

 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. GTE/2022-23/060
Date of Publication: 19-07-2022
Date/Time of Closing: 10-08-2022, 1500 hours

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

**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF
DYNAMIC SHEAR RHEOMETER SYSTEM**

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
1	Publication of the Tender Document	19-07-2022
2	Date of Pre-Bid Meeting	27-07-2022, 1000 hours
3	Last Date/Time for submission of ONLINE Bids	10-08-2022, 1500 hours
4	Opening of Technical Bids	10-08-2022, 1515 hours

Pre bid Meeting:

1. Online Pre-bid meeting will be held on 27-07-2022 at 10 AM to clear the doubts of intending bidders. The details of the meeting will be intimated through the ONLINE Portal. Bidders, who are unable to attend the Pre-bid Meeting, may send their queries for the same, latest by 26-07-2022 hours of 1700 hrs to purchase@iitpkd.ac.in.
2. Queries received after the Pre-bid Meeting shall not be considered. Addendum/Corrigendum/Clarifications to the Queries will be uploaded, post the Pre-bid Meeting in the ONLINE Portal, which shall be the part of the Tender Document.

TERMS AND CONDITIONS

<p style="text-align: center;">1</p>	<p style="text-align: center;">GENERAL</p>	<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 the doubts/clarifications of intending bidders during the Pre-bid meeting. 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>
<p style="text-align: center;">2</p>	<p style="text-align: center;">COMPOSITION OF THE</p>	<p>(a) The Tender Document comprises of:</p>

	TENDER DOCUMENT	<p>Instruction to the bidders including terms and conditions</p> <ol style="list-style-type: none"> 1. Technical Specifications (Annexure-I) 2. Format for self certification (MII) (Annexure-II) 3. Undertaking by the Bidder (Annexure-III) 4. Fall Clause Notice Certificate (Annexure-IV)
3	DOCUMENTS COMPRISING THE BID	<ol style="list-style-type: none"> (a) The Technical, Techno-commercial and Commercial Bids (Cover One) and Commercial Bid (Cover Two) shall be submitted ONLINE through the e-Wizard Portal. (b) Bids submitted in any mode other than ONLINE will be rejected outright. (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. (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. (e) Compliance or Confirmation report with reference to the specifications and other terms and conditions should also be obtained from the principal. (f) Information related to the agency/bidder such as photocopies of the Registration/PAN/GST/TIN shall be furnished. (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 <u>DISQUALIFICATION</u>. (h) Bidders who are bidding for this tender shall, <ol style="list-style-type: none"> 1) Should have implemented at least three orders of DYNAMIC SHEAR RHEOMETER SYSTEM during previous three financial years (2019-20, 2020-21, 2021-22) from Centrally Funded Technical Institutes (IITs, NITs, IISc, IISER), DRDO, ISRO, CSIR labs or Government Firms in India, of which at least one implementation should have the same/similar specifications as mentioned in the Annexure I of this bid. 2) Copies of the most recent purchase orders and user 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 2,50,00,000 (RUPEES TWO CRORE FIFTY LAKH ONLY) during the last THREE financial years (2019-20, 2020-21, 2021-22). 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. 4) Digitally signed Tender Document should be submitted in Cover One.

4	EARNEST MONEY DEPOSIT (EMD)	<p>(a) The bidder shall furnish EMD of Rs 3,70,000 /- (Rupees Three Lakh Seventy Thousand Only) through online payment gateway in the E-Wizard.</p> <p>(b) Bids not accompanied by EMD shall be DISQUALIFIED.</p>
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 SIXTY DAYS 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 equipment/item identified.</p> <p>(b) Price quoted for the equipment/items shall be in CIP PALAKKAD.</p> <p>(c) All the costs associated with packing, local transportation from the point of clearance to IITPKD, insurance, loading, unloading and associated delivery charges shall be borne by the supplier or authorized Indian Agent. The delivery shall be on DOOR DELIVERY basis to the institute including its installation, commissioning, integration and validation. It is the sole responsibility of the supplier to ensure that the equipment is delivered at IIT Palakkad on DOOR DELIVERY BASIS. An undertaking to this effect as in Annexure-III.</p> <p>(d) Prices quoted by the bidder shall be fixed during the validity of the bid.</p> <p>(e) Prices of the equipment/items shall be quoted in Indian Rupees (INR) / Foreign Currency.</p>
7	LETTER OF CREDIT	<p>(a) Upon the successful Bidder's furnishing of the copy of the Purchase Order duly signed on each page and the Performance Security, for the equipment ordered in foreign currency, IITPKD will open a letter of credit (LC) in a convenient Nationalized Bank in India. For opening of LC</p>

		<p>necessary information shall be provided by the supplier or its authorized agents.</p> <p>(b) In case the successful bidder is a foreign company and wishes to submit Performance Security in the form of Bank Guarantee, the Bank Guarantee should be routed through the Beneficiary Bank to the end user bank. Otherwise, the Indian Agent of the foreign vendor shall submit a Bank Guarantee from a Nationalized Bank of India. The following documents shall be submitted in case of an Indian agent submitting the Performance Security on behalf of his principal:</p> <ul style="list-style-type: none"> • Foreign principal’s proforma invoice indicating the commission payable to the Indian agent and nature of after-sales service to be rendered by the Indian agent. • Copy of the agency agreement with the foreign principal and the precise relationship between them and their mutual interest in the business. <p>(c) For imported equipment, a Letter of Credit (LC) shall be opened for 100% CIP price on receipt of the acknowledgment of the purchase order. However, 80% of the LC amount only shall be released on proof of the shipment of the consignment with necessary documents to be provided in detail at the time of placing of the purchase order. Balance 20% of the LC amount shall be released upon the receipt of a performance security of 5% of the total value of the purchase order and installation, commissioning, integration, validation and installation report/certification jointly given by the end user and the supplier.</p> <p>Any costs associated with the amendments made in the LC as per the request made by the Supplier s should be borne by the supplier.</p> <p>Any fluctuation in rates / rate conversions arising due to the amendment requests made by the supplier shall be on the supplier and not on the institute.</p>
8	PERIOD OF VALIDITY OF BIDS	<p>(d) 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>(e) If the deadline is extended due to unforeseen circumstances, the bid validity shall be deemed to have extended accordingly.</p>
9	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 THREE 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 IIT Palakkad (Nila Campus), Kanjikode-Malampuzha Road, Pudukkottai West, Kanjikode, Kerala 678623.</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>

		(d) In the event of failure of supply of the item/equipment/items within the 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.
10	PRODUCT UPGRADES	The Supplier shall continue to support and maintain the version/model of the Equipment supplied by upgrading the software and the hardware as 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, the Supplier may charge for upgrade in hardware provided it is of major nature. An upgraded higher version of the instrument and software related with the instrument shall be supplied.
11	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.
12	UP-TIME GUARANTEE/ DOWNTIME PENALTY CLAUSE	(a) The Supplier should provide up-time guarantee of 95% [24 (hours) X 7 (days) X 365 (days)] basis during the warranty period. (b) The Supplier should provide up-time guarantee of 95% (24 hours/day basis) both during warranty. If downtime exceeds the 5% limit, extension of the warranty period will be twice the excess down time period.
13	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.
14	EFFECT OF FORCE MAJEURE	(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. (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. (c) No delay or non-performance by the Supplier caused by the occurrence of any event of Force Majeure shall: 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. (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.

15	EXTENSION OF TIME LIMITS FOR SUPPLY AND MAKING OPERATIONAL, THE EQUIPMENT	<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> <ul 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>
16	GOVERNING LAW AND SETTLEMENT OF DISPUTES	<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 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-III.</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>

AWARD OF CONTRACT

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

ANNEXURE-I

TECHNICAL SPECIFICATIONS

Main Instrument		
1	Measuring head type	1. Direct current synchronous motor with permanent magnets on its rotor for combined motor transducer mode 2. Linear motor to control force or displacement in axial direction
2	Torque	1 nNm to 225 mNm or better
3	Motor bearing	Air bearing
4	Speed	10 ⁻⁵ to 300 rad/s or better
5	Frequency	10 ⁻⁶ to 100 Hz or better
6	Normal Force	0.05 to 50 N or better
7	Measurement Types	Rotational, Oscillatory, Linear and Transient (Creep & Relaxation)
8	Materials to be characterised	<ul style="list-style-type: none"> • Soil, soil-water mix • Asphalt, modified asphalt, asphalt mastic, asphalt concrete • Cement, cement mortar, cement concrete • Polymers • Colloidal suspensions: Foams, Emulsions & other Simple Yield Stress materials • Active suspensions: Tissues, activated vesicles/colloids • Active/Passive systems: Eg., Bacterial suspension in a Colloidal system. <p>*Any additional accessory that is useful in measurement of aforementioned materials may be quoted with details for recommendation</p>
Temperature Controlled Furnace		
1	Range	minus(-)10 to 160 °C or better
2	Heating Rate	15 °C/min or better
3	Cooling Rate	10 °C/min or better
4	Type	Peltier or Convection Controlled
5	1. Furnace should be compatible with parallel plate, cone-plate, concentric cylindrical measuring geometries, tribology and powder attachments	
Dynamic Mechanical Thermal Analysis Attachments		
1	Dynamic mechanical thermal analysis with linear motor	Suitable measuring fixtures should be quoted to perform the above stated measuring modes
2	Measuring Head Type	Linear/Axial Motor
3	Force Range	0.005 to 35 N or better
4	Displacement Range	0.01 to 8000 μ or better
5	Frequency Range	0.001 to 100 Hz
6	Test Modes	1. Dynamic and mechanical thermal analysis in tension, torsion and compression 2. Dynamic and mechanical thermal analysis in 3-point bending 3. Thermomechanical Analysis 4. Calculation of Poisson's ratio after performing DMA in tension and torsion within a single test definition without changing the sample, measuring systems, or any other accessory Suitable measuring fixtures should be quoted to perform the above stated measuring modes
7	Calibration standards	DMA sample polycarbonate; 1 pak = 10 piece or more DMA sample steel; 1 pak = 2 piece or more rigid steel bar for compliance calibration 1 piece or more DMA sample silicon 1 pak = 2 piece or more

Measuring Systems/Application Based Accessories

1	Shear Viscometry/Rheology	<p>Stainless Steel Geometries</p> <ol style="list-style-type: none"> 1. Measuring plate with diameter 8 mm - 01 no. 2. Measuring plate with diameter 25mm - 01 no. 3. Measuring plate with diameter 4 mm - 01 no. 4. Measuring cone with diameter 50 mm & 1o angle - 01 no. 5. Measuring cone with diameter 25 mm & 2o angle - 01 no. 6. Lower measuring plate with diameter 25 mm (to be used with furnace) - 01 no. 7. Lower measuring plate with diameter 50 mm (to be used with furnace) - 01 no. 8. Lower measuring plate with diameter 08 mm (to be used with furnace) - 01 no. 9. Concentric cylindrical measuring system for medium viscous samples (to be used with furnace) - 01 set <p>Glass Geometries</p> <ol style="list-style-type: none"> 1. Lower glass plate with peltier temperature control 2. For optical applications with max. measuring system diameter 50 mm 3. Upper plate should be made of quartz glass for high temperature application. The diameter of the plate should be in the range of 40 to 45 mm 4. Temperature control for the lower plate should be peltier temperature control in the range of 10 to 150 °C 5. Peltier temperature control should be compatible with microscopy, small angle light scattering systems, UV & fluorescence microscopy for future upgradation <p>Calibration Fluids</p> <ul style="list-style-type: none"> • Three set of standard fluids (low, medium & high) • PSTD1000VE 50 ml to demonstrate oscillatory measurements <p>Silicon Molds for Sample Preparation</p> <ul style="list-style-type: none"> • Flexible and tear resistant silicone molds of parallel plates of: (i) Diameter 4 mm - 05 no., (ii) Diameter 8 mm - 05 no., & (iii) Diameter 25 mm - 10 no. with robust quality for sample preparation to ensure exact specimen shape as per AASHTO T315. • Silicon mold (3 mm x 9 mm x 35 mm) for casting asphalt bars - 05 nos.
2	Tribology Attachment (Adaptable with temperature-controlled furnace)	<p>Ball on three plates attachment for the measurement of friction as a function of various factors, such as time, temperature, normal force, sliding velocity, Stribeck curves as well as extended Stribeck curves in lubricated conditions, and wear measurements in both lubricated and dry conditions. Following specifications shall be satisfied:</p> <ul style="list-style-type: none"> • Contact type: ball-on-three plates; point contact • Speed range: 10^{-3} to 1000 rpm or better • Sliding speed range: 10^{-3} to 1.00 m/s or better • Maximum torque: 225 mNm or better • Oscillation frequency :10^{-3} to 100 Hz or better • Temperature range: -10 to 160 °C
3	Powder Shear Cell (Adaptable with temperature-controlled furnace)	<p>Powder shear cell shall be provided for the powder behaviour characterization under realistic conditions, for the determination of flow behaviour, wall friction & bulk density of the sample. Following specifications shall be satisfied:</p> <ul style="list-style-type: none"> • Powder shear cell for low sample volume & high loads up to 22 kPa or better • Temperature range: -10 to 160 °C or better
4	Building Material Attachment	<p>Special attachment to study the rheology of cement, slurry, concrete, plaster, suspensions, paste like materials etc. Special stirrer with resistance to abrasive materials shall be provided to avoid sedimentations. Following specifications shall be satisfied:</p> <ul style="list-style-type: none"> • Temperature range: 5 to 75 °C • Type of temperature controller: Peltier • Volume: Approx. 500 ml <p>Note that the quoted Peltier temperature controller should be compatible with parallel plate & cone-plate geometries</p>
5	Ball Measuring Attachment	<p>Ball diameter suitable of particle sizes, 1 - 10 mm shall be provided with temperature control option.</p> <ul style="list-style-type: none"> • Temperature range: ambient to 70 °C • Sample volume: Approx. 500 ml

Utilities		
1	Air Compressor	<ul style="list-style-type: none"> • Max pressure: 8 bar • Oil free compressor
2	Air Dryer	Multistage with microfilters
3	Circulator	<ul style="list-style-type: none"> • Temperature range: -20 to 180 °C or better • Bath volume: 3 to 5 liters • Temperature accuracy: ± 0.5 °C or better • With external circulating pump
4	Computer	<ul style="list-style-type: none"> • Processor: Intel Core i7 • Processor speed: 2.8 GHz or higher • RAM size: 8 GB or higher • SSD: 512 GB or better
5	UPS	3 KVA with 25 minutes back up or better
Rheology Software		
1	Architecture	Template based with at least 100 built-in templates pre-programmed for all types of materials
2	Analysis Modules	Integrated modelling/curve fitting, inter-rheological conversion, data reduction and handling protocols
3	Testing Protocols	<ul style="list-style-type: none"> • Rotational with rate/control stress/combination of CSR+CSS, • Oscillatory with strain/direct strain amplitude/control stress/combination of strain + CSS • Transient with creep (single/multi-level)/step-strain (stress relaxation) • Combination with any modes above • Large amplitude oscillatory shear - Fourier analysis to measure stress and strain coefficient, ratio for shear thickening and thinning, ratio for strain stiffening • Master curve software for time temperature super imposition measurements using frequency-temperature sweep • Linear amplitude sweep, Stress relaxation modulus, creep compliance • Strain - stress - temperature sweep • Controlled stress - controlled strain/rate • Linear viscoelastic limit (linearity) to verify linear viscosity region • Phase angle vs. Temperature (frequency) • Modulus vs. Phase angle, • Elastic and viscous modulus vs. Temperature (frequency) • Viscosity vs. Strain rate; Viscosity vs. Shear stress; Viscosity vs. Time; Viscosity vs. Temperature, • Angular frequency vs. Complex viscosity; Angular frequency vs. Storage modulus; Angular frequency vs. Viscous modulus; Angular frequency vs. Phase angle. • Multiple Stress Creep Recovery test (MSCR) • Linear Amplitude Sweep test (LAS) • Steady shear over oscillatory simultaneous operation

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 and 04.06.2020)

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	
<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.]

ANNEXURE-III

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 here by accept that the PRICES OF THE EQUIPMENT/ITEMS QUOTED IS AS PER THE CLAUSE NO.6 OF THE TENDER DOCUMENT.

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.

ANNEXURE-IV

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.

INTEGRITY PACT

To,

.....

.....

.....

Sub: Tender No. GTE/2022-23/060

Name of work: **SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF DYNAMIC SHEAR RHEOMETER SYSTEM**

Dear Sir,

It is hereby declared that IIT Palakkad is committed to follow the principle of transparency, equity, and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the Institute.

Yours faithfully

Registrar
IIT Palakkad

INTEGRITY PACT

To,

Registrar
IIT Palakkad

Sub: SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF DYNAMIC SHEAR RHEOMETER SYSTEM

Dear Sir,

I/We acknowledge that IIT Palakkad is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that **THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE** of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by IIT Palakkad. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, IIT Palakkad shall have unqualified, absolute, and unfettered right to disqualify the tenderer/bidder and reject the tender/bid in accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

To be signed by the bidder and the same signatory competent / authorized to sign the relevant contract on behalf of the Institute.

INTEGRITY AGREEMENT

This Integrity Agreement is made at on this day of 20.....

BETWEEN

Director, IIT Palakkad represented through Registrar

IIT Palakkad Permanent Campus, Kanjikode, Palakkad, Kerala, (Hereinafter referred as the ‘**Principal/Owner**’, which expression shall unless repugnant to the meaning or context thereof include its successors and permitted assigns)

AND.

(Name and Address of the Individual/firm/Company)

through

(Details of duly authorized signatory)

(Hereinafter referred to as the “**Bidder/Contractor**” and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Bid (**NIT No. GTE/2022-23/060**) (hereinafter referred to as “Tender/Bid”) and intends to award, under laid down organizational procedure, contract for

hereinafter referred to as the “Contract”.

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as “Integrity Pact” or “Pact”), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

(a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the bid, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

(b) The Principal/Owner will, during the bid process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the bid process, provide to all Bidder(s) the same information and will

not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the bid process or the contract execution.

(c) The Principal/Owner shall endeavour to exclude from the bid process any person, whose conduct in the past has been of biased nature.

- 2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

- 1) It is required that each Bidder/Contractor (including their respective officers, employees, and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the bidding process and throughout the negotiation or award of a contract.
- 2) The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the bid process and during the Contract execution:
 - a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the bid process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the bid process or during the execution of the Contract
 - b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
 - c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals, and business details, including information contained or transmitted electronically
 - d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly, Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a bid but not both. Further, in cases where an agent participates in a bid on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.
 - e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract

- 3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a wilful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.
- 5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the bidding process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

- 1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the bid process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.
- 2) Forfeiture of EMD/Performance Guarantee/Security Deposit: If the Principal/Owner has disqualified the Bidder(s) from the bid process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.
- 3) Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

- 1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country conforming to the anti-corruption approach or with Central Government or State Government or any other bid process

- 2) If the Bidder makes an incorrect statement on this subject, he can be disqualified from the bid process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
- 3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

- 1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/ sub-vendors.
- 2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
- 3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the bid or violate its provisions at any stage of the bid process, from the bid process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, IIT Palakkad.

Article 7- Other Provisions

- 1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Division of the Principal/Owner, who has floated the Tender.
- 2) Changes and supplements need to be made in writing. Side agreements have not been made.
- 3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
- 4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 5) It is agreed to terms and conditions that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- Legal and Prior Rights

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contract documents with regard to any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....

(For and on behalf of Principal/Owner)

.....

(For and on behalf of Bidder/Contractor) WITNESSES:

1.

(Signature, name, and address)

2.

(Signature, name, and address) Place:

Date