

## NOTICE INVITING TENDER (E-PROCUREMENT MODE)

### NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR

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**NOTICE INVITING TENDER NO.:** NITD/HEFA/PHY/2021-22/01

Date: 17/09/2021

National Institute of Technology Durgapur is in the process of purchasing following item(s).  
The details are given as under.

<b>Items</b>	NOTICE INVITINGE-TENDER FOR supply and installation of <b>Solar Simulator I-V System with IPCE.</b>
Earnest Money Deposit to be submitted	<b>INR. 1,80,000/-</b>
Warranty	3 Years
Performance security	The successful bidder must submit before release of payment a valid bank guarantee on any nationalized bank amounting <b>10%</b> of the order value towards Performance Security during the warranty period plus 90 days.
Completion/Delivery Period in Calendar Days	Within 45days from the date of issuing Purchase Order/Work Order/Award of Contract.

# SCHEDULE

Name of Organization	<b>National Institute of Technology Durgapur</b>
Tender Type (Open/Limited/EOI/Auction/Single)	Open
Tender Category (Services/Goods/works)	Goods
Type/Form of Contract (Work/Supply/Auction/Service/Buy/Empanelment/ Sell)	Buy
Source of Fund (Institute/Project)	Institute
Is Multi Currency Allowed	NO
Date of Issue/Publishing	17.09.2021
Document Download/Sale Start Date	17.09.2021
Date for Pre-Bid Conference	22.09.2021 Time: 11:30Hrs.
Bid Submission Start Date	17.09.2021
Venue of Pre-Bid Conference	New Admin Building (S.N. Roy Memorial Building).
Last Date and Time for Uploading of Bids	25.10.2021 Time: 16:00 Hrs.
Date and Time of Opening of Technical Bids	26.10.2021 Time: 10:00 Hrs.
Form Fee	NILL
EMD	<b>INR. 1,80,000/-</b>
No. of Covers (1/2/3/4)	02
Bid Validity days (180/120/90/60/30)	180 days (From date of opening of price bid)
Address for Communication	Department of Physics NIT Durgapur, M.G. Avenue. West Bengal- 713209
Contact No.	+91-9434789024
Email Address	aniruddha.mondal@phy.nitdgp.ac.in
ITI Helpdesk Contact No. and mail address	Helpdesk Number - 011-49606060 <a href="mailto:helpdeskeuniwizarde.com@gmail.com">helpdeskeuniwizarde.com@gmail.com</a> Mr. SK Tariq- 9355030608 eprochelpdesk.35@gmail.com Mr. Saikat Pal - 8927976198 eprochelpdesk.38@gmail.com

## PROCEDURE FOR SUBMISSION OF E-TENDER

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

### 1. REGISTRATION PROCESS ON ONLINE PORTAL

- o Bidders to enroll on the e-Procurement module of the portal <https://mhrd.euniwizarde.com> by clicking on the link “Bidder Enrolment” as per portal norms.
- o The bidders to choose a unique username and assign a password for their accounts. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the e-Wizard Portal.
- o Bidders must provide the details of PAN number, registration details etc. as applicable and submit the related documents. The user id will be activated only after submission of complete details. The activation process will take minimum 24 working hours. After completion of registration payment, you can also send your acknowledgement copy on our help desk mail id [helpdeskeuniwizarde.com@gmail.com](mailto:helpdeskeuniwizarde.com@gmail.com) for activation of your account.
- o Bidders to register upon enrolment their valid Digital Signature Certificate (DSC: Class III Certificates with signing key and encryption usage) issued by any Certifying Authority recognized by CCA India with their profile.
- o A bidder should register only one valid DSC. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others, which may lead to misuse. Foreign bidders are advised to refer “DSC details for Foreign Bidders” for Digital Signature requirements on the portal.
- o Bidder then logs in to the site through the secured login by entering their user ID/password and the password of the DSC / e-Token.

### 2. Tender Document Search

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

### 3. Bid Preparation

- o Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- o Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.
- o Please note the number of covers in which the bid documents have to be submitted, the number of

documents - including the names and content of each document that needs to be submitted. Any deviations from these may lead to rejection of the bid.

- o Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/schedule and generally, they can be in PDF/XLS/PNG, etc. formats. Documents in PDF format with maximum Five (5) Mb file can be uploaded.

#### **4. Bid Submission**

- o Bidder to log into the site well in advance for bid submission so that he/she uploads the bid in time i.e., on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- o The bidder to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- o Bidders must pay required payments (Form fee, EMD, Tender Processing Fee etc) as mentioned before submitting the bid
- o Bidder to select the payment option mode as specified in the Schedule (EMD/FORM FEE Section) to pay the form fee/ EMD wherever applicable and enter details of the instrument.
- o A standard BoQ format has been provided with the tender document to be filled by all the bidders. Bidders to note that they should necessarily submit their financial bids in the prescribed format and no other format is acceptable.
- o The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, the opening of bids, etc. The bidders should follow this time during bid submission.
- o All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data, which cannot be viewed by unauthorized persons until the time of bid opening.
- o The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- o Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
  - o Kindly have all relevant documents in a single PDF file.
- o The off-line tender shall not be accepted and no request in this regard will be entertained whatsoever.

#### **5. Amendment of bid document**

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

#### **6. Instruction to Bidders**

- o Process for Bid submission through ITI E-wizard portal is explained in Bidder Manual. Bidders are requested to download Bidder Manual from the home page of website (<https://mhrd.uniwizarde.com>). Steps are as follows:  
**(Home page ⇒ Downloads ⇒ Bidder Manuals).**

- o The tenders will be received online through portal <https://mhrd.uniwizarde.com>. In the Technical Bids, the bidders are required to upload all the documents in .pdf format.
- o Possession of Valid Class III Digital Signature Certificate (DSC) in the form of smart card/ e-Token

in the company's name is a prerequisite for registration and participating in the bid submission activities through <https://mhrd.euniwizarde.com>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available on the web site <https://mhrd.euniwizarde.com> under the link 'DSC help'.

Tenderers are advised to follow the instructions provided in the 'User Guide and FAQ' for the e-Submission of the bids online through the ITI e-Wizard Portal for e-Procurement at <https://mhrd.euniwizarde.com>

o The bidder has to "**Request the tender**" to portal before the "**Date for Request tender document**", to participate in bid submission.

7. All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.

8. Any order resulting from this e-tender shall be governed by the terms and conditions mentioned therein.

9. No deviation to the technical and commercial terms & conditions allowed.

10. The tender inviting authority has the right to cancel this e-tender or extend the due date of receipt of the bids

#### **How to Submit the bid?**

1. Whenever, EMD/ Form fees are sought, bidders need to pay the form fee and EMD separately On-line through **RTGS** (or alternatively **Demand Draft** may be sent to the address for communication mentioned in schedule, if mode of payment is through **DD**). Account details are given below.

Account Name: NIT Society Durgapur  
Bank Name: State Bank of India  
Branch: NIT Durgapur, Durgapur-713209,  
Dist.- Paschim Bardhaman,  
West Bengal, Pin- 713209  
IFSC Code: **SBIN0002108**  
Bank Account Number: **11520034072**  
MICR Code: **713002204**

**(Scanned copy of the RTGS challan should be submitted at the technical folder)**

2. A standard BoQ format has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BoQ file, open it and complete the colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

#### **3. Bidder may submit bid either one or more or all of the Schedules.**

4. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
5. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.
6. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
7. Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other  
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relevant details.

8. Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

### **ASSISTANCE TO BIDDERS**

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

### **GENERAL INSTRUCTIONS TO THE BIDDERS**

1. Possession of a Valid Class III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities. Digital Signature Certificates can be obtained from the authorized certifying agencies, details.

## **Credentials:**

**The bidder must have the following credential:**

- If the bidder is not the manufacturer of the device, it must produce the Manufacturer's Tender Specific Authorization certificate regarding the sales & servicing of the device.**
- Bidder must produce credential (e.g. Purchase Order, Contract Order etc.) of sale similar type of equipment in the recent past.**
- Bidder must have at least 10 years of business operation in the related field in INDIA.**

# TECHNICAL SPECIFICATIONS

## 1. Class AAA Solar simulator

Solar Simulator Class: Class AAA(As per ASTM E927/ IEC 60904-9 /JIS C8912 ) Test Reports for class AAA conditions has to be attached.

Type of lamp	: Xenon Short Arc
Power Range	:300 W or better
Illuminated area	:3'' (80mm) X 3'' (80mm)
Light Source	: Steady State
Air Mass Filter	: AM1.5G Standard
Spectral Range	: 400 to 2100 nm
Collimation Angle	: +/- 4 deg or better
Lamp lifetime	: 1,000 Hours or better
Adjustment Range of light intensity	: 100 mW/cm <sup>2</sup> (1SUN) (+/- 15% is Adjustable)
Spectral Match	: ±25% or better
Non-uniformity of irradiance	: ≤ 2% or better( this has to be demonstrated at the time of installation)
Temporal Stability	: ≤ 2% or better
Optimum Working Distance	: 8" (inch) or better
Suitable to measure the following PV Technologies	: 1. Mono-crystalline Silicon 2. Amorphous Silicon 3. DSSC 4. Organic Solar cell
Power Supply	: 110-220AC Volts, 50-60Hz

## 2. I-V Station with the 1A Current/source meter

Electrical Interface	: 4 Wire
Current range	: 1 Amps
Voltage range	: +/- 20.0 Volts
Current accuracy	: better than 0.5%
Voltage accuracy	: better than 0.5%
Max Output Power	: 20 W or better
No. of Measurement points	:100-1000 or better
Computer Interface	: RS-232 Cable or USB which is suitable

## 3. Software features

Software **should preferably handle** measurement of both P type and N type cells without any cell connection changes. Should measure both Light & Dark I-V Curves so as to eliminate the initial hysteresis, if any.

Provides printable test reports and test data in text files for easy exchange between programs

Parameters to be measured: I<sub>SC</sub>, V<sub>OC</sub>, V<sub>MAX</sub>, I<sub>MAX</sub>, P<sub>MAX</sub>, FF, Efficiency, R<sub>s</sub>, R<sub>sh</sub>, J<sub>SC</sub>, R<sub>s</sub> Density, R<sub>sh</sub> Density, Dark I-V and time dependent I-V with light on off conditions (option should be there in the software)

## 4. Cell holder and Temperature Controller

Reference cell hold chuck size	: <b>3x3 inch or better</b>
Unit Design	: Electrically isolated from all other source
Chuck plate Material	: Copper
Test Connection	: Spring loaded gold pin for 4 wire I-V test Connection
Temperature control device	: Sample stage should be equipped with temperature control device with temperature range <b>+5°C to +80°C</b> or better (Accuracy < ±0.5°C or better.)

Sample angle orientation

: Provision to change angle orientation of sample for Angle (minimum  $10^{\circ}$  to  $90^{\circ}$ ) dependent efficiency measurement.

## **5. Accessories**

### **i) Calibrated Reference Cell with Connecting Cables**

Material: Standard Silicon cell or Mono-crystalline Photovoltaic Cell encased in a Metal Enclosure with protective quartz window and equipped with Temperature sensor.

Certificate of Calibration: It should be certified by NIST or AIST and traceable to NREL

### **ii) Spare Xenon Lamp for Solar Simulator**

Power Output: 300W or better

### **iii) Filters**

AM1.5, AM1 and AM0

### **iv) Computer**

Branded computer (like HP or Dell) compatible with I-V software

### **v) Probe Kits**

Magnetic electrical contact probe kits with X- Y-Z micromanipulator joystick (2 nos)

Shaft Probe (10 nos.)

Material: Tungsten carbide or Tungsten for low leakage current

Probe Diameter: 25  $\mu\text{m}$  or better

## **6. Other requirements:**

The bidder must have at least five installations of the system or equivalent in India during last five years. End user certificate confirming satisfactory performance to be provided. Response time of the bidder for any service matter should be less than 72 hours.



## Terms & Conditions Details

Sl. No.	Particulars / Specification
1	<b>Due date:</b> The tender has to be submitted on-line before the due date. The offers received after the due date and time will not be considered.
2	<b>Preparation of Bids:</b> The offer/bid should be submitted <b>in two bid systems (i.e.) Technical bid and financial bid.</b> The technical bid should consist of all technical details along with commercial terms and conditions. Financial bid should indicate item wise price for the items mentioned in the technical bid in the given format. The Technical bid and the financial bid should be submitted Online.
3	<b>EMD (if applicable):</b> The tenderer/bidder should submit an EMD amount through DD/RTGS/NEFT – in favor of NIT Durgapur, payable at Durgapur, in any nationalized bank. The Technical Bid without EMD would be considered as UNRESPONSIVE and will not be accepted. The EMD will be refunded without any interest to the unsuccessful bidders after the award of contract. Earnest Money Deposit (EMD / Bid Security (BS) has to be submitted by bidders except those who are registered with National Small Industries Corporation (NSIC)/ Ministry of Micro Small Medium Enterprises or as per GFR 2017 guidelines. However, this certificate should be for manufacturing of the item indented and not for selling items manufactured by other firms. The certificate should be valid up to bid validity.
4	<b>Refund of EMD:</b> The EMD will be returned to unsuccessful bidders only after the tenders are finalized. In case of successful bidder, it will be retained till the successful and complete installation of the equipment and submission of performance/security deposit.
5	<b>Opening of the tender:</b> The online bid will be opened by a committee duly constituted for this purpose. Online bids (complete in all respect) received along with EMD (if any) will be opened as mentioned at “Schedule” in presence of the representative of bidders if available. Only one representative from each bidder will be allowed to participate in the tender opening. Bid received without EMD (if present) will be rejected straight way. The technical bid will be opened online first and it will be examined by a technical committee (as per specification and requirement). The financial offer/bid will be opened only for the offer/bid which technically meets all requirements as per the specification. The bidders if interested may participate on the tender opening Date and Time. The bidder should produce authorization letter from their company to participate in the tender opening.
6	<b>Acceptance/ Rejection of bids:</b> The Committee reserves the right to reject any or all offers without assigning any reason.
7	<b>Pre-qualification criteria:</b> Bidders should be the manufacturer / authorized dealer. Letter of Authorization from original equipment manufacturer (OEM) <b>on the same and specific to the tender</b> should be enclosed. An undertaking from the OEM is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend support for the warranty as well. (Ref. Annexure-II) Non-compliance of tender terms, non-submission of required documents, lack of clarity of the specifications, contradiction between bidder specification and supporting documents etc. may lead to rejection of the bid. In the tender, either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender. 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 same tender for the same item/product.

8	<p><b>Performance Security:</b> The supplier shall require to submit the performance security in the form of irrevocable bank guarantee issued by any Indian Nationalized Bank for an amount which is stated in the tender document, within 30 days from the date of receipt of the purchase order/LC and should be kept valid for a period of 90 days beyond the date of completion of warranty period or the same will be deducted from the bill/ invoice before payment is made. The same will be released on application by the supplier after the said interval (warranty period + 90 days).</p>
9	<p><b>Force Majeure:</b> The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.</p> <p>For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.</p> <p>If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.</p>
10	<p><b>Risk Purchase Clause:</b> In event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from the other source on the total risk of the supplier under risk purchase clause.</p>
11	<p><b>Packing Instructions:</b> Each package will be marked on three sides with proper paint/indelible ink, the following:</p> <ul style="list-style-type: none"> <li>Item Nomenclature</li> <li>Order/Contract No.</li> <li>Country of Origin of Goods</li> <li>Supplier's Name and Address</li> <li>Consignee details</li> <li>Packing list reference number</li> </ul>
12	<p><b>Delivery and Documents:</b></p> <p>Delivery of the goods should be made within a <b>45 days</b> from the date of placement of purchase order. Within 24 hours of shipment, the supplier shall notify the purchaser and the insurance company by cable/telex/fax/e mail the full details of the shipment including contract number, railway receipt number/ AAP etc. and date, description of goods, quantity, name of the consignee, invoice etc. The supplier shall mail the following documents to the purchaser with a copy to the insurance company:</p> <ul style="list-style-type: none"> <li>4 Copies of the Supplier invoice showing contract number, goods' description, quantity</li> <li>Unit price, total amount;</li> <li>Insurance Certificate if applicable;</li> <li>Manufacturer's/Supplier's warranty certificate;</li> <li>Inspection Certificate issued by the nominated inspection agency, if any</li> <li>Supplier's factory inspection report; and</li> <li>Certificate of Origin (if possible by the beneficiary);</li> <li>Two copies of the packing list identifying the contents of each package.</li> </ul> <p>The above documents should be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses</p>

13	<p><b>Delayed delivery:</b> If the delivery is not made within the due date for any reason, the Committee will have the right to impose penalty @ 1% per week and the maximum deduction is 10% of the contract value / price.</p>
14	<p><b>Prices:</b> The price should be quoted in net per unit (after breakup) and must include all packing and delivery charges. The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However the percentage of taxes &amp; duties shall be clearly indicated. The price should be quoted without custom duty and excise duty, since NIT Durgapur is exempted from payment of Excise Duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand.</p> <p><b>In case of imports, the price should be quoted on FOB/FCA origin Airport Basis only.</b> Under special circumstances (e.g. perishable chemicals), when the item is imported on CIF, please indicate CIF charges separately up to NIT Durgapur indicating the mode of shipment. NIT Durgapur will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges. <b>At any circumstances, it is the responsibility of the foreign supplier to handover the material to our forwarder at the origin airport after completing all the inland clearing. No Ex- Works consignment will be entertained.</b> “In case of CIF shipments, kindly provide the shipment information at least 2 days in advance before landing the shipment along with the documents i.e. invoice, packing list, forwarder Name, address, contact No. in India to save penalty/demurrage charges (imposed by Indian Customs) . Otherwise these charges will be recovered from the supplier/Indian Agent.”</p> <hr/> <p><b>The contract shall be for the full quantity as described above</b>  <b>All duties, entry taxes, transport, insurance and other levies payable by the contractor under the contract shall be included in the total price F.O.R. NIT Durgapur.</b>  <b>The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustments on any account.</b>  <b>The Prices should be quoted in Indian Rupees only.</b>  <b>The base price includes all type of prices except GST</b></p> <p><b>5% GST (or equivalent) for all items will be Applicable.</b></p>
15	<p><b>Notices:</b> For the purpose of all notices, the following shall be the address of the Purchaser and Supplier.  <b>User: Prof. ANIRUDDHA Mondal,</b>  <b>Associate Professor</b>  <b>Dept. of PHYSICS</b>  <b>NIT Durgapur</b>  <b>West Bengal – 713209</b></p> <p><b>Supplier:</b> (To be filled in by the supplier)  <b>(All suppliers should submit its supplies information as per Annexure-II).</b></p>

16	<p><b>Progress of Supply:</b> Wherever applicable, supplier shall regularly intimate progress of supply, in writing, to the Purchaser as under:</p> <p>Quantity offered for inspection and date;</p> <p>Quantity accepted/rejected by inspecting agency and date;</p> <p>Quantity dispatched/delivered to consignees and date;</p> <p>Quantity where incidental services have been satisfactorily completed with date;</p> <p>Quantity where rectification/repair/replacement effected/completed on receipt of any communication from consignee/Purchaser with date;</p> <p>Date of completion of entire Contract including incidental services, if any; and</p> <p>Date of receipt of entire payments under the Contract (In case of stage-wise inspection, details required may also be specified).</p>
17	<p><b>Inspection and Tests:</b> Inspection and tests prior to shipment of Goods and at final acceptance are as follows:</p> <p>After the goods are manufactured and assembled, inspection and testing of the goods shall be carried out at the supplier's plant by the supplier, prior to shipment to check whether the goods are in conformity with the technical specifications attached to the purchase order. Manufacturer's test certificate with data sheet shall be issued to this effect and submitted along with the delivery documents. The purchaser shall be present at the supplier's premises during such inspection and testing if need is felt. The location where the inspection is required to be conducted should be clearly indicated. The supplier shall inform the purchaser about the site preparation, if any, needed for installation of the goods at the purchaser's site at the time of submission of order acceptance.</p> <p>The acceptance test will be conducted by the Purchaser, their consultant or other such person nominated by the Purchaser at its option after the equipment is installed at purchaser's site in the presence of supplier's representatives. The acceptance will involve trouble free operation and ascertaining conformity with the ordered specifications and quality. There shall not be any additional charges for carrying out acceptance test. No malfunction, partial or complete failure of any part of the equipment is expected to occur. The Supplier shall maintain necessary log in respect of the result of the test to establish to the entire satisfaction of the Purchaser, the successful completion of the test specified.</p> <p>In the event of the ordered item failing to pass the acceptance test, a period not exceeding one weeks will be given to rectify the defects and clear the acceptance test, failing which the Purchaser reserve the right to get the equipment replaced by the Supplier at no extra cost to the Purchaser.</p> <p>Successful conduct and conclusion of the acceptance test for the installed goods and equipment shall also be the responsibility and at the cost of the Supplier.</p>
18	<p><b>Resolution of Disputes:</b> The dispute resolution mechanism to be applied pursuant shall be as follows:</p> <p>In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration &amp; Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Director, National Institute of Technology Durgapur and if he is unable or unwilling to act, to the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.</p> <p>In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.</p> <p>The venue of the arbitration shall be the place from where the order is issued.</p>
19	<p><b>Applicable Law:</b> Settlement of any dispute will be made under the jurisdiction of Durgapur Court.</p>

20	<p><b>Right to Use Defective Goods</b>  If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.</p>
21	<p><b>Supplier Integrity</b>  The Supplier is responsible for and obliged to conduct all contracted activities in accordance with the Contract using state of the art methods and economic principles and exercising all means available to achieve the performance specified in the contract.</p>
22	<p><b>Training</b>  The Supplier is required to provide training to the designated Purchaser's technical and end user personnel to enable them to effectively operate the equipment.</p>
23	<p><b>Installation &amp; Demonstration</b>  Installation and demonstration of the equipment within 15 days of the arrival of materials at the NIT Durgapur will carried out at the site of installation.  In case of any mis-happening/damage to equipment and supplies during the carriage of supplies from the origin of equipment to the installation site, the supplier has to replace it with new equipment/supplies immediately at his own risk. Supplier will settle his claim with the insurance company as per his convenience. NIT Durgapur will not be liable to any type of losses in any form.</p>
24	<p><b>Insurance:</b> For delivery of goods at the purchaser's premises, the insurance shall be obtained by the supplier in an amount equal to 110% of the value of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War Risks and Strikes. The insurance shall be valid for a period of not less than 3 months after installation and commissioning. <b>If orders placed on CIF basis, the insurance should be up to NIT DURGAPUR.</b></p>
25	<p><b>Incidental services:</b> The incidental services also include:  Furnishing of 01 set of detailed operations &amp; maintenance manual.  Arranging the shifting/moving of the item to their location installation within NITD premises at the cost of Supplier through their Indian representatives.</p>

26	<p><b>Warranty:</b></p> <p>Warranty period shall be from date of installation of Goods at the NIT Durgapur site of installation. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests. The warranty should be comprehensive on site.</p> <p>The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall immediately within in 02 days arrange to repair or replace the defective goods or parts thereof free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts/goods thereafter. The period for correction of defects in the warranty period is 02 days. If the supplier having been notified fails to remedy the defects within 02 days, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expenses and without prejudice to any other rights, which the purchaser may have against the supplier under the contract.</p> <p>The warranty period should be clearly mentioned. The maintenance charges (AMC) under different schemes after the expiry of the warranty may also be mentioned. The comprehensive onsite warranty will commence from the date of the satisfactory installation/commissioning of the equipment against the defect of any manufacturing, workmanship and poor quality of the components.</p> <p>After the warranty period is over, Annual Maintenance Contract (AMC)/Comprehensive Maintenance Contract (CMC) up to next two years should be started. The AMC/CMC charges will not be included in computing the total cost of the equipment, and needed to be mentioned separately.</p>
27	<p><b>Governing Language</b></p> <p>The contract shall be written in English language. English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the same language.</p>
28	<p><b>Notices</b></p> <p>Any notice given by one party to the other pursuant to this contract/order shall be sent to the other party in writing or by cable, FAX or e mail and confirmed in writing to the other party's address. A notice shall be effective when delivered or on the notice's effective date, whichever is later.</p>
29	<p><b>Taxes</b></p> <p>Suppliers shall be entirely responsible for all taxes, GST in respect of the transaction between the Purchaser and the Supplier, duties, license fees, octroy, road permits, etc., incurred until delivery of the contracted Goods to the Purchaser.</p>

30	<p><b>Duties</b></p> <p>NIT Durgapur is exempted from paying custom duty and necessary “Custom Duty Exemption Certificate” can be issued after providing following information and Custom Duty Exemption Certificate will be issued to the shipment in the name of the Institute, (no certificate will be issued to third party): The procured product should be used for teaching, scientific and research work only.</p> <p>a) Shipping details i.e. Master Airway Bill No. and House Airway No. (if exists) b) Forwarder details i.e. Name, Contact No., etc.</p> <p>NIT Durgapur is exempted from paying Excise Duty and necessary Excise Duty Exemption Certificate will be provided for which following information are required.</p> <p>b) Quotation with details of Basic Price, Rate, Tax &amp; Amount on which ED is applicable c) Supply Order Copy d) Proforma-Invoice Copy.</p>
31	<p><b>Agency Commission:</b> Agency commission if any will be paid to the Indian agent in Rupees on receipt of the equipment and after satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances. The details should be explicitly shown in Tender even in case of Nil commission. The tenderer should indicate the percentage of agency commission to be paid to the Indian agent.</p>
32	<p><b>Payment:</b></p> <p>(i) For imported items Payment will be made through irrevocable Letter of Credit (LC) Cash Against Documents (CAD)/Against delivery/after satisfactory installation by T.T. Letter of Credit (LC) will be established in favour of foreign Supplier after the submission of performance security. The letter of credit (LC) will be established on the exchange rates as applicable on the date of establishment. For Imports, LC will be opened for 100% FOB/CIF value. 80% of the LC amount shall be released on presentation of complete and clear shipping documents and 20% of the LC amount shall be released after the installation and demonstration of the equipment at the INST site of installation in faultless working condition for period of 60 days from the date of the satisfactory installation and subject to the production of unconditional performance bank guarantee as specified in Clause 8 of tender terms and conditions.</p> <p>(ii) For Indigenous supplies, 100% payment shall be made by the Purchaser against delivery, inspection, successful installation, commissioning and acceptance of the equipment at NIT Durgapur in good condition and to the entire satisfaction of the Purchaser and on production of unconditional performance bank guarantee as specified in Clause 9 of tender terms and conditions.</p> <p>(iii) Indian Agency commission (IAC), if any shall be paid after satisfactory installation &amp; commissioning of the goods at the destination at the exchange rate prevailing on the date of negotiation of LC documents, subject to DGS&amp;D registration for restricted items.</p> <p>(iv) All the bank charges within India will be borne by the Institute and outside India will be borne by the supplier.</p> <p>100% payment shall be made by the Purchaser within 6 weeks after successful installation, commissioning and acceptance of the equipment at NIT Durgapur in good condition and to the entire satisfaction of the Purchaser and on production of unconditional performance bank guarantee as specified in Clause 8 of tender terms and conditions.</p>
33	<p><b>User list:</b> Brochure detailing technical specifications and performance, list of industrial and Educational establishments where the items enquired have been supplied must be provided. (Ref. Annexure-III)</p>

34	<p><b>Manuals</b></p> <p>(i) Before the goods and equipment are taken over by the Purchaser, the Supplier shall supply operation and maintenance manuals. These shall be in such details as will enable the Purchaser to operate, maintain, adjust and repair all parts of the works as stated in the specifications.</p> <p>(ii) The Manuals shall be in the ruling language (English) in such form and numbers as stated in the contract.</p> <p>(iii) Unless and otherwise agreed, the goods equipment shall not be considered to be completed for the purposes of taking over until such manuals and drawing have been supplied to the Purchaser.</p>
35	<p><b>Application Specialist:</b> The bidder should mention in the Techno-Commercial bid the availability and names of Application Specialist and Service Engineers in the nearest regional office. (Ref. to Annexure-III)</p>
36	<p><b>Spare Parts</b></p> <p>The Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:</p> <ol style="list-style-type: none"> <li>i. Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and</li> <li>ii. In the event of termination of production of the spare parts:</li> <li>iii. Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and</li> <li>iv. Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.</li> <li>v. Vendor must ensure availability of spare parts for minimum of five years after commissioning.</li> </ol> <p>Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods, such as gaskets, plugs, washers, belts etc. Other spare parts and components shall be supplied as promptly as possible but in any case within six months of placement of order.</p>
37	<p><b>Defective Equipment:</b> If any of the equipment supplied by the bidder is found to be substandard, refurbished, un-merchantable or not in accordance with the description/specification or otherwise faulty, the purchaser will have the right to reject the equipment or its part. The prices of such equipment shall be refunded by the bidder with 18% interest if such payments for such equipment have already been made. All damaged or unapproved goods shall be returned at suppliers cost and risk and the incidental expenses incurred thereon shall be recovered from the supplier. Defective part in equipment, if found before installation and/or during warranty period, shall be replaced within 30 days on receipt of the intimation from this office at the cost and risk of supplier including all other charges. In case supplier fails to replace above item as per above terms &amp; conditions, NIT Durgapur may consider “Banning” the supplier.</p>



38	<p><b>Termination for Default</b></p> <p>The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part:</p> <ul style="list-style-type: none"> <li>i. If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the order or within any extension thereof granted by the Purchaser; or</li> <li>ii If the Supplier fails to perform any other obligation(s) under the Contract.</li> <li>iii If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.</li> </ul> <p>For the purpose of this Clause:</p> <p><b>“Corrupt practice”</b> means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.</p> <p><b>“Fraudulent practice”</b> means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition;”</p> <p>In the event the Purchaser terminates the Contract in whole or in part, the Purchaser may procure, upon such terms and in such manner, as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.</p>
39	<p><b>Downtime:</b> During the warranty period not more than 5% downtime will be permissible. For everyday exceeding permissible downtime, penalty of 1/365 of the 5% FOB value will be imposed. Downtime will be counted from the date and time of the filing of complaint with in the business hours.</p>
40	<p><b>Training of Personnel:</b> The supplier shall be required to undertake to provide the technical training to the personnel involved in the use of the equipment at the Institute premises, immediately after completing the installation of the equipment for a minimum period of two days at the supplier’s cost.</p>
41	<p><b>Disputes and Jurisdiction:</b> Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located in Durgapur</p>
42	<p><b>Compliance certificate:</b> This certificate must be provided indicating conformity to the technical specifications. (Annexure-I)</p>
43	<p>All other terms and conditions of <b>GFR 2017 of the Government of India</b> will be applicable.</p>

## COMPLIANCE SHEET

**The supplier has to put (Y/N) in the respective compliance sheet**

<u>Solar Simulator I-V System with IPCE.</u>	YES / NO
<p><b><u>1. Class AAA Solar simulator</u></b></p> <p>Solar Simulator Class: Class AAA(As per ASTM E927/ IEC 60904-9 /JIS C8912 ) Test Reports for class AAA conditions has to be attached.</p> <p>Type of lamp : Xenon Short Arc</p> <p>Power Range :300 W or better</p> <p>Illuminated area :3" (80mm) X 3" (80mm)</p> <p>Light Source : Steady State</p> <p>Air Mass Filter : AM1.5G Standard</p> <p>Spectral Range : 400 to 2100 nm</p> <p>Collimation Angle : +/- 4 deg or better</p> <p>Lamp lifetime : 1,000 Hours or better</p> <p>Adjustment Range of light intensity (Adjustable) : 100 mW/cm<sup>2</sup> (1SUN) (+/- 15% is</p> <p>Spectral Match : ±25% or better</p> <p>Non-uniformity of irradiance : ≤ 2% or better( this has to be demonstrated at the time of installation)</p> <p>Temporal Stability : ≤ 2% or better</p> <p>Optimum Working Distance : 8" (inch) or better</p> <p>Suitable to measure the following PV Technologies : 1. Mono-crystalline Silicon 2. Amorphous Silicon 3. DSSC 4. Organic Solar cell</p> <p>Power Supply : 110-220AC Volts, 50-60Hz</p> <p><b><u>2. I-V Station with the 1A Current/source meter</u></b></p> <p>Electrical Interface : 4 Wire</p> <p>Current range : 1 Amps</p> <p>Voltage range : +/- 20.0 Volts</p> <p>Current accuracy : better than 0.5%</p> <p>Voltage accuracy : better than 0.5%</p> <p>Max Output Power : 20 W or better</p> <p>No. of Measurement points :100-1000 or better</p> <p>Computer Interface : RS-232 Cable or USB which is suitable</p> <p><b><u>3. Software features</u></b></p> <p>Software <b>should preferably handle</b> measurement of both P type and N type cells without any cell connection changes. Should measures both Light &amp; Dark I-V Curves so as to eliminate the initial hysteresis, if any. Provides printable test reports and test data in text files for easy exchange between programs</p> <p>Parameters to be measured: Isc, Voc, VMAX, IMAX, PMAX, FF, Efficiency, Rs, Rsh, Jsc, Rs Density, RSH Density, Dark I-V and time dependent I-V with light on off conditions (option</p>	

should be there in the software)

#### **4. Cell holder and Temperature Controller**

Reference cell hold chuck size	: <b>3x3 inch or better</b>
Unit Design	: Electrically isolated from all other source
Chuck plate Material	: Copper
Test Connection	: Spring loaded gold pin for 4 wire I-V test
Connection	
Temperature control device	: Sample stage should equipped with temperature control device with temperature range <b>+5°C to +80°C</b> or better (Accuracy < ±0.5°C or better.)
Sample angle orientation for	: Provision to change angle orientation of sample Angle (minimum 10 <sup>0</sup> to 90 <sup>0</sup> ) dependent efficiency measurement.

#### **5. Accessories**

##### **i) Calibrated Reference Cell with Connecting Cables**

Material: Standard Silicon cell or Mono-crystalline Photovoltaic Cell encased in a Metal Enclosure with protective quartz window and equipped with Temperature sensor.

Certificate of Calibration: It should be certified by NIST or AIST and traceable to NREL

##### **ii) Spare Xenon Lamp for Solar Simulator**

Power Output: 300W or better

##### **iii) Filters**

AM1.5, AM1 and AM0

##### **iv) Computer**

Branded computer (like HP or Dell) compatible with I-V software

##### **v) Probe Kits**

Magnetic electrical contact probe kits with X- Y-Z micromanipulator joystick (2 nos)

Shaft Probe (10 nos.)

Material: Tungsten carbide or Tungsten for low leakage current

Probe Diameter: 25 um or better

#### **6. Other requirements:**

The bidder must have at least five installations of the system or equivalent in India during last five years. End user certificate confirming satisfactory performance to be provided.

Response time of the bidder for any service matter should be less than 72 hours.

I have also enclosed all relevant documents in support of my claims, (as above) in the following pages.

**Signature of Bidder with date**

**Name:**

**Designation:**

**Organization Name:**

**Contact No. :**

**E-mail Id:**

## &lt;&lt;Organization Letter Head&gt;&gt;

## DECLARATION SHEET

We, \_\_\_\_\_ hereby certify that all the information and data furnished by our organization with regard to this tender specification are true and complete to the best of our knowledge. I have gone through the specification, conditions and stipulations in details and agree to comply with the requirements and intent of specification.

This is certified that our organization has been authorized (Copy attached) by the OEM to participate in Tender. We further certified that our organization meets all the conditions of eligibility criteria laid down in this tender document. Moreover, OEM has agreed to support on regular basis with technology / product updates and extend support for the warranty.

The prices quoted in the financial bids are subsidized due to academic discount given to NIT Durgapur.

We, further specifically certify that our organization has not been Black Listed/De Listed or put to any Holiday by any Institutional Agency/ Govt. Department/ Public Sector Undertaking in the last three years.	NAME & ADDRESS OF THE Vendor/ Manufacturer / Agent
Phone No.:	
Fax	
E-mail	
Contact Person Name	
Mobile Number	
TIN Number	
PAN Number	
(In case of on-line payment of Tender Fees) UTR No. (For Tender Fee)	
(In case of on-line payment of EMD) UTR No. (For EMD)	

**(Signature of the Bidder with date  
& Seal)  
Name**

**LIST OF GOVT. ORGANIZATION/DEPTT**

<b>List of Government Organizations for whom the Bidder has undertaken such instrument during last five years (must be supported with work orders)</b>			
Sl. No.	Name of the organization with address	Name of Contact Person	Contact No.

<b>Name of application specialist / Service Engineer who have the technical competency to handle and support the quoted product during the warranty period.</b>			
Sl. No.	Name of the organization with address	Name of Contact Person	Contact No.

**Signature of Bidder with date**

**Name:**

**Designation:**

**Organization Name:**

**Contact No. :**

**E-mail Id:**

## **SUBMISSION OF BID**

The Online bids (complete in all respect) must be uploaded online in **two** Envelops as explained below:

<b>Envelope – 1</b> (Following documents to be provided as single PDF file)			
<b>Sl. No.</b>	<b>Documents</b>	<b>Content</b>	<b>File Types</b>
1	<b>TECHNICAL BID</b>	Compliance Sheet as per Annexure – I	.pdf
2		Organization Declaration Sheet as per Annexure - II	.pdf
3		List of organizations/ clients where the same products have been supplied (in last two years) along with their Contact number(s). (Annexure-III)	.pdf
4		Technical supporting documents (data sheet, manual, OME certificate) in support of all claims	.pdf
5		Bidders other credentials (PAN, Tread Licence, 3 years IT return, etc).	.pdf
<b>Envelope – 2</b>			
<b>Sl. No.</b>	<b>TYPES</b>	<b>Content</b>	<b>File Types</b>
1	<b>Financial Bid</b>	Price bid should be submitted in .xls format	.xls