
	सामग्री प्रबंधन अनुभाग भारतीय प्रौद्योगिकी संस्थान, रुड़की रूड़की-247667, हरिद्वार, उत्तराखण्ड, भारत Phone-(O) 01332-28-4293, 4693 E-mail: mmiitr@iitr.ac.in	Material Management Section Indian Institute of Technology Roorkee-247667(Haridwar) (Uttarakhand) (India) Phone-(O) 01332-28-4293, 4693 E-mail: mmiitr@iitr.ac.in	
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	PAN-AAALI0033R		

निविदा प्रलेख / Tender Document

No. 1100001795/MM-20/IITR/2020-21/Plant Green House Facilit/BIO/224

Date of Uploading of Tender -<https://eprocure.gov.in/eprocure/app>

7/Dec/2020

Bids under two bid systems (Technical and Commercial) are invited Online at CPP Portal (<https://eprocure.gov.in/eprocure/app>) from the reputed manufacturer/authorized supplier/dealer for the following items. **Manual bids will not be accepted.**

वस्तु की तकनीकी विषिष्टताये / Technical Specifications of item:

Sr. No	Name of item / Specifications	QTY	UOM
1	Plant Green House Facility	1	No.
(For Detailed Technical Specification Plz refer Annexure-V)			
नोट-1: कृपया वस्तु का मूल्य एवं कर अलग-अलग दर्शाए।			
Note-1: Please quote the Rate & Taxes of the item separately.			
Note-2: E-way bill is to be issued by the Venders/Transporter			
Note-3: The HSN / SAC Code of the item must be mentioned.			
For Reasonability of Rates, The firm must enclose the last two supply orders for the same item with Financial Bid (Annexure-III) only.			
Critical Date Sheet			
1	Published Date	8/Dec/2020	(15:00)
2	Bid Document Download / Sale Start Date	8/Dec/2020	(15:30)
3	Seek Clarification Start Date	8/Dec/2020	(16:00)
4	Seek Clarification End Date	15/Dec/2020	(16:00)
5	Pre Bid Meeting Date	Not Required	Not Required
6	Bid Submission Start Date	16/Dec/2020	(15:00)
7	Bid Submission End Date	29/Dec/2020	(17:30)
8	Bid Opening Date	30/Dec/2020	(12:00)

Chapter-1 : Instruction to bidders

- A. The Tender should be enclosed with proper certifications like Agency Certification, Authorization certificate and/or Proprietary Certificate, as the case may be, in support of your offer.
- B. बोली का जमा किया जाना / **Submission of Bids:**
The bids should be submitted online in two parts –
1 (i) The Technical Bid (Annexure-I, II, IV & V) and Tender Acceptance Letter
(ii) The Financial Bid (Annexure-III) & Price Bid in .XLS Format
Rates in .xls format will only be considered for Financial evaluation.
2 The bids should be on official pad preferably with GST Number of the firm

- 3 The quotations should bear full details and where possible may be duly supported with catalogues, pamphlets, literature, samples of the item/items as the case may be for comparing the quality and rates of the item(s).
- 4 The transportation cost, insurance charge etc., if any, percentage/ rate of GST or all other taxes and duties should be clearly mentioned.
- 5 The bids / rates / tenders should remain valid for a minimum period of 90 days from the date of opening.
- 6 **Since this purchase being for research purpose, I.I.T., Roorkee is registered in DSIR, New Delhi, it is therefore exempted from the payment of GST up to the limit of exemption as per Govt. Rules. The bidder should quote accordingly.**
- 7 The rates shall not be subject to escalation of any nature.
- 8 The rates quoted should be applicable to educational institutions and any cost advantage received in lieu thereof should be passed on the Institution.
- 9 While quoting / sending rates, the firm shall give an undertaking as per Annexure-II.

C. विधि निक्षेप/ Earnest Money Deposit (EMD):

In lieu of EMD, declaration is to be provided/submitted as per annexure-IV of the tender document.

D. निष्पादन बैंक प्रत्याभूति/ Performance Bank Guarantee (PBG):

In case the total order value of items becomes Rs.25.00 Lakhs or above, 3% of the total order value in the form of Bank Guarantee or FDR pledged in favor of "The Registrar, IIT Roorkee" is required at the time of installation of the equipment which should remain valid at least during the warranty period plus sixty days. No interest shall be claimed by the bidder on the PBG submitted.

E. बोलियों का खोला जाना/ Opening of Bids:

- 1 The Technical Bids will be opened online at CPPP Portal (<https://eprocure.gov.in/eprocure/app>)-**Plz refer Critical Date Sheet**
- 2 The Financial bids of only the Technically Qualified bidders will be opened. The date and time for opening the Financial Bid will be communicated to the respective firm later by the system (CPP Portal (<https://eprocure.gov.in/eprocure/app>))
- 3 Representatives of the firms(s) may be present at the time of openings, if they so desire.

Chapter-2 : Conditions of Contract

- F. ठेका देना/ Award of Contract:**
The final selection of the bidder for the award of the contract will be made on the basis of the lowest commercial bid amongst the Technically Qualified Bidders.
- G. पूर्व-आपूर्ति निरीक्षण/ Pre-supply Inspection:**
Authorized representative of the Institute shall make the final inspection before supply of the item at site of the firm, if required.
- H. वस्तु की आपूर्ति/ Supply of Item:**
The whole supply as per order shall have to be completed within the time mentioned in the order failing which the I.I.T. Roorkee shall have the right to accept or reject any quantity of items ordered. The firm will have to arrange for supply of the material in good condition.
- I. भुगतान की शर्तें/ Payment Terms:**
- A. Payment in INR for supply of goods:**
Where installation is not required: 100% payment will be made after satisfactory delivery of material duly certified by the HOD/P.I. **OR**
Where Installation is required :100% payment will be made after satisfactory delivery and installation of the material duly certified by the HOD/P.I. **OR**
80% payment will be made on receipt and acceptance of goods and balance 20% on successful installation and commissioning duly certified by the HOD/P.I. **OR**
100% Advance will be paid against submission of 110% Bank Guarantee of the Total Order value. Bank Guarantee should be in favor of "The Registrar, IIT Roorkee" which should be valid till the date of Installation/Delivery period + 30 days
- B. Payment in INR for AMC/Service:**
Quarterly/Halfyearly after satisfactory completion of work/service duly certified by the H.O.D./P.I.
- J. दंड/Penalty:**
A penalty of 0.5% of the total order value per week shall be levied for the delay subject to a maximum of 5% of the total order value.
In case of the non-supply of the item after the acceptance of the work/supply order, the firm will be debarred from any future bidding process of IIT Roorkee for a period of minimum one year.
(Please refer annexure-IV)

K. अप्रत्याशित घटना/Force Majeure:

For the purpose of and within the scope of contract by way of indication and not of limitation, the term "Force Majeure" shall mean acts of nature, strikes, Lockouts, or other industrial disturbances, act of public/enemy, wars, blockades, insurrection, riots, epidemics, landslides, earthquakes, storms lightening, flood, washouts, civil disturbances, explosion and any other similar even not within the control of either party on which by exercise of due care and diligence neither party is able to prevent or overcome.

L. मध्यस्थता / Arbitration:

In the event of any difference or dispute arising out this work, all effort shall be made by both the parties to settle the same amicably. Failing an amicable settlement, the dispute shall be finally settled through arbitration conducted under the Arbitration and Conciliation Act 1996, by arbitrators appointed in accordance with the said Act. The arbitration shall give reasoned and speaking award. All disputes are subject to Roorkee jurisdiction only.

M. बोली अस्वीकृती के लिए मानदंड / Criteria for bid rejection:

- 1 If technical bid found without the required undertaking (Annexure-II) and declaration (Annexure-IV).
- 2 If it found at a later date that any information given in the bids is Incorrect/false then the bid is liable to be disqualified/rejected.
- 3 Canvassing in any form will result to disqualification.
- 4 If "extra, as actual" etc. are mentioned against any of the price components in the bid the bid will be rejected.
- 5 If the firm quotes 'NIL' charges / consideration, the bid shall be treated as unresponsive and will not be considered.
- 6 If financial bid is found along with technical bid in pdf on CPP Portal, then the bid shall be rejected outrightly.
- 7 If any bidder submitting two/multiple bids for the same item of a tender, both/all the bids of that bidder will be outrightly rejected.

Chapter-3 : Schedules of requirements

N. टिप्पणी / Note:

- 1 If the supplier/firm is manufacturer/authorized dealer/sole distributor/of the item, the certificate to this effect should be attached.
- 2 Please note that the firms must submit the compliance Statement in an organized and structured manner in respect of all the specifications as per Annexure-V with the supporting catalogue/leaflet of the firm. Annexure-I, II & V have to be submitted with Technical Bid and Annexure-III with financial bid.
- 3 It may also be noted that the tender bids received after the stipulated date & time or found incomplete and the tender bids containing false/incorrect information shall be summarily rejected. The Institute shall not entertain any communication in this regard, whatsoever.
- 4 The firm is required to give its Bank Account details with IFSC for the purpose of making e-payment.
- 5 The Indian Institute of Technology (IIT) Roorkee reserves the right to reject any quotation wholly or partly without assigning any reason.
- 6 The quantity shown in the tender can be increased or decreased to any extent depending upon the actual requirement.
- 7 The decision of the institute in all matters relating to eligibility, acceptance, rejection of the bid will be final and binding on the applicants.
- 8 IIT Roorkee discourages High Sea Sale purchase. All tenders with High Sea Sale will be rejected.
- 9 The firms should clearly mention (in the financial bid) the Harmonized System of Classification (HS code) defined by the Central Custom and Excise Board (Govt. of India)- for the item(s) involving import.
- 10 **If the bid opening date happens to be a holiday, then the bid will be opened at 3.30PM of the next working day followed by the holiday.**
- 11 If an agent submits bid on behalf of the Principal/OEM, the same agent can not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.
- 12 Indian Agent should submit the certificate from the Foreign Principal that they are the Authorized & Registered Indian Agent.
- 13 The quantity shown against the item is approximate and may vary as per demand of the Institute at the time of placing order. Also, the final requirement of each line item will be decided by the Institute at the time of placing the PO.
- 14 **Any corrigendum/addendum/errata in respect of the Tender Notice/ Enquiry letter shall be made available CPP Portal (<https://eprocure.gov.in/eprocure/app>). Hence prospective bidders are advised to visit the CPP Portal (<https://eprocure.gov.in/eprocure/app>) regularly.**
- 15 Bidders shall be responsible for the correctness of the information provided in the enquiry letter/tender document. If it is found at a later date that any information given in the bid is Incorrect/false then the bid is liable to be disqualified/rejected.

- 16 Before submission of bids, bidders should read the complete enquiry letter/tender document carefully and ensure that the bidders fulfill the eligibility criteria.
- 17 In case the item/product is under rate contract with DGS&D or GeM, then Bidder should certify that the rate quoted is not over and above (higher side) the rates under RC with the DGS&D or GeM.
- 18 **In Item Wise BoQ .xls sheet, In column M, leave blank for the item/service not provided/quoted by you. If quoted 0 then it will be considered that the item/service will be provided free of cost.**
Or
In Item Rate BoQ .xls sheet, If quoted 0 for the items/services in column M then it will be considered that the items/services will be provided free of cost.
- 19 **The Institute reserves the right to rectify any discrepancy of this advertisement, if found later on. In case of any inadvertent mistake in the process which may be detected at any stage even after the issue of purchase order, the Institute reserves the right to modify/withdraw/cancel any communication made to the bidder.**

Chapter-4 : Specifications and allied Technical details

Plz. See Annexure- I, II, IV, V

Chapter-5 : Price Schedule (to be utilized by the bidders for quoting their prices online in .XLS format at CPPP Portal (<https://eprocure.gov.in/eprocure/app>))

Plz. See Annexure- III & Price Bid in .XLS Format

Chapter-6 : Contract Form

Purchase Order is used as Contract Form

Chapter-7 : Other Standard Forms, if any to be utilized by the purchaser and bidders

Tender Acceptance Letter

***उप कुलसचिव (सामग्री प्रबंधन) / सहायक कुलसचिव (सामग्री प्रबंधन)**

Deputy Registrar (MM)/ Assistant Registrar (MM)

***Document Digitally Signed on <https://eprocure.gov.in/eprocure/app>**

For any Clarification regarding technical specifications of item Please Contact:

**Prof. Shri Ram Yadav
Deptt. of Biotechnology,
IIT Roorkee**

**Deptt. of
Biotechnology,
IIT Roorkee**

**Ph.-01332-28-4782
Email: srydbfbt@iitr.ac.in**

तकनीकी बोली

विस्तृत विवरण अनुपालन रिपोर्ट के साथ प्रस्तुत किया जाना है (अपने आधिकारिक लेटर हेड पर विक्रेता/फर्म द्वारा प्रस्तुत करने के लिए)

Detailed specification cum compliance report to be submitted with the Technical Bid
(to be submitted by the vendor/firm on its official letter head)

(For Detailed Technical Specification Plz refer Annexure-V)

Sr.No	Name & Required Specifications of Item(s)	Qty	UOM	Offered specifications of item(s) by the firm
1	Plant Green House Facility	1	No.	
	Firm's Profile :			
1	Manufacturer/Authorized Agent/Distributor/Dealer/Supplier(valid certificate must be attached)			
2	E-mail I.D. & Telephone/Mobile No. Detail of Bank A/C			
Note:	1. "offered specifications", should be filled up properly in the format provided as per Annexure-I.			
	2. Volume & Weight of the item should also be mentioned.			
	3. The HSN / SAC Code of the item must be mentioned.			

Signature: _____

Name : _____

Designation : _____

Seal of the Organisation

उपबंध / UNDERTAKING

Ref. No. No. 1100001795/MM-20/IITR/2020-21/Plant Green House Facilit/BIO/224
Dated:- 7-Dec-20

That all the terms/conditions mentioned in the enquiry letter/tender against which the rates are being given are acceptable to the firm.

It is certified that the rate quoted is not over and above (higher side) the rates under RC with the DGS&D or GeM.

It is certified that the firm has never been black-listed from any Government Department. (State/Central Govt./ Autonomous/ PSU)

Signature_____

Name_____

Financial Bid

(to be submitted by the vendor/firm on its official letter head)

Ref. No. No. 1100001795/MM-20/IITR/2020-21/Plant Green House Facilit/BIO/224
 Date: 7-Dec-20

Rates :

Sr. No	Name of item / Specifications	Qty	UOM	Rate	Amount (INR) Or In Other Currency
	Plant Green House Facility	1	No.		To be filled in .XLS sheet (attached)
Total					
Grand Total Rs.					

1) Price of the items should be clearly mentioned if supplied Free of Cost.

Terms & Conditions:

- 1 Prices (quoted in Rs.): FOR Deptt. of Biotechnology,
IIT Roorkee
- 2 **Payment:** **Should be clearly mentioned, As per clause-I of enquiry letter.**
- 3 Validity:
- 4 Delivery period:
- 5 Other charges:
- 6 **Warranty:**
- 7 Rejection: Equipment if found not as per the required specification would be rejected.
As per clause-J of enquiry letter.
- 8 Penalty Clause: In case of the non-supply of the item after the acceptance of the work/supply order, the firm will be debarred from any future bidding process of IIT Roorkee for a period of minimum one year.
(Please refer annexure-IV)
- 9 PBG: In case the total order value of items becomes Rs.25.00 Lakhs or above, 3% of the total order value in the form of Bank Guarantee or FDR pledged in favor of "The Registrar, IIT Roorkee" is required at the time of installation of the equipment which should remain valid at least during the warranty period plus sixty days. No interest shall be claimed by the bidder on the PBG submitted.
- 10 Only GST Exemption Certificate is provided by the Institute (If required).

It is certified that the rate quoted is not over and above (higher side) the rates under RC with the DGS&D or GeM.

Signature _____
 Name _____
 Designation _____
 Seal Of the Firm/Organization _____

Details of Institute :

IEC CODE	0100000011	
AD CODE	0001069-2770325	S.B.I., IIT ROORKEE
	0303974-2770324	P.N.B. IIT ROORKEE

DECLARATION
(to be submitted by the vendor/firm on its official letter head)

**To,
Registrar,
IIT Roorkee,
Roorkee,**

Subject: Undertaking as per GFR – 2017, Rule 170(iii) in lieu of Bid Security/Earnest Money Deposit (EMD)

Tender Ref no: No. 1100001795/MM-20/IITR/2020-21/Plant Green House Facilit/BIO/224

Dated 7-Dec-20

Dear Sir,

We, the undersigned, offer to Supply the
..... as per tender at IIT Roorkee, in response to your above refered tender no.

We are hereby submitting our proposal/Bid/Quote for the same, which includes Technical bid and the Financial Bid. As a part of eligibility requirement stipulated in above refered tender document, we hereby submit a declaration in lieu of Earnest Money Deposit (EMD) as given below:

1. Our bid shall remain valid for 90-days from the date of financial opening and that we will not withdraw or modify our bid during the validity period,
2. In case, we are declared as successful bidder and an order is placed on us, we will submit the acceptance in writing within 7 days of placement of order on us.
3. In case, we are declared as successful bidder and an order is placed on us, we undertake, to submit a Performance Bank Guarrantee(PBG) as mentioned in above refered tender document or as per terms stipulated in the Purchase Order.
4. In case of failure on our part to comply with any of the above said requirements, we are aware that we shall be declared as un-eligible for said tender and /or debarred from any future bidding process of IIT Roorkee for a period of minimum one year.
5. The undersigned is authorized to sign this undertaking.

Instructions for Online Bid Submission

Instructions to the Bidders to submit the bids online through the Central Public Procurement Portal for e Procurement at <https://eprocure.gov.in/eprocure/app>.

- 1 Possession of valid Digital Signature Certificate (DSC) and enrollment/registration of the contractors/bidders on the e-Procurement/e-tender portal are prerequisite for etendering.
- 2 Bidder should register for the enrollment in the e-Procurement site using the "Online Bidder Enrollment" option available on the home page. Portal enrollment is generally free of charge. During enrollment/registration, the bidders should provide only valid and true information including valid email id. All the correspondence shall be made directly with the contractors/bidders through email id as registered.
- 3 Bidder need to login to the site through their user ID/ password chosen during enrollment/registration.
- 4 Then the Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by SIFY/nCode/eMudra etc. recognized by Controller of Certifying Authorities (CCA) India on eToken/SmartCard, should be registered.
- 5 The registered DSC only should be used by the bidder in the transactions and should ensure safety of the same.
- 6 Contractor/Bidder may go through the tenders published on the site and download the tender documents/ schedules for the tenders.
- 7 After downloading/getting the tender document/schedules, the Bidder should go through them carefully and then submit the documents as required, otherwise bid will be rejected.
- 8 Any clarifications may be sought online through the tender site, through the contact details or during pre-bid meeting if any. Bidder should take into account the corrigendum if any published before submitting the bids online.
- 9 Bidder may log in to the site through the secured login by the user id/ password chosen during enrolment/registration and then by submitting the password of the e-Token/Smartcard to access DSC.
- 10 Bidder may select the tender in which he/she is interested in by using the search option and then move it to the 'my tenders' folder.
- 11 From my tender folder, he may select the tender to view all the details uploaded there.
- 12 It shall be deemed that the bidder has read and understood all the terms and conditions before submitting the offer. Bidder should go through the tender schedules carefully and upload the documents as asked; otherwise, the incomplete bid shall stand rejected.
- 13 Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/ schedule and ordinarily it shall be in PDF/xls/rar/jpg/dwf formats. If there is more than one document, all may be clubbed together and provided in the requested format. Bidders Bid documents may be scanned with 100 dpi with black and white option. It is advisable that each document to be uploaded through online for the tenders should be less than 2 MB. If any document is more than 2MB, it can be reduced through zip/rar and the same if permitted may be uploaded. The file size being less than 1 MB the transaction uploading time will be very fast.
- 14 The Bidders can update well in advance, the documents such as certificates, annual report details etc., under "My Space option" and these can be selected as per tender requirements and then send along with bid documents during bid submission. This will facilitate the bid submission process faster by reducing upload time of bids.
- 15 Bidder should submit the Tender Fee/ EMD as specified in the tender. Scanned copy of the same should be uploaded as part of the offer. (if applicable)
- 16 While submitting the bids online, the bidder shall read the terms and conditions and may accept the same to proceed further to submit the bid packets.
- 17 The bidder has to select the payment option as offline to pay the Tender FEE/ EMD as applicable and enter details of the same. (if applicable)
- 18 The details of the DD/any other accepted instrument, physically delivered, should tally with the details available in the scanned copy and the data entered during bid submission time, otherwise submitted bid shall not be acceptable or liable for rejection. (If applicable)
- 19 The bidder has to digitally sign and upload the required bid documents one by one as indicated. Every act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read, understood and agreed with all clauses of the bid document including General conditions of contract without any exception.
- 20 The bidder has to upload the relevant files required as indicated in the cover content. In case of any irrelevant files, the bid may be rejected.

- 21 If the price bid format is provided in a spread sheet file like BoQ_XXXX.xls, the rates offered should be entered in the allotted space only and uploaded after filling the relevant columns. The Priced-bid/BOQ template shall not be modified / replaced by the bidder; else the bid submitted is liable to be rejected for the tender.
- 22 The bidders are advised to submit the bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission due date and time (as per Server System Clock). The TIA shall not be held responsible for any delay or the difficulties faced during the submission of bids online by the bidders.
- 23 After the bid submission (i.e. after Clicking "Freeze Bid Submission" in the portal), the acknowledgement number indicated by the system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender and also be used as entry pass to participate in the bid opening.
- 24 The time settings fixed in the server side and displayed at the top of the tender site, shall remain valid for all actions of requesting, bid submission, bid opening etc., in the e- Tender system. The bidders should follow such time during bid submission.
- 25 All the data being entered by the bidders would be encrypted using Public Key Infrastructure (PKI) encryption techniques to ensure the secrecy of the data. The data entered is not retrievable by unauthorized persons during the bid submission and until the time of bid opening by any person.
- 26 Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers' public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 27 The confidentiality of the bids is maintained with the use of Secured Socket Layer (SSL) 128 bit encryption technology. Data storage encryption of sensitive fields is done.
- 28 The bidder should logout of the tendering system using the normal logout option available at the top right hand corner and not by selecting the (X) exit option in the browser.
- 29 For any queries regarding e-Tendering process, the bidders may contact at address as provided in the tender document. Parallely for any further queries, the bidders are advised to contact over phone: **0120-4001005** or send an e-mail to – cphp-nic@nic.in.

Prequalification

- 1 An undertaking by the firm that it has never been black-listed must be attached along with the Bid, failing which the Bid shall be rejected. (As per Annexure-II)
- 2 True copy of Permanent Account Number.
- 3 Details of GST along with a copy of certificate to be attached.
- 4 Submission of samples if required, for all items indicated in the NIT. The make of items proposed to be supplied should be indicated and submitted along with the techno commercial unpriced bid without indicating the pricing components.
- 5 Willingness to execute all orders which are placed to meet emergency requirement on priority basis. The Bidder shall note that standards for workmanship, material and equipment, and references to brand names designated by the Purchaser in the tender document are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers in his bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

Tender Acceptance Letter
(To be given on Company Letter Head)

Date:

Sub: Acceptance of Terms & Conditions of Tender.

Tender No. 1100001795/MM-20/IITR/2020-21/Plant Green House Facilit/BIO/224

Tender description:

Dear Sir,

- 1 I/We have downloaded/ obtained the tender document(s) for the above mentioned 'Tender No.' from the web site(s) namely:

as per your advertisement, given in the above mentioned website(s).
- 2 I/We hereby certify that I/We have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like section(s), schedules(s) etc.), which form part of the contract agreement and I/we shall abide hereby by the terms/conditions/ clauses contained therein.
- 3 The corrigendum(s) issued from time to time by your department/ organisation too have also been taken into consideration, while submitting this acceptance letter.
- 4 I/We hereby unconditionally accept the tender conditions of above mentioned tender document(s)/ corrigendum(s) in its totality/entirety.
- 5 In case any provisions of this tender are found violated, then your department/organisation shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

Technical Specifications for Plant Green House Facility

1. Structure:

- Actual Containment Area: 792 sq. ft. equally divided into three equal independent containment area using Galvanised tubular frames with Sealed Hollow metal doors pressed Galvanized steel confirming to IS 277. Over all Area 1080 Sq.ft.
- Vestibule/Buffer Area- 288 sq. ft.
- Shape: Arc
- Sealed Door: Hollow metal doors pressed Galvanized steel confirming to IS 277. Door frame will be single rebate profile of size 100 x 50 mm made out of 1.20mm (18gauge) thick galvanized steel sheet. Frames will be provided with back plate bracket for anchor fasteners for installation. Door leaf will be 46mm thick fully flush double skin door manufactured from 0.8mm (22guage) minimum thick galvanized steel sheet. All five doors are fitted with necessary reinforcement for hinges, locks, and door closers. Complete door and frame will be covered with Pure Polyester Powder Coated 60-80 Micron thickness of approved colour. 2 Nos. in Vestibule area including emergency door and 3 nos. for each chambers (Total 5 Nos.).
- Air modulation system should be made available over the False Roof side with thermal controls, pre filters & axial driven heat evacuation arrangements (Details must be provided)
- All Structures, Rafters, Perlins, Trusses (complete) should be hot dip galvanized and design to take a wind load up to 140 km/h (details of modulation system must be provided).
- Galvanized Tubular Structure of 50mm x 50mm and 50mm x 25mm size ISI marked B class with necessary joining and water tightens components (such as fittings, clamps, screws and nuts should be GI plated to avoid corrosion)
- Roof, front wall, end wall, sidewalls and ceiling of the Containment Facility shall be covered by 10 mm thick Multiwalled walled (Four layer) clear multiwall polycarbonate sheet (preferably from Make Ultralite/Lexan), Aluminium Profile, EPDM gasket, Silicon sealant, and accessories. (Technical details of sheets must be provided)
- External Shading System: 75% agro shading net green colour (agro shade net) with rolling arrangement (Gear based) connecting pipe etc. can be rolled when not required.

2. Light System: (Individual for each Chamber)

- For sub chambers, providing and fixing of 30 powder coated tubular benching arrangement (2.5"x4"), out of 30, nine benches having three shelves in which two are working with independent Light Bank Arrangements using 24 LED lamps (25 watt) in each Light Bank. Separate Light Bank using 24 LED Lamps (25 watt) needs to be put independently on roof top of each respective bench, shelf to shelf distance on first shelf is 24" and another bench will be put at a distance of 36" with water/fog protectors on each light bank using thermal protectors and heat insulation. Bench selves are made of high quality bakalite sheets and each shelf has separate on/off switch. Rest benches with two shelves with shelf to shelf distance of 5" and with same lighting arrangement as above.
- Three additional benches along with Grow Lamps of following features-

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- Photosynthetically Active Radiation Lamp: PAR (LED) illumination 100-150 $\mu\text{moles}/\text{m}^2/\text{s}$ using Grow Lamps in addition to these Lamps Adjusting lights of variable wavelength (red, green, blue) should be provided with higher efficacies and higher PHOTOSYNTHETIC PHOTON FLUX along with SMART DIGITAL SELECTABLE CONTROLLING OF COLOR SPECTRUM, AND LUMINOCITY.
- PRORGRAMMABLE SELECTABLE WAVE LENGTH
- Wavelengths: 450nm, 660nm, 735nm & 5700K White /
- Wavebands: UV-A (380nm), Blue (400, 420 & 450nm), Green (520nm),
- Red (630, 660nm), Far Red (735nm), & White (5700K)
- (Technical details must be provided with enclosure & details otherwise tender shall be treated as non-responsive)

3. Cooling System (Separate for each chamber)

- High Static Commercial Air-conditioning cooling arrangements with Backup additive cooling system. in all three Sections individually having temperature range of 20°C to $28 \pm 2^{\circ}\text{C}$ with a provision for separate day-night temperature setting.
- Cooling Capacity 21101.11 Watt (6 TR) commercial cooling capacity. With Standby system so that one unit should work keeping another unit as standby operated through thermal controlled sequential controllers.
- Additive supporting Commercial cooling arrangements of Cooling Capacity 5275.27 Watt. 350*Pa static pressure of indoor unit provides long air supply & ensures flexibility in installation and positioning of AIR HANDLING UNITS and ODU.
- Temperature range: 20°C to $28^{\circ}\text{C} \pm 2^{\circ}\text{C}$ through out the year. (Technical details must be provided with enclosure & details)
- Along with Additional commercial air conditioning having 7033.70 Watt cooling capacity complete with separate controlling device should also be provided complete and separate electrical wiring, safety gears duly installed in additional area of 200 Sq.ft. complete.

4. Heating System: (Individual for each Chamber)

- Radiant Heating System using Far infrared ray radiation backed up with commercial Paralytic heating arrangements
- Far infrared ray radiation $-3.49 \times 10^2 \text{ watt}/\text{m}^2$ and Anion radiation more than 500 ions/cc
- IP 65 electrical termination with overheating preventing device
- Along with Backup arrangements.

5. Humidification System: (Individual for each Chamber)

Advance air drying humidification system which gives non wetting effects consumption (ultrasonic) 1-18 ltrs./hr. with complete plumbing using ABS plastic pipes and fittings, 100 liter of Carboy and commercial RO system along with 1700 ± 40 KHz ultrasonic humidifier having Ceramic Disc size : Φ 20mm.Titanium Coated. Mist Generation > 900 ml/Hr. Stainless Steel 304 grade enclosure (Technical details must be provided failing which tender may be disqualified)

6. Microprocessor Control Panel (Individual for each Chamber)

(i) Programmable Photoperiodic Timer:

- Clock Accuracy $\pm 2.5\text{sec/day@}20^\circ\text{C}$
- 1 Channel and Week Program
- 16 memory locations adjustable to the minutes
- Auto summer and winter time changing
- 1500 Hrs. Running reserve

(ii) Temperature Control System:

- Temp. Range: 0.1 to 59.9°C ; Accuracy: $\pm 1^\circ\text{C}$
- Hysteresis: 0.4°C with sensor probe Pt-100 Sensor cord 15 meters

(iii) Relative Humidity Control System:

- RH in the range of $\pm 4\%$, Real RH: $\pm 2\%$, ± 1 digit (at 45%)
- Range: 30% to 90%

(iv) Programmable Temperature and Humidity Data Logger for recording for each

Chamber: Temperature Range : 0.0°C to 60.0°C . Humidity Range : $0.0\% \text{RH}$ to $100.0\% \text{RH}$. Accuracy : $\pm 2.0\% \text{Rh}$ and $\pm 0.3^\circ\text{C}$ and Inbuilt real time clock calendar with lithium battery (Back up minimum 10Years).

7. 130 KVA THREE PHASE DIGITAL MICROCONTROLLED SERVO STABILIZER equally divided with Individual Chamber:

Under, Over Voltage & By pass switch, Air Cooled.

Input Voltage - 340-460 volts (Phase to Phase)

200-270 volts (Phase to Neutral)

Output Voltage - 400 volts $\pm 1\%$ (Phase to Phase)

230 volts $\pm 1\%$ (Phase to Neutral)

Phase - 3 Phase, 4 wire.

Speed of Correction - 20 to 30 V/sec

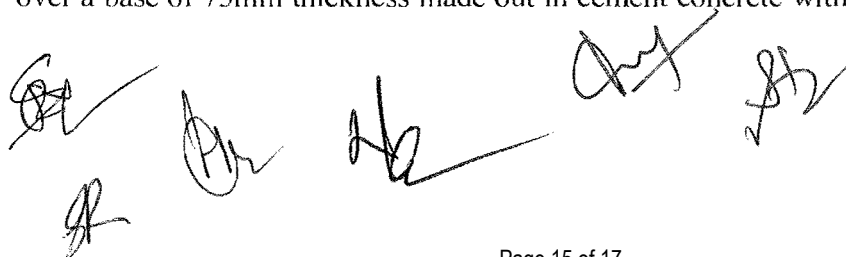
Response Time - Instantaneous (mili sec)

Duty Cycle - Continuous 24 Hrs

8. CCTV Monitoring: Each chamber and buffer area should be monitored through wireless CCTV cameras. All the required accessories for this should be provided.

9. Civil Construction:

- Foundation Wall: for all sides of Greenhouse along with the double door room/Pre entry room. WIDE Based 2' below earth's surface, and 2' above earth's surface, as kick-board 9" wide. Frame base block height 2'
- Floor: Should be Made of crushed bricks 2" thick with 20mm graded stone (Rodi) which is further flushed with 1:3:6 (Rodi:sand:cement). Further finished with Anti-slippery Vitrified flooring tiles with proper drainage arrangements complete as required.
- Plinth Protections : 2' wide cement concrete plinth protection at 1:2:4 ratio, 50mm thick over a base of 75mm thickness made out in cement concrete with 40mm brick ballast in



ration of 1:4:8, the work will be complete including curing of top surface and proper compaction of the under surface.

- Electrical wiring: All connections should be made from the provided location of electric line near the construction site. All wires should be of copper and desired load (Preferably from Make-Polycab/Finolex), Switches should be of imported make, with extra switches as standby. Each feature should have its own electric line with MCB and should be underground in PVC pipe complete set with A grade work. Each room will have its own RCCB control
- Air Curtain: Electronically balanced air curtain with double blower and atomized ON/OFF operation w.r.t. door opening at the entrance of the vestibule.
- Additional area of 200 sq.ft of same height will be made available with anti-slippery tile flooring and Galvanized structure covered with 10mm four layer Polycarbonate Sheet duly fixed using aluminum profiles, Door, Benching arrangements along with accessories

9. Miscellaneous items:

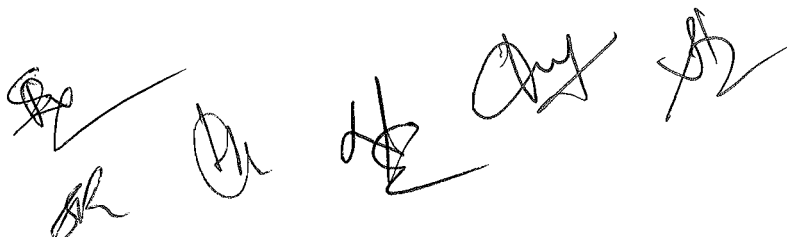
- Miscellaneous Stainless washbasin (2 in each chamber), aluminum ladder, wheel trolley, plumbing polymer pipes etc. should be provided. All fittings should be of ISI or equivalent material.
- Three powder coated storage racks with 4 shelves/rack should be provided in the buffer zone.
- Flexible wall hanging roller type retractable hose of good quality with 7 different water discharge streams in each area must be provided with complete plumbing fittings and pump assembly (technical details must be provided)
- Fitting of all electrical and water supply connections should be provided by manufacturer.
- 750 No. 8'' round nursery pots (without skirting) in three different colors (250 each of a color).
- 300 no. high quality plastic trays of 12 inch x 18 inch, in three different colors (100 each of a color).

10. **Fire Alarm System-** Uniformly installed in each sections and vestibule of the entire containment facility (Technical details must be provided). Three fire extinguishers should be provided.

11. Warranty:

- Three years comprehensive warranty against i) all spare parts ii) electronic & electrical instruments iii) manufacturing defects.
- At least Ten years warranty against discolorations, loss of light transmission, and /or loss of strength due to weathering.

12. Tenderer must provide a trouble free after sales service within 24-48 Hrs. after the intimation of complaint. Tenderer must be ISO 9001:2015, 14001:2015, 18001:2007 certified and CE certified. Documentary proof must be attached with the tender.

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13. The detailed specification needs to be given in Technical Bid with all commercial terms and conditions failing which tender will be rejected.

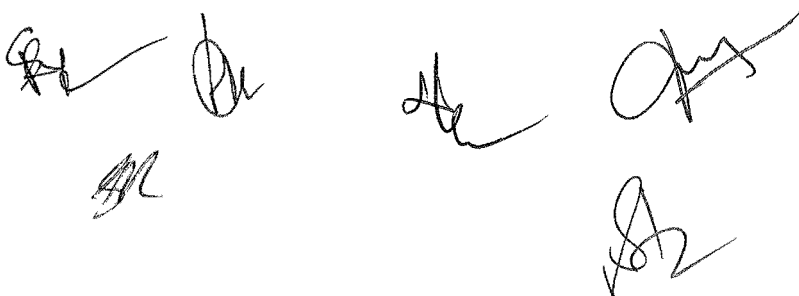
14. Constructional drawing mentioning Plan and 3 dimensional view needs to be submitted with the tender failing which tender may be disqualified / rejected.

15. Tender are liable to be rejected if they are not inline with the technical specifications of the Tender Notice.

16. At least 10 similar work orders/completion certificate needs to be submitted with tender failing which tender may be rejected.

17. Tender must be submitted in Two Bid system (Technical and Financial).

Optional: A water purification system should be quoted along with the bid as an optional item to provide deionized water for plant growth. System for Ultra Pure, Tissue culture grade water, free of particulate matter, Bacteria, RNase, DNase, Protease, Endotoxins. Microprocessor controlled single integrated system with Type 1 and Type 2 Water producing capability and should dispense water directly from system to avoid remote dispenser. Type II Water purification System: Should include a) Pre-treatment system including pre-filters, activated carbon filter and hardness treating filter capable of giving out water with at least 6L/minute with a pressure of 2 bar minimum The pre-treatment should accommodate water of following specifications: Conductivity: 0.67-0.1 μ S/cm or better; Chlorine: 3 ppm; Silt Density Index: 20; Pressure: 0.1bar or better b) Reverse Osmosis + Ion exchange water system to generate TYPE II Water with capacity to produce 1L/Minute or more & upgradeable looking to future requirements Conductivity: < 0.1 μ S/cm; Resistance at 25°C clearly 15 – 10 M Ω .cm or better (“typically” or “may be” will not be accepted) c) Storage tank of minimum capacity of 60 Ltr or better Type I water purification system: Ultrapure System UF including pre-treatment to generate TYPE I water for Tissue Culture and PCR use. Performance: 1.0 ltr/ min or better; Operating pressure in bar, min/max: 1 - 6 bar or better, Bacteria count: <1 CFU/ml or better; Conductivity: 0.055 μ S/ cm or better; Resistance: 18.2 M Ω ×cm; Pyrogens/Endotoxins free <0.001EU/ml, DNase <0.4pg/micro liter, RNase <0.003ng/ml, TOC: <5pp.

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