

Tender Details

Tender No: SCL/PS/2017E0081901

Tender Date: 16/10/2017

Purchase Entity: Purchase& Stores

Tender Notice

E-Procurement Tender No. SCL/PS/2017E0081901 dated October 16, 2017, SEMI-CONDUCTOR LABORATORY [SCL] invites ONLINE offers in TWO part system through e-tender portal <https://eprocure.isro.gov.in> for Supply, Installation and Training of NanoIndenter Tool. Tender Documents can be downloaded from October 18, 2017 - 0900 hrs. to November 15, 2017 upto 1100 hrs. The vendors need to get enrolled in the e-tender portal to access tender and submit their offer online. Vendors need to have Digital Signature Certificate as detailed on our e-portal and corporate e-mail ID to register on the above portal. Only online tenders will be accepted. No Manual/Postal/courier/e-mail/fax tender will be entertained. Please note Tender fee shall not be applicable for tenders submitted on-line through this portal.

Vendors interested to participate in this e-Tender are required to register themselves as vendors, if not already registered, in our e-procurement portal <https://eprocure.isro.gov.in> by downloading plugins and help demos listed on the home page of the e-procurement link mentioned above to complete the vendor registration process. They can seek help from help desk +91 20 2531 5555/ Mobile No.91679 69601 (Email: support.isro@nextenders.com) also the home page of e-procurement portal may be accessed for any technical help for registration and subsequent process. Vendors may please note that without registering in our E-procurement portal they will not be able to quote for this tender.

Tender Attachments

Technical Write-up/Drawings

Attachment - I:

IDT0014340000000000isro05401.pdf

Attachment - II:

IDT0014340000000000isro05402.pdf

Attachment - III:

Attachment - IV:

Attachment - V:

Instructions to Tenderers (PT)

1. Interested tenderers may, at their option, login to <http://eprocure.isro.gov.in> and submit offers as per details in the tender notification.
2. This being two part Tender-Technical and Commercial parts separate, the bidder should not attach any document(s) containing pricing information alongwith Technical Part. The tenders containing price information in Technical Part will be treated as unsolicited offers and rejected. Prices should be indicated in the Price Bid format only .
3. Request for the extension of the due date will not be considered.
4. SCL reserves the right to accept or reject any/or all the tenders in part or full without assigning any reasons thereof. The bidder is at liberty to seek information related to bidding conditions, bidding process and/or rejection of its bid.
5. In this tender either the Indian Agent on behalf of the Principal/OEM or the Principal/OEM itself can bid, but both cannot bid simultaneously for the same item. Indian agents while quoting on behalf of their principals shall provide necessary latest authorization letter obtained from their Principals/Manufacturers in their bid.
6. If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the tender for the same item. If submitted, all offers submitted by the said agent shall be excluded from the procurement process.
7. Bids submitted other than EGPS mode shall not be considered..
8. SCL reserves the right to verify all claims made by the bidder.

9. SCL reserves the right to change any milestone date of the tendering activity / tender schedule.
10. Tender which is not submitted in terms of instructions mentioned herein is liable to be rejected.
11. If tender opening date happens to be a public holiday, tender will be opened on the next working day and interested bidders may depute their representatives to attend the Tender Opening, with proper authorization.
12. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.
13. It is expressly agreed that the acceptance of the Stores Contracted for is subject to final approval in writing by the Purchaser.
14. It is to be noted that the drawings, specifications, end-use, etc., given by the purchaser, are confidential and shall not be disclosed to any third party.
15. Prices are required to be quoted according to the units indicated in the Price bid. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
16. The quote should indicate quantity wise unit rate separately which have to be Price bid. The Prices are to be mentioned both in figures as well as in words. The taxes, duties etc. are to be calculated and indicated in the column provided in online forms explicitly.
17. Bidders are expected to comply with commercial and other terms and conditions given in vendor specified terms of this tender. In case of any deviation, the reasons thereof should be clearly specified in the vendor specified terms column.
18. All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.
19. Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his bid. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.
20. The tenderer would provide, the name of his bankers as well as the latest Income-Tax clearance certificate duly countersigned by the Income-Tax Officer of the Circle concerned under the seal of his office, if required by the Purchaser during evaluation of tender.

21. Subletting and Assignment: The contractor/supplier cannot sublet, transfer or assign the order/Contract or any part thereof or interests therein or benefit or advantage thereof in any manner whatsoever, to any other party save with the previous written consent of the purchaser. Such consent by the purchaser, however, shall not relieve or discharge the contractor/supplier from any obligation, duty or responsibility under the Purchase Order/ Contract.

22. The contractor/supplier shall indemnify the purchaser against Workmen Compensation Act.

23. The authority of the person submitting the tender, if called for, should be produced.

24. The bids shall be opened on 1st day of opening schedule as indicated in the Tender Notice in the presence of the bidders/their authorized representatives who may like to attend the tender opening against presentation of Authorization letter.

Due to any breakdown in server/link, bid opening will be continued on the following dates. The schedule of opening of Price bids shall be intimated separately to the technically qualified bidders only.

25. PROCEDURE FOR EVALUATION OF TENDERS:

Technical Evaluation Criteria:

Vendor meeting the eligibility criteria and basic technical specifications mentioned in SCL Tender shall be considered to be technically qualified.

Evaluation of Price Bids

The following elements shall be considered for evaluation of Priced Commercial offer:

a. Price quoted by the bidder in the price bid template for meeting the functionalities given in the Tender and Technical Specifications sheet. Bid shall be evaluated on overall cost basis. AMC charges and recommended spares & consumables charges sought in this tender shall not be taken into account for evaluation of price bid.

b. Compliance with the Payment Terms prescribed in this tender document. In the event, the bidder offers Payment Terms stringent than SCL prescribed Payment Terms, the bid of the bidder shall be loaded based on Base Rate of SBI prevailing on the date of opening of price bids.

c. In the event of the bidder requiring SCL to bear bank charges outside India (foreign bank charges), the bidders bid shall be loaded at the rate 0.5percent of the value towards bank charges outside India.

26. The bid should contain the following information:-

a. Agency Commission: Bidders are required to provide the following information in respect of their authorised Indian Agent, if any, alongwith technical bid as the same is mandatory as is required for consideration of the bid. Name, Address, Telephone no. , fax no., email of the Indian Agent including the contact person. A letter from the Manufacturer/supplier in the current date certifying that the said Indian Agent is their authorised Indian Agent and also indicating the responsibilities/role of the Indian

Agent under the proposed purchase. Remuneration/service charges payable to the Indian Agent under the proposed purchase. The amount of agency commission included in the price and payable to Indian Agent of the contractor shall be paid directly to the Indian Agents by the Purchasers in equivalent in Indian rupees on the basis of an invoice from him applying TT buying rate of exchange ruling on the date of placement of the Purchase Order and which shall not be subject to any further exchange variations. The payment will be released to the Indian Agents within 30 days from the date of acceptance of the goods.

b. Recommended spares for satisfactory operation for a minimum period of one year.

c. Details of any technical service, if required for erection, assembly, commissioning and demonstration.

27. The FOB/FCA prices quoted should be inclusive of all taxes, levies, duties arising in the tenderer country.

28. The details of Import License if any, will be furnished in the Purchase Order.

29. Instruction/operation manual containing all assembly details including wiring diagrams should be sent wherever necessary in duplicate. All documents/correspondence should be in English Language only.

30. Part shipment is not allowed unless specifically agreed to by us.

Bid Templates

Document Solicited from Vendor

Attachment 1:

Attachment 2:

Supply, Installation & Training Of NanoIndenter Tool

Item Specifications

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	<p>1.00.00SCOPE OF WORK</p> <p>Vendor's scope of work shall cover supply, installation & commissioning of NanoIndenter for measuring Modulus, Hardness, Stiffness, Creep, Fracture Toughness & Scratch properties. The scope of work shall include the following:</p> <p>- Supply of NanoIndenter tool as per the required specifications.</p>			

	<ul style="list-style-type: none"> - Supply of all support tools viz. mechanical fixtures/pumps etc. - Installation of the tool and Support equipments (if any), including all utility connections. - Commissioning of the Tool and demonstration of its functionality as per the required specifications. - On-site training to concerned SCL personnel on Operations, Maintenance & Trouble shooting of the tool. This should include discussions pertaining to type of indenter to be used for testing variety of films/materials <p>It is not the intent of this document to completely specify all details of design and construction. Nevertheless the system shall conform in all</p>			
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	<p>respects to high standards of engineering, design and workmanship and shall be capable of performing the operations in a safe and efficient manner as per industry norms/codes.</p>			
2	<p>1.01.00ELIGIBILITY CRITERIA</p> <p>The tool should be supplied by the OEM. The bidder should have experience in the manufacture and maintenance support of semiconductor equipment, and have supplied similar tool(s) during the last seven (7) years. Parties shall provide list of similar installations (with client details) carried out by them during the last seven (7) years</p>			

3	<p>1.02.00SCOPE OF SUPPLY</p> <p>1.02.01Vendor shall supply the tool, including support tools (if any) viz. various fixtures/jigs for indenter replacement, mechanical fixtures/pumps.</p> <p>1.02.02 Vendor shall supply all the auxiliary items like interconnecting tubing's /fittings, interconnect matching cables for electrical connections, vacuum line etc. as may be required for the complete installation and commissioning of the tool in order to meet all the technical specifications as mentioned in technical specification clause</p> <p>3.02.00Any items not specifically mentioned in the specifications but required for safe and efficient operations of the system shall deem to be included in the scope of</p>			
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	supply of the vendor unless explicitly indicated in the bid by the vendor.			
4	<p>1.03.00SCOPE OF INSTALLATION AND COMMISSIONING</p> <p>1.03.01It shall be the responsibility of the vendor to ensure installation & commissioning of the tool at SCL.</p> <p>1.03.02Vendor shall provide guidelines for preparation of installation site like vacuum line, vibration isolation, ambient temperature etc.</p> <p>1.03.03Vendor shall also supply the installation drawings giving detailed information regarding the port size & type for the utility connections.</p> <p>1.03.04Vendor shall uncrate the tool, move the</p>			

	<p>same to the respective area (s) and install the tool on foundations, etc. SCL will provide utilities hook-up upto the tool.</p> <p>1.03.05 Vendor shall Commission the systems with the required utilities (to be supplied by SCL) and demonstrate the functionality of the tool supplied, at SCL site.</p> <p>1.03.06 Vendor shall bring all necessary tools/instruments/special tools etc. that may be required for successful commissioning/ installation/ verification/ acceptance of the tool and sub tools of the tool.</p>			
5	<p>1.04.00 TRAINING</p> <p>1.04.01 During commissioning of the tool, vendor shall provide on-site hands-on training to the concerned SCL</p>			

	<p>personnel on Operations/Process, application software, related applications, trouble-shooting and Preventive Maintenance of the tool supplied. The training shall be extensive so that quick diagnostics of problems and remedial actions is possible at SCL.</p>			
6	<p>2.00.00ACCEPTANCE PROCEDURE</p> <p>2.01.00Vendor shall demonstrate, at site, the functionality as per the tool acceptance procedure specified at Annexure-A besides their standard Acceptance Test Procedures. SCL shall have the option for Pre-shipment inspection at vendor's premises. Final acceptance, will be done after installation and demonstration of the functionality of the tool, as</p>			

	per the acceptance procedure (Annexure-A)			
7	<p>3.00.00TECHNICAL SPECIFICATIONS</p> <p>Following are the detailed technical specifications of the required system. Vendor has to provide complete information as required in various sections for proper evaluation of the system. The statements in the compliance sheet shall be supported by relevant documents/brochures.</p>			
8	<p>3.01.00APPLICATION</p> <p>NanoIndenter tool is required for reporting Stiffness, Modulus, Hardness & fracture toughness of thin films like Nitride, Oxides & polysilicon (500&#550; to 2 micron thickness) as well as for bulk materials like Silicon etc. Quantitative</p>			

	<p>testing for characterization of metals, materials including metal coatings and films (thick and thin films on rigid as well as flexible substrate) at micro and nano-scale level are required. Scratch & Creep analysis is also required.</p>			
9	<p>3.02.00 TECHNICAL SPECIFICATIONS</p> <p>PLATFORM</p> <p>1.1Stage X-Y Travel - Usable X-Y travel area shall be 100mm X 100mm (minimum)</p> <p>1.2Sample Size - Vendor To specify</p> <p>1.3Sample Holding - Mechanical Fixtures/clamps for holding the samples</p> <p>1.4Position Accuracy - < 1 μm</p> <p>1.5Position Control - Automated X-Y motion system with control from computer</p>			

	<p>2.1 TRANSDUCER SPECIFICATIONS</p> <p>2.1.1 Displacement Measurement Method - Capacitance Gauge</p> <p>2.1.2 Displacement Range - 50 μm at least</p> <p>2.1.3 Displacement Resolution - < 0.01 nm</p> <p>2.1.4 Displacement Noise Floor - \pm 1 nm</p> <p>2.2 Low Load Range</p> <p>2.2.1 Load Range - \pm 10 mN</p> <p>2.2.2 Load Resolution - \pm 20 nN</p> <p>2.2.3 Load Noise Floor - \pm 100 nN</p> <p>2.3 High Load Range</p> <p>2.3.1 Load Range - \pm 500 mN</p> <p>2.3.2 Load Resolution - \pm 300 nN</p> <p>2.3.3 Load Noise Floor - < 7 μN</p> <p>2.4 Lateral Load</p> <p>2.4.1 Load Range - \pm 250 mN</p> <p>2.4.2 Load resolution - < 2 μN</p> <p>2.4.3 Load noise floor - < 3.5 μN</p> <p>2.4.4 Lateral Displacement Range -</p>			
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	<p>&#8804; 10 mm</p> <p>3. IMAGING</p> <p>3.1 Imaging Criterion a) Image analysis with 2D and 3D visualization b) Pre and post topography of indentation site to be provided (required hardware to be supplied) 3.2 Tip positioning accuracy (if applicable) - 10nm or better</p> <p>4. Point & Click Test Option (For locating the indenting site after pre indentation scan) - Required</p> <p>5. Optical Microscope Objective - Minimum 20X</p> <p>6. Thermal Drift - 0.05 nm/s or better</p> <p>7. Type of Indentors Required - Berkovich Tip, Cube Corner, Conical, Spherical</p>			
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	<p>8. Indenter Calibration - Automatic with Supplied Calibration Samples like fused silica</p> <p>9. Vibration Isolation System a) Indenter should have high performance vibration isolation system. b) Vibration isolation system should exhibit no low frequency range</p> <p>10. Environmental Isolation Enclosure - Enclosed chamber for Thermal & Acoustic Isolation</p> <p>11. Tool Foot Print - Vendor to specify</p> <p>12. Parameters To Be Tested - Stiffness, Modulus, Hardness, Fracture Toughness, Creep, Scratch Resistance, Coefficient of friction</p> <p>13. Materials To Be Tested - Semiconductor Thin</p>			
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	<p>films but not limited to Nitride, Polysilicon, Oxides, Polymers, Metal Coatings like Al, Ti</p> <p>14. Minimum Contact Force - $\geq 2 \mu\text{N}$</p> <p>15. Feedback Control - Load and Displacement controlled nanoindentation</p> <p>16. Additional Required Features a) Dynamic Testing Module> For testing range upto 200 Hz or better for mechanical properties as a function of penetration depth> Modulus Mapping for storage & loss modulus b) Thermal Testing upto 200 DegC</p> <p>17. SOFTWARE a) For generating 3D mechanical property map b) Ability to perform analysis of time dependent signals. c) Automatic comparison of</p>			
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	<p>hardness and depth plots from multiples samples.d) User friendly software for easy calibration/operation and data analyse)</p> <p>Software should have the capability to provide multiuser environmentf) Should have the capability of exporting analyze data in major data formatsg) Ability to compensate for the substrate effect on mechanical properties while testing thin films</p> <p>18.Warranty, Support and services a) 24-month warrantyb) Local application and service support in India & abroad from the manufacturer.c) Training must cover all aspects of NanoIndenter operation and trouble-shooting, and must dedicate separate time-slots for every specialized mode of operation.</p>			
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	<p>19.Data Acquisition Computer - Vendor should provide compatible latest configuration window based PC, 29" LED screen with a color printer</p> <p>20.Standards Compliance - ISO 14577 / ASTM 2546</p>			
10	<p>4.00.00WARRANTY</p> <p>Vendor to provide a comprehensive part and labor warranty for a period of 24 months after acceptance of the system at SCL. Vendor to guarantee greater than 90% uptime for the tool based on 24 hours working, 7 days a week. Vendor to give two Preventive Maintenance Visits in the Warranty Period of the tool per year. The vendor has to provide Preventive Maintenance kit during PM under period of warranty.</p>			

11	<p>5.00.00POST WARRANTY SYSTEM SUPPORT</p> <p>Spares and maintenance support is required for at least 5 years after the expiry of warranty period. Vendor to quote separately for Post-warranty 'labor-only' AMC charges per year for a period of 5 years.</p>			
12	<p>6.00.00RECOMMENDED SPARES AND CONSUMABLES</p> <p>Vendor to provide separate itemized Quote (optional, for reference) for recommended essential spares and consumables including indenters. One set of additional spares of indenters (as mentioned in S.No 7 of clause 3.02.00) to be provided.</p>			
13	7.00.00SAFETY			

	<ul style="list-style-type: none"> •Appropriate safety mechanism in terms of alarms and EMO shall be provided for operator safety. Vendor to provide the details. •The system shall be design to be compliant with CE standards or other Industrial safety standard. •Fitted with all necessary safety interlocks (Hardware and software) for safe operation. 			
14	<p>8.00.00TECHNICAL DOCUMENTATION</p> <p>Vendor to supply technical documentation (in English language) containing, but not limited to, the following:</p> <ol style="list-style-type: none"> 1.System user manuals 2.System Hardware / Software manuals. 3.Maintenance /Diagnostic / Trouble shooting manuals including schematics, diagram (Electrical & 			

	<p>Mechanical) along with Parts for all spares.4.OEM system/subsystem/accessories manuals5.Vendor to recommend/ specify type of indenters, accessories and type of oils/grease to be used along with maintenance manual.6.Vendor shall supply all additional information such as application development notes, paper published/process information etc. related to the system.</p>			
15	<p>ACCEPTANCE PROCEDURE</p> <p>Part 1: Vendor to perform complete standard Acceptance Test Procedures (ATP) as per their Tool acceptance guidelines. Calibration sample like fused silica, fused quartz to be tested at vendors site & results to be repeated at SCL</p>			

	<p>Part 2: Besides standard ATP, the following tests shall be performed either as part of Standard ATP if it already contains the following tests or as separate demonstration at SCL site.</p> <p>1.Hardness/ Modulus / Scratch Testing of> Undoped Polysilicon 1 μm> Al metal of 1 μm> LPCVD & PECVD deposited Undoped Oxide & Silicon Nitride of 1 μm thickness> Single Crystal Silicon for low load & ceramic for high load testing> Pre & post indentation topography to be demonstrated2.Variation of mechanical properties like modulus & hardness as a function of penetration depth3.Dynamic testing for storage & loss modulus of polymers like silicone,</p>			
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	photoresist			
16	Annexure B - Utility Requirements for Tool pdf enclosed. Matrix to be filled by the vendor and to be uploaded			

Vendor Specified Terms

Description	Vendor Terms
<p>1. Definitions:</p> <p>a) The term Purchaser shall mean the Director, Semi-Conductor Laboratory or his successors or assignees.</p> <p>b)The term Contractor shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractors Successors, representatives, heirs, executors and administrators unless excluded by the Contract.</p> <p>c) The term Purchase Order/Contract shall mean the communication signed on behalf of the Purchaser by an officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the Tender or offer of the Contractor for supply of stores of plant, machinery, Software or equipment or part thereof.</p> <p>d) The term Stores shall mean all that the Contractor agrees to supply under the Contract as specified in the Purchase Order including its installation, testing and commissioning as per the specifications.</p>	
<p>2. For imported stores, prices shall be quoted on FOB/FCA nearest International/Gateway airport basis.</p> <p>For indigenous stores, prices shall be quoted on F.O.R destination basis i.e. SCL, S.A.S. Nagar, Mohali, Punjab exclusive of GST and taxes</p>	

<p>as may be applicable.</p> <p>The rates at which the said Government levies, taxes and duties are applicable, shall be indicated separately.</p> <p>The prices of the indigenous items shall also be exclusive of transit insurance which shall be arranged by the Purchaser and shall be to Purchaser account.</p> <p>Notes:</p> <p>a) For imported materials, the Purchaser is entitled to issue Customs duty exemption certificate (CDEC) to the contractor under customs notification no.51/96 dated 23.07.1996 and subsequent amendments to enable the contractor to avail off the benefit of concessional rate of customs duty under this notification. CVD under this notification is nil. In addition to the above CDEC, any documentary support requested by the contractor from the purchaser for customs clearance of goods against the above CDEC shall be provided by the purchaser.</p> <p>b) For indigenous stores, no concessional Central Sales Tax form will be issued. Please indicate the rate of GST as applicable.</p>	
<p>3. IMPORTANT: This being two part Tender-Technical and Commercial parts separate, the bidder should not attach any document(s) containing pricing information alongwith Technical Part. The Contractor will provide Un-Priced Commercial offer in envelope 1 (Technical Part) as an attachment.</p> <p>The tenders containing price information in Technical Part will be treated as unsolicited offers and rejected. Contractor to confirm that</p>	

<p>Prices bid is not attached in Envelope 1 i.e. Technical Part</p> <p>Priced Commercial offer, if any, should be attached in Envelope-2 (Price Bid) under Supporting Documents from Vendor (Commercial), as an attachment.</p>	
<p>4. Contractor shall confirm that the quote has been submitted for Brand New system.</p>	
<p>5. Delivery Period:</p> <p>The contractor should specify their best delivery period inclusive of all Govt. formalities of the exporting country.</p> <p>6. PRICES:</p> <p>Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.</p>	
<p>7. SECURITY DEPOSIT:</p> <p>a) On acceptance of the tender, the Contractor shall submit security deposit for ten percent (10 percent) of the value of the Contract within 15 days from the date of purchase order. If the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores contracted at the cost and risk of the Contractor.</p> <p>b) Security Deposit shall be submitted through Demand Draft /Bankers</p>	

<p>Cheque/ fixed deposit receipt or Bank Guarantee from any of the Scheduled Banks executed on non-judicial stamp paper of appropriate value, and shall be valid for a period of sixty (60) days beyond the date for completion of the Purchase Order/Contract.</p> <p>c) In case the contractor fails to furnish the security deposit within the specified date or extended due date, the Purchase Order/Contract shall be cancelled and in addition, appropriate penal action may also be considered.</p> <p>d) After the Purchase Order/Contract is successfully executed in all respects, the Bank Guarantee towards Security Deposit may be discharged and retained amount refunded to vendors.</p> <p>e) In the event of non-execution of the Purchase order/Contract or breach of any terms and conditions of the Purchase Order, the Security Deposit shall be forfeited.</p>	
<p>8. Warranty :</p> <p>The Contractor shall provide for the tendered equipment comprehensive warranty for parts as well as labour for a period of 24 months from the date of successful installation, Training and acceptance of the system at Purchasers site at no extra charges against any manufacturing defect/faulty workmanship.</p> <p>In case any defect arises during warranty period, the Contractor should replace/rectify the same at its own cost at site/works.</p> <p>The Contractor to guarantee 90% uptime for the system based on 24 hours working, 7 days a week. The Contractor will provide two</p>	

<p>Preventive Maintenance (PM) Visits in the warranty period of the tool.</p> <p>Contractor will also provide all consumables, spares and PM kit which will be required during preventive maintenance during the warranty period at no extra cost.</p>	
<p>9. Warranty Replacements:</p> <p>a) If in the opinion of the purchaser it becomes necessary to replace or repair any defective equipment during the warranty period, such replacement or repair shall be made by the Contractor free of all costs to the Purchaser provided the notice informing the Contractor of the defect is given by the Purchaser within a period of 26 months from the date of acceptance thereof.</p> <p>b) All replacement parts during the warranty period shall be supplied by the Contractor, free-of-cost on DDP (Delivery Duty paid) basis with freight and insurance upto Purchaser site at S.A.S. Nagar, Punjab and customs duty applicable in India to the Contractor account including compliance with the customs procedure in India. The indigenous replacement parts, if any, shall be supplied by the Contractor free of cost on F.O.R. Purchaser site at SAS Nagar, Punjab basis.</p> <p>All defective parts including the imported parts shall be returned by Purchaser to the Contractor, if requested, on Freight to pay basis.</p>	
<p>10. GUARANTEE & REPLACEMENT :</p> <p>a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.</p>	

<p>b) For a period of Twenty Four (24) months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 16 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty.</p> <p>c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 26 months from the date of acceptance thereof.</p> <p>d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.</p> <p>e) The decision of the purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the Contractor are defective or any defect has developed within the said period of 24 months or as to whether the nature of the defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.</p> <p>f) PERFORMANCE BANK GUARANTEE:</p> <p>To fulfil guarantee conditions outlined in clause 10 (a) to (e) above, the Contractor shall furnish a Bank Guarantee (as per format given by</p>	
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<p>purchaser) from any scheduled bank/ bank approved by the Purchaser for an amount equivalent to 10% of the value of the Contract and shall be valid for a period of 60 days beyond the expiry date of warranty period. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.</p> <p>g) All the replacement stores shall also be guaranteed for a period of 24 months from the date of arrival of the stores at purchasers site.</p> <p>h) Even while the 24 months guarantee applies to all stores, in case where a greater period is called for by our specifications then such a specification shall apply in such cases the period of 26 months referred to in clause 10 (b) & (c) shall be the asked for guarantee period plus two months.</p>	
<p>11. TERMS OF PAYMENT IN CASE OF OVERSEAS SUPPLIER[S]:</p> <p>Being a Department of the Government of India, the normal terms of payment are by Sight Draft. The payment shall be remitted as under:</p> <p>90% of the value of the materials supplied shall be paid within 30 days of the receipt of the materials at purchaser site and the balance 10% amount shall be payable on successful installation, commissioning and acceptance of the entire project at Purchasers site against a Performance Bank Guarantee (refer clause no. 10(f).</p> <p>All bank charges outside India related to the payment shall be borne by the Contractor and all bank charges in India shall be borne by the purchaser.</p> <p>In the event of the Contractor not being able to provide the</p>	

Performance Bank Guarantee the payment of balance 10% amount shall be made after the expiry of the warranty period.

Indian agent remuneration/service charge shall be payable by the Purchaser directly to the Indian agent in Indian Rupees based on T.T buying rate of exchange prevailing on the date of placement of purchase order within 30 days of acceptance of equipment at purchaser site.

The Sight Draft will be operative on presentation of the under mentioned documents :

- a) Original Airway Bill
- b) Commercially certified invoices describing the stores delivered, quantity, unit rate and their total value, in triplicate. The invoice should indicate the discounts, if any, and Agency Commission separately.
- c) Packing List showing individual dimensions and weight of packages.
- d) Country of Origin Certificate in duplicate, wherever applicable.
- e) Test Certificate.
- f) Declaration by the Seller that the contents in each case are not less than those entered in the invoices and the quality of the Stores are guaranteed as per the specifications asked for by the Purchaser.
- g) Warrantee and guarantee Certificate/s as applicable.

While the purchasers bank charges shall be borne by the purchaser, the contractor shall bear the bank charges payable to his banker

including the charges towards advising/amendments/commissions etc.	
<p>12. TERMS OF PAYMENT IN CASE OF INDIGENOUS SUPPLIER[S]:</p> <p>The payment shall be remitted as under:</p> <p>90% of the value of the materials supplied shall be paid within 30 days of the receipt of the materials at purchaser site and the balance 10% amount shall be payable on successful installation, commissioning and acceptance of the entire project at Purchasers site against a Performance Bank Guarantee (refer clause no. 10(f).</p> <p>In the event of the Contractor not being able to provide the Performance Bank Guarantee the payment of balance 10% amount shall be made after the expiry of the warranty period.</p> <p>While the purchaser bank charges shall be borne by the purchaser, the contractor shall bear the bank charges payable to his banker including the charges towards advising/amendments/ commissions etc.</p>	
<p>13. DEMURRAGE:</p> <p>Supplier shall bear demurrage charges, if any, incurred by the purchaser due to delayed presentation of shipping documents to the bankers immediately after receipt of Air Way Bill.</p>	
<p>14. VALIDITY:</p> <p>The tender must be valid for a minimum period of 120 days from the date of opening of Technical bid and 90 days after opening of Price bid.</p>	

<p>15. POST WARRANTY SERVICE/SUPPORT:</p> <p>Contractor will ensure Spares and Maintenance support for 5 years after the expiry of warranty period.</p> <p>The Contractor shall provide quote for Post Warranty (labour-only) AMC charges per year for a period of 5 years separately for the tendered stores. This AMC charges may be quoted in Envelope-2 (Price Bid) under Supporting Documents from Vendor (Commercial), as an attachment. These charges shall not be considered during evaluation of the tendered stores.</p>	
<p>16. RECOMMENDED SPARES AND CONSUMABLES:</p> <p>The Contractor to provide separate list of recommended spares and consumables in Technical Part, which will be required to maintain above stated tool uptime. This list would be for reference only and shall not include any price information.</p> <p>Price of these recommended spares and consumables may also be quoted in Envelope-2 (Price Bid) under Supporting Documents from Vendor (Commercial), as an attachment. These charges shall not be considered during evaluation of the tendered stores.</p>	
<p>17. GUARANTEED TIME DELIVERY :</p> <p>The time for and the date of delivery stipulated in the Purchase Order shall be deemed to be the essence of the Contract. Delivery must be completed within the date specified therein.</p>	
<p>18. MODE OF DESPATCH:</p> <p>Stores should be despatched through Freight forwarder nominated by</p>	

<p>the purchaser whose contact details shall be indicated in the purchase order.</p>	
<p>19. PORT OF ENTRY:</p> <p>IGI Airport, New Delhi</p> <p>20. CONSIGNEE:</p> <p>Sr. Purchase & Stores Officer (Stores),</p> <p>Semi-Conductor Laboratory,</p> <p>Sector 72, S.A.S. Nagar (Mohali), Punjab,</p> <p>India - 160 071</p> <p>21. SHIPPING MARKS:</p> <p>The mark on the shipping documents such as invoice, bill of lading and on the packages should be as follow:</p> <p>PURCHASE ORDER NO.</p> <p>DATED</p> <p>GOVERNMENT OF INDIA</p> <p>DEPARTMENT OF SPACE</p> <p>SEMI-CONDUCTOR LABORATORY</p> <p>DESTINATION: SECTOR 72, S.A.S. NAGAR (MOHALI),PUNJAB, INDIA.</p> <p>22. INSURANCE OF THE STORES:</p>	

<p>Insurance wherever necessary, will be arranged by the Purchaser. The necessity or otherwise of insurance will be as indicated in the Purchase Order/Contract.</p> <p>23. INSTALLATION AND COMMISSIONING :</p> <p>Installation, commissioning and demonstration of performance of the tendered stores as per Purchaser tendered specifications shall be carried out by the Contractor at Purchaser site at S.A.S. Nagar, Punjab, India.</p> <p>The Contractor shall provide in advance guidelines for preparation of the installation site and list of items to be supplied by Purchaser during installation.</p> <p>On receipt of intimation from the Purchaser, the Contractor shall depute its engineer(s) to Purchaser site within two weeks to carry out installation and commissioning and will demonstrate the functionality of the tendered equipment to Purchaser specifications as per mutually agreed acceptance procedure. The Contractor shall be responsible for any loss/damages sustained due to delay on the part of the Contractor to send its engineer for installation and commissioning.</p> <p>Failure to commission the tendered equipment successfully shall entitle Purchaser to full refund of the payment made and the interest thereon. Decision regarding successful installation and commissioning shall rest solely with the Purchaser.</p>	
<p>24. REPLACEMENT :</p> <p>If the stores or any portion thereof is damaged or lost during transit, the Purchaser shall give notice to the Contractor setting forth</p>	

<p>particulars of such stores damaged or lost during transit. The replacement of such stores shall be effected by the Contractor within a reasonable time to avoid unnecessary delay in the intended usage of the Stores. In case the purchaser agrees, the price towards replacement items shall be paid by the purchaser on the basis of original price quoted in the tender or as reasonably worked out from the tender.</p>	
<p>25. REJECTION:</p> <p>In the event that any of the stores supplied by the Contractor is found defective in material or workmanship or otherwise not in conformity with the requirements of the Contract specifications, the purchaser shall either reject the stores or request the Contractor, in writing, to rectify the same. The Contractor, on receipt of such notification, shall either rectify or replace the defective stores free of cost to the purchaser. If the Contractor fails to do so, the purchaser may at his option either :</p> <ul style="list-style-type: none"> a) replace or rectify such defective stores and recover the extra cost so involved from the Contractor, or b) terminate the Contract for default as provided under clause 41, or c) acquire the defective stores at a reduced price considered equitable under the circumstances. The provision of this article shall not prejudice the Purchasers rights under clause 28. 	
<p>26. EXTENSION OF TIME :</p> <p>If the completion of supply of stores is delayed due to reason of force majeure such as acts of god, acts of public enemy, acts of Government,</p>	

<p>fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, etc., the Contractor shall give notice within 15 days to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice after verification, if necessary, may agree to extend the Contract delivery date as may be reasonable but without prejudice to other terms and conditions of the Contract.</p>	
<p>27. TRAINING:</p> <p>During Commissioning of the equipment, the Contractor shall provide on-site hands-on training to Purchaser engineers (including classroom training) on system operation/process, application software, related applications, trouble shooting and Preventive Maintenance of the system supplied. The training shall be extensive enough so that quick diagnosis of problems and remedial actions is possible at Purchaser site.</p>	
<p>28. DELAY IN COMPLETION/LIQUIDATED DAMAGES:</p> <p>If the Contractor fails to deliver the stores within the time specified in the Contract or any extension thereof, the purchaser shall recover from the Contractor as liquidated damages a sum of one-half of one percent (0.5 percent) of the Contract price of the undelivered stores for each calendar week of delay. The total liquidated damages shall not exceed ten percent (10 percent) of the Contract price of the unit or units so delayed. Stores will be deemed to have been delivered only when all their component parts are also delivered. If certain components are not delivered in time, the stores will be considered as delayed until such time as the missing parts are delivered. Delivery of stores shall be complete on Installation, commissioning, Testing and</p>	

Acceptance.	
<p>29. ACCEPTANCE PROCEDURE:</p> <p>The contractor shall demonstrate, at site, the functionality as per Tool Acceptance Procedure (TAP) specified in this tender, beside their standard Acceptance Test Procedures. Purchaser shall have the option for Pre-Shipment inspection at Contractors premises. Final acceptance, however, will be done after installation and demonstration of the functionality of the tool, as per acceptance procedure defined in the tender.</p> <p>30. ADDRESS OF INDIAN AGENT:, if any:</p>	
<p>31. RECOVERY OF SUM DUE:</p> <p>Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, the purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with the purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claim, whether liquidated or not, against the Contractor under any other Contract with the purchaser, the payment of all moneys payable under the Contract to the Contractor including the</p>	

<p>security deposit shall be withheld till such claims of the purchaser are finally adjudicated upon and paid by the Contractor.</p>	
<p>32. PACKING:</p> <p>a) The Contractor wherever applicable shall pack and crate all stores for sea /air/road shipment as applicable in a manner suitable for export to a tropical humid climate, in accordance with internationally accepted export practices and in such a manner so as to protect it from damage and deterioration in transit by road, rail, air or sea. The Contractor shall be held responsible for all damages due to improper packing.</p> <p>b) The Contractor shall ensure that each box / unit of shipment is legible and properly marked for correct identification. The failure to comply with this requirement shall make the Contractor liable for additional expenses involved.</p> <p>c) The Contractor shall notify the purchaser of the date of shipment from the port of embarkation as well as the expected date of arrival of such shipment at the designated port of arrival.</p> <p>d) The Contractor shall give complete shipment information concerning the weight, size, content of each packages, etc.</p> <p>e) Trans-shipment of equipment shall not be permitted except with the written permission of the purchaser.</p> <p>f) Apart from the despatch documents negotiated through Bank, the following documents shall also be airmailed to the purchaser within 3 days from the date of shipment:</p>	

<p>i) Air Way Bill (Two non-negotiable copies)</p> <p>ii) Invoice (3 copies)</p> <p>iii) Packing List (3 copies)</p> <p>iv) Test Certificate (3 copies)</p> <p>v) Certificate of Origin, wherever applicable.</p> <p>The Contractor shall also ensure that one copy of the packing list is enclosed in each case.</p>	
<p>33. ARBITRATION:</p> <p>If at any time any question, dispute or difference whatsoever shall arise between the purchaser and the Contractor upon or in connection with this Contract, either party may forthwith give to the other notice in writing of the existence of such question, dispute or difference and the same shall be referred to the adjudication of two arbitrators, one to be nominated by purchaser, other by a Contractor and in the event of any difference of opinion, the arbitrators will refer the matter to the umpire. The arbitration shall be conducted in accordance with the rules and procedure for arbitration of the International Chamber of Commerce at Paris. The expenses of the arbitrators and umpire shall be paid as may be determined by them. However, the venue of such arbitration should be in India.</p> <p>In case of dispute arises with domestic/Indian suppliers, the applicable Arbitration procedure shall be as per Indian Arbitration & Conciliation Act, 1996.</p>	

<p>34. LANGUAGE AND MEASURES:</p> <p>All documents pertaining to the Contract including specification, schedule, notice, correspondence, operating and maintenance instructions, drawings or any other writings shall be written in English language. The metric system of measurement shall be used exclusively in the Contract.</p>	
<p>35. SECURITY INTEREST:</p> <p>On each item to be delivered under this Contract, including an item of work in progress in respect of which payments have been made in accordance with the terms of the Contract, purchaser shall have a security interest in such items which shall be deemed to be released only at the time when the applicable deliverable item is finally accepted and delivered to the purchaser in accordance with the terms of the Contract. Such security interest of the purchaser shall constitute a prior charge as against any other charge or interest created in respect of such items by any entity.</p> <p>36. APPLICABLE LAW:</p> <p>The Contract shall be interpreted, construed and governed by the laws of India.</p>	
<p>37. INDEMNITY:</p> <p>The Contractor shall warrant and be deemed to have warranted that all Stores supplied against this Contract are free and clean of infringement of any patent, copyright or trade mark and shall at all times indemnify the purchaser against all claims which may be made in respect of stores for infringement of any right protected by Patent,</p>	

<p>Registration of design or Trade Mark and shall take all risk of accident or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfilment of the Contract.</p> <p>38. COUNTER TERMS AND CONDITIONS OF SUPPLIERS:</p> <p>Where counter terms and conditions/printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the purchaser unless specific written acceptance thereof is obtained.</p> <p>39. CONTRACTORS DEFAULT LIABILITY:</p> <p>The purchaser may upon written notice of default to the Contractor terminate the Contract in whole or in part in circumstances detailed hereunder:</p> <p>a) If in the judgement of the Purchaser the Contractor fails to make delivery of Stores within the time specified in the Contract/agreement or within the period for which extension has been granted by the Purchaser to the Contractor.</p> <p>b) If in the judgment of the Purchaser the Contractor fails to comply with any of the other provisions of this Contract.</p>	
<p>40. In the event the Purchaser terminates the Contract in whole or in part as provided in Clause 39 the Purchaser reserves the right to Purchase, upon such terms and in such a manner as he may deem appropriate, stores similar to that terminated and the Contractor shall be liable to the Purchaser for any additional costs for such similar stores and/or for liquidated damages for delay as defined in Clause 28</p>	

until such reasonable time as may be required for the final supply of stores.

A) If this Contract is terminated as provided in Clause 39 the Purchaser in addition to any other rights provided in this Article, may require the Contractor to transfer title and deliver to the Purchaser under any of the following clauses in the manner and as directed by the Purchaser:

a) Any completed stores.

b) Such partially completed stores,

drawing, information and Contract rights (hereinafter called manufacturing material) as the Contractor has specifically produced or acquired for the performance of the Contract as terminated. The Purchaser shall pay to the Contractor the Contract price for completed stores delivered to and accepted, by the purchaser and for manufacturing material delivered and accepted.

B) In the event the Purchaser does not terminate the Contract as provided in Clause 39, the Contractor shall continue the performance of the Contract in which case he shall be liable to the purchaser for liquidated damages for delay as set out in Clause 28 until the stores are accepted.

41. Any Other Term:

Supporting Documents from Vendor

Attachment - I:

Attachment - II:

Price Bid Form

Item Description	Slab Range	Qty	UOM	Currency	Unit Price	Total Price
Supply, Installation & Training of NanoIndenter Tool	-	1	No.	-	-	-

Break-up of other taxes and other costs should be specified in respective narration columns.

Sum of these Break-up values should be specified in respective value columns.

Supporting Documents from Vendor (Commercial)

Document attachment with price bid

Attachment - I:

Attachment - II: