liable to be rejected.</p> <p>(d) The bidder shall bear all costs associated with the preparation and submission of his bid and IITPKD shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tender process.</p> <p>(e) IITPKD will respond to any request for clarification or modification of the Tender Document that are received up to TWO DAYS prior to the deadline for submission of bids prescribed by IITPKD. For this purpose, the prospective bidder(s) requiring clarification in the Tender Document shall notify IITPKD through the ONLINE Portal ONLY. Any such clarification, together with all the details on which the clarification had been sought, will be published in the ONLINE Portal ONLY. Deviations, if any, observed by the Institute in the submitted bids, from the Terms and Conditions of the Tender Document will not be accepted by the Institute.</p> <p>(f) Except for any such clarification by the Institute, which is expressly stated to be an addendum to the tender document issued by the Registrar, IIT Palakkad, no written or oral communication, presentation or explanation by any other employee of any of the Sections/Departments of the Institute, shall be taken to bind or fetter the Institute.</p> <p>(g) The bidder is expected to examine all instructions, forms, terms and conditions in the Tender Document. In the event of discovery of any missing pages, the bidder shall inform the same to the Section/Department concerned. Failure to furnish the information required by the Tender Document or submission of a tender not substantially responsive to the Tender Document in every respect will be at the bidder's risk and may result in rejection of the bid.</p> <p>(h) The bidder shall not make or cause to be made any alteration, erasure or obliteration to the text of the Tender Document.</p> <p>(i) The Supplier shall not, without the prior written consent of the IITPKD, assign to any third party, the Contract or any part thereof.</p> |
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| 2 | COMPOSITION OF THE TENDER DOCUMENT | <p>(a) The Tender Document comprises of:</p> <p style="padding-left: 40px;">Instruction to the bidders including terms and conditions</p> <ol style="list-style-type: none"> 1. Technical Specifications (Annexure-I) 2. Self Declaration Form (MII) - (Annexure-II) 3. Bid Security Declaration Form - (Annexure-III) 4. Undertaking by the Bidder - (Annexure-IV) 5. Fall Clause Notice Certificate (Annexure-V) |
| 3 | DOCUMENTS COMPRISING THE BID | <p>(a) The Technical, Techno-commercial and Commercial Bids (Cover One) and Commercial Bid (Cover Two) shall be submitted ONLINE through the e-Wizard Portal.</p> <p>(b) Bids submitted in any mode other than ONLINE will be rejected outright.</p> <p>(c) Documents establishing the conformity of the terms and conditions of the Tender Document shall be provided along with the bid. The offer/bids should be sent only for a system or that is available in the market and supplied to a number of customers. A list of customers in India and abroad with details must accompany the quotations. Quotations for a prototype machine will not be accepted.</p> <p>(d) Original catalogue (not any photocopy) of the quoted model duly signed by the principals must accompany the quotation in the Technical bid. No prices should ever be included in the Technical bid.</p> <p>(e) Compliance or Confirmation report with reference to the specifications and other terms and conditions should also be obtained from the principal.</p> <p>(f) Information related to the agency/bidder such as photocopies of the Registration/PAN/GST/TIN shall be furnished.</p> <p>(g) The technical bid should consist of all technical details along with commercial terms and conditions. No prices should be included in the technical bid. Mentioning of Prices in the Technical Bid shall lead to DISQUALIFICATION.</p> <p>(h) Bidders who are bidding for this tender shall,</p> <ol style="list-style-type: none"> 1) The bidder must be in existence in the business of RAY TRACING SOFTWARE (or allied Multiphysics Software) for at least THREE previous financial years (2017-18, 2018-19, and 2019-20). Documentary evidence of experience must be provided. 2) Should have implemented at least THREE orders of RAY TRACING SOFTWARE (or allied Multiphysics Software) during previous THREE financial years (2017-18, 2018-19, 2019-20) to any of the reputed firms/Institutions in India. Copies of the most recent purchase orders and certificates of successful implementation must be included. Copies of financial statements or evidence of turnover must be furnished 3) Have an Average Annual Turnover of Rs. 12,00,000/- (RUPEES TWELVE LAKH ONLY) during each of the last THREE financial years (2017-18, 2018-19, 2019-20). The bidder shall enclose the audited statements of the indicated financial years, which should have been certified by a Chartered Accountant or a Competent Authority. <p>(i) Digitally signed Tender Document should be submitted in Cover One.</p> |
| 4 | EARNEST MONEY DEPOSIT (EMD) | <p>(a) The bidder shall furnish, as part of the technical bid, Bid Security Declaration Form as per the Annexure-II.</p> <p>(a) Bids not accompanied by Bid Security Declaration Form shall be</p> |

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| | | DISQUALIFIED. |
| 5 | PERFORMANCE SECURITY | <p>(a) The performance security shall be submitted within FIFTEEN DAYS of receipt of the material by the IITPKD. The successful bidder shall furnish the Performance Security equal to 3% of the order / contract value (excluding the value of annual maintenance charges). The Performance Security shall be valid all along the warranty period and shall extend upto SIXTYDAYS after the date of completion of warranty period. It shall be ensured by the successful bidder that the validity of the Performance Security submitted is extended depending on the date of commencement of the Warranty.</p> <p>(b) The performance security shall be a bank guarantee (in the format as provided) issued by the Indian Scheduled bank acceptable to the IITPKD or a Demand Draft favoring, INDIAN INSTITUTE OF TECHNOLOGY PALAKKAD payable at PALAKKAD.</p> <p>(c) The performance security shall automatically become null and void once all the obligations of the Supplier under the Contract have been fulfilled, including, but not limited to, any obligations during the Warranty Period and any extensions to the period. The performance security shall be returned to the Supplier not later than fifteen (15) days after its expiration.</p> <p>(d) Failure of the successful Bidder to comply with the requirements shall constitute enough grounds for the annulment of the award and forfeiture of the EMD, in which event the IITPKD may make the award to the next lowest evaluated bid submitted by a qualified Bidder or call for new bids.</p> |
| 6 | BID PRICES AND CURRENCY | <p>(a) Prices must be quoted separately for each software license identified.</p> <p>(b) Price quoted must include all costs associated its installation, commissioning, integration and validation.</p> <p>(c) Prices quoted by the bidder shall be fixed during the validity of the bid.</p> <p>(d) Prices of the Software license shall be quoted in Indian Rupees (INR) only.</p> |
| 7 | PERIOD OF VALIDITY OF BIDS | <p>(a) Bids shall remain valid for a period of 180 DAYS after the date of the deadline for submission of bids prescribed by IITPKD.</p> <p>(b) If the deadline is extended due to unforeseen circumstances, the bid validity shall be deemed to have extended accordingly.</p> |
| 8 | TIME FOR SUPPLY, INSTALLATION, COMMISSIONING AND VALIDATION OF THE EQUIPMENTS/ITEMS | <p>(a) The Supplier shall supply the equipment/items within the period specified in the tender document i.e. within ONE TO TWO Months of signing the purchase order or within the period mutually agreed between IITPKD and supplier. All the equipment and accessories should be delivered at Indian Institute of Technology Palakkad, AhaliaIntegrated Campus, Kozhippara, Kerala 678557.</p> <p>(b) The Supplier shall thereafter proceed with the installation, commissioning, integration and validation and demonstrate operational acceptance of the equipment/items within the period specified. The equipment/items shall be installed and commissioned by the successful bidder within 20 to 25 days from the date of its receipt.</p> <p>(c) The tenderer should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.</p> <p>(d) In the event of failure of supply of the item/equipment/items within the</p> |

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| | | stipulated delivery schedule, IITPKD has all the right to purchase the item/equipment/items from other sources on the total risk of the Supplier under the risk purchase clause. |
| 9 | PRODUCT UPGRADES | The Supplier shall continue to support and maintain the version by upgrading the software and when amendments are carried out in the existing version or the product is upgraded. Whereas upgrades to the software shall be supplied free of cost. |
| 10 | PENALTIES | If the Supplier fails to complete any of the activities in accordance with the time specified for it, or any extension of time granted by IITPKD, Liquidated Damages Clause shall be invoked. |
| 11 | LIQUIDATED DAMAGES | If a firm accepts an order and fails to execute the order, in full or part, as per the terms and conditions stipulated therein, it will be open to the Institute to recover liquidated damages from the firm at the rate of 1% of the value of the undelivered goods per month or part thereof, subject to a maximum of 5% of the value of the undelivered goods. It will also be open to the Institute alternatively, to arrange procurement of the required stores from any source, at the risk and expense of the firm, accepted and failed to execute the order according to stipulations agreed upon. This will also entail the removal of the defaulters' name from the approved/registered list of Suppliers. |
| 12 | EFFECT OF FORCE MAJEURE | <p>(a) If the Supplier is prevented, hindered, or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the IITPKD in writing of the occurrence of such event and the circumstances of the event of Force Majeure within FIFTEEN DAYS after the occurrence of such event.</p> <p>(b) The Supplier, when affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect of the event of Force Majeure upon its performance of the Contract and to fulfill its obligations under the Contract, but without prejudice to IITPKD's right to terminate the Contract.</p> <p>(c) No delay or non-performance by the Supplier caused by the occurrence of any event of Force Majeure shall:</p> <ol style="list-style-type: none"> i. Constitute a default or breach of the Contract; ii. Give rise to any claim for damages or additional cost or expense occasioned by the delay or non-performance. <p>(d) If the performance of the Contract is substantially prevented, hindered, or delayed for a single period of more than THIRTYDAYS or an aggregate period of more than SIXTY DAYS on account of one or more events of Force Majeure, the IITPKD shall have the right to terminate the Contract by giving a notice to the Supplier.</p> |
| 14 | EXTENSION OF TIME LIMITS FOR SUPPLY AND MAKING OPERATIONAL, THE SOFTWARE | <p>(a) The time limit for supply, installation & commissioning, integration & validation shall be extended if the supply is delayed or impeded in the performance of any of its obligations under the Contract by reason of any of the following:</p> <ol style="list-style-type: none"> i. Any occurrence of Force Majeure; ii. Any other matter specifically mentioned in the Contract; <p>(b) By such period as shall be fair and reasonable in all the circumstances and as shall fairly reflect the delay or impediment sustained by the Supplier.</p> |
| 15 | GOVERNING LAW AND SETTLEMENT | <p>(a) The Contract shall be governed by and interpreted in accordance with the laws of India.</p> <p>(b) Any dispute or claim arising out of/relating to this Contract of the</p> |

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| | OF DISPUTES | <p>breach, termination or the invalidity thereof, shall be settled by the Hon'ble Courts of Justice at Palakkad.</p> <p>(c) The page number should be marked in all pages serially (including all supporting documents enclosed with the tender document) and the declaration for the same shall be submitted by the bidder as in Annexure-IV.</p> <p>(d) IITPKD reserves the right to accept or reject any or all the tenders in part or whole or may cancel the tender at its sole discretion without assigning any reason whatsoever. No further correspondence in this regard will be entertained.</p> |
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AWARD OF CONTRACT

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| 1 | AWARD CRITERIA | <ol style="list-style-type: none">1. IITPKD will award the Contract to the Bidder whose bid has been determined to be substantially responsive and as per the Order No. P-45021/2/2017-PP(BE-II) dated 16-09-2020 from Department for Promotion of Industry and Internal Trade (Public Procurement Section), Ministry of Commerce and Industry, Govt. of India.2. The Institute reserves the right to buy different items/quantities from different bidders considering price of individual/group of equipment/items or any other factors as decided by the Committee. |
| 2 | AWARD OF PURCHASE ORDER | <ol style="list-style-type: none">1. Prior to the expiration of the period of bid validity, IITPKD will issue the Letter of Intent / Purchase Order to the successful Bidder in writing.2. Any amendment(s) in the Purchase Order will be permitted within SEVEN DAYS of its issuance. No amendments will be permitted beyond this period.3. The Purchase Order will constitute the foundation of the Contract. |
| 3 | CONTRACT AGREEMENT | <ol style="list-style-type: none">1. Within SEVEN DAYS of receipt of the Purchase Order, the successful Bidder shall sign and date its copy on each page and return it to the Purchaser.2. Copy of Purchase Order duly signed and dated by the successful Bidder on each page shall constitute the Contract Agreement. |
| 4 | CONTRACT DOCUMENTS / AMENDMENT TO CONTRACT | <ol style="list-style-type: none">1. All documents forming part of the Contract (and all parts of these documents) are intended to be correlative, complementary and mutually explanatory. The Contract shall be read as a whole.2. The order of precedence of the Contract documents shall be as follows:<ol style="list-style-type: none">(i) Contract Agreement/Purchase Order(ii) All Forms/Annexures(iii) equipment/items and their requirement(iv) Supplier's Bid(v) Tender Document3. No amendment or other variation of the Contract shall be effective unless it is in writing, is dated, expressly refers to the Contract and is signed by a duly authorized representative of each party to the Contract. |

REGISTRAR

TECHNICAL SPECIFICATIONS

Summary of Requirement :

Ray Tracing Software with support for

1. CAD Import
2. Control and Design via MATLAB
3. Simulation of Micro-Electro-Mechanical devices
4. Simulation of Micro-Fluidic devices

Any base/common modules needed for the above needs to be provided. Please see below for detailed technical specifications.

Licensing Terms : Perpetual license with updates and support for 1 year.

1. A single named individual may use the software simultaneously on at most two computers but may install the software on up to four computers.
2. No restriction on the number of simultaneous sessions that the designated user may run.
3. Access via a single encrypted connection providing secure remote access, such as Virtual Private Network or Remote Desktop Protocol

| Sl. No. | Technical Requirement | Specification |
|---------|--------------------------|--|
| 1. | Ray Tracing Capabilities | <ol style="list-style-type: none"> 1. Model electromagnetic wave propagation with a ray tracing approach. Reflection, refraction, absorption at boundaries must be supported. 2. Must include a library of essential geometry parts, including mirrors, lenses, prisms. Each of these parts must be fully parameterized so they can be conveniently modified to fit an optical design. 3. The refractive index of each medium should be specifiable directly or derived from an optical dispersion relation. Support for complex refractive index must be supported. Support for thermo-optic dispersion coefficients to adjust the refractive index based on temperature. 4. Support for boundary conditions to handle diffraction gratings, diffuse (Lambertian) scattering, predefined optical components such as linear polarizers, wave retarders, depolarizers, support for user-defined Mueller matrices 5. Rays can be initialized by entering their coordinates directly, importing the coordinates from a text file, or |

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| | | <p>releasing rays from selected geometric entities. When solving for the ray intensity, it can be initialized either by using an expression or loading a photometric data file (specifically an IES file) into the model. At each release position, the rays can be launched in a user-specified direction, or a number of different directions can be sampled from a spherical, hemispherical, conical, or Lambertian distribution.</p> <p>6. Plot rays as lines, tubes, points, and vectors in 2D or 3D, and color the rays by an arbitrary expression that can vary between different rays and even along each ray's path.</p> |
| 2. | CAD Import | <ol style="list-style-type: none"> 1. Support Import of CAD files in AutoCAD(dwg, dxf), Solidworks, STEP and IGES formats 2. Support export of geometry into STEP And IGES formats. |
| 3. | Control and Design via MATLAB | <ol style="list-style-type: none"> 1. Use MATLAB® as a scripting tool to set up and solve models 2. Import/export data from/to the MATLAB® workspace 3. Enables the use of MATLAB® functions while modeling |
| 4. | Simulation of Micro-Electro-Mechanical devices | <ol style="list-style-type: none"> 1. Interfaces for modeling electromagnetic-structure interaction 2. Support for Electrostatic actuation, Modal Analysis, Mechanical Contacts, Piezoelectricity and Piezoresistivity 3. Connect to external electrical circuits via SPICE netlists |
| 5. | Simulation of Micro-Fluidic devices | <ol style="list-style-type: none"> 1. Support for Optofluidics applications, Fluid-structure interaction 2. Support to handle heat and mass transport with fluid flow at the microscale. |

FORMAT FOR SELF-CERTIFICATION UNDER PREFERENCE TO MAKE IN INDIA
(TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

Format for Affidavit of Self-Certification regarding Minimum Local Content in line with “Make in India” Policy vide GoI Order no. P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019, 04.06.2020 and 16-09-2020)

Date: _____
 I/We _____ S/o, D/o, W/o, _____
 Resident of _____

Hereby solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the Public Procurement (Preference to Make in India) Order, 2017 (hereinafter PPP-MII order) of Government of India issued vide Notification No:P-45021/2/2017 -BE-II dated 15/06/2017, its revision dated 28/05/2018 and any subsequent modifications/Amendments, if any and

That the local content for all inputs which constitute the said goods/services/works has been verified by me and I am responsible for the correctness of the claims made therein.

| Tick (✓) and Fill the Appropriate Category | |
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| <input type="checkbox"/> | I/We _____ [name of the manufacturer] hereby confirm in respect of quoted items(s) that Local Content is equal to or more than 50% and come under “ Class-I Local Supplier ” category. |
| <input type="checkbox"/> | I/We _____ [name of the manufacturer] hereby confirm in respect of quoted items(s) that Local Content is more than 20% but less than 50% and come under “ Class-II Local Supplier ” category. |
| <input type="checkbox"/> | I/We _____ [name of the manufacturer] hereby confirm in respect of quoted items(s) that Local Content is less than or equal to 20% come under “ Non-Local Supplier ” category. |

For and on behalf of..... (Name of firm/entity)

Authorized signatory (To be duly authorized by the Board of Directors)
 <Insert Name, Designation and Contact No.>

[Note: In case of procurement for a value in excess of Rs. 10 Crores, the bidders shall provide this certificate from statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.]

BID SECURITY DECLARATION FORM
(TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

Date: _____

Tender No. _____

To (insert complete name and address of the purchase)

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that We may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

- a) Have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or
- b) Having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: _____ (insert signature of person whose name and capacity are shown)
in the capacity of _____ (insert legal capacity of person signing the Bid Securing Declaration)

Name: _____ (insert complete name of person signing he Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)

Dated on _____ day of _____ (insert date of signing)

Corporate Seal (where appropriate)

(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)

Note:

This letter should be on the letterhead of the quoting firm and should be signed by a Competent Authority. Non-submission of this will lead to DISQUALIFICATION of bids.

UNDERTAKING BY THE BIDDER
(TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

We here by accept all the Terms and Conditions of the Tender Document and strictly adhere to the same in the event of getting Purchase order. We also declare that the Technical and Financial Bids submitted by us has NO DEIVATION from the Tender Terms and Conditions.

We hereby undertake that there are _____ pages, serially numbered, in the submitted tender including the supporting documents. (Please serially number all the pages including blank page, if any).

We have submitted our principal's exclusive authorization letter which is specific for this tender No. _____ dated _____.

Note:

This letter should be on the letterhead of the quoting firm and should be signed by a Competent Authority.

FALL CLAUSE NOTICE CERTIFICATE
(TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

This is to certify that we have offered the maximum possible discount to you in our Quotation No. _____ dated _____ **(Please do not reveal the prices here, which will lead to outright rejection of your bid).**

The prices charged for the Stores supplied under tender should under no event be higher than the lowest prices at which the party sells the items of identical description to any other Govt. organization/PSU's/Central Govt, /State Govt. Autonomous bodies/Central/state Universities/Central/State Educational Institutions, failing which the "FALL CLAUSE" will be applicable. The institute will look into a reasonable past period to ensure this.

In case, if the price charged by our firm is found to be more, **IIT Palakkad** will have the right to recover the excess charged amount from the subsequent/unpaid bill of the supplier.

Note:

This letter of authority should be on the letterhead of the quoting firm and should be signed by a Competent Authority and having the power of attorney.