

बसु बिज्ञान मन्दिर

BOSE INSTITUTE

P-1/12, C.I.T. Scheme VII-M, Kolkata 700 054

BIDDING DOCUMENTS

For Tender Notice No.

BI-K/E-TEND/24/2017-18

To be addressed to:

The Sr. Prof. & Incharge, Registrar's Office,
Bose Institute, Centenary Building,
P-1/12, CIT Scheme - VII -M
Kolkata - 700054 (INDIA)



Ref : BI-K/E-TEND/24/2017-18

INVITATION TO BIDS

Director, Bose Institute, Kolkata, West Bengal, India invites *online* offers from **foreign/Indian suppliers** or their Authorized Dealers for the supply, installation and building up of the following :

SI.	Name of the items	Qty.	Bid security (EMD)
No.			
1.	Clean room of class 10,000 for gas detector	01	INR 1,20,000.00
	fabrication		

Details of specifications are enclosed in Annexure - I

SI.	Particulars	Date & Time
No.		
1.	Date of uploading of NIT & other documents (Online)	04.9.2017
	(Publishing date)	
2.	Documents download start date (Online)	04.9.2017 at 16:30 hrs.
3.	Site visit	05.9.2017 to 08.9.2017
		from 13:00 hrs. to 17:00 hrs.
4.	Clarification Start date (Offline)	09.9.2017 at 16.30 hrs.
	Queries to be sent to the mail id bipurchase@jcbose.ac.in)	
5.	Clarification End date (Offline)	12.9.2017 at 13:00 hrs.
6.	Amendment (if any) (On line)	14.9.2017 at 17:00 hrs.
7.	Bid submission start date (On line)	15.9.2017 at 14:00 hrs.
8.	Documents download end date (Online)	21.9.2017 upto 17:00 hrs.
9.	Bid Submission closing (On line)	21.9.2017 at 17:00 hrs.
10.	Last Date of submission of Earnest Money Deposit	22.9.2017 within 13:00 hrs.
	Including the technical brochure, if any (Off line)	
11.	Bid opening date for Technical Proposals (Online)	25.9.2017 at 13:00 hrs.
12.	Date of uploading list for Technically Qualified Bidder (online)	To be notified later
13.	Date of uploading the final list of Technically Qualified Bidder	To be notified later
	(online) after disposal of appeals, if any.	
14.	Date for opening of Financial Proposal (Online)	To be notified later



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<u>SECTION - A</u> INSTRUCTION TO BIDDERS

- **A. General guidance for e-Tendering :** Instructions / Guidelines for electronic submission of the tenders have been annexed for assisting the vendors to participate in e-Tendering.
- 1. **Registration of Vendors**: Any vendor willing to take part in the process of e-Tendering will have to enrol and get registered in the Central Public Procurement (CPP) Portal, NIC, GOI through logging on to http://eprocure.gov.in/eprocure/app and the vendor is to click on the link for e-Tendering site as given on the above.
- 2. **Digital Signature certificate (DSC)**: Each vendor is required to obtain a Class-III or Class-III Digital Signature Certificate (DSC) for submission of tenders as applicable from the approved service provider of the National Informatics Centre (NIC) on payment of requisite amount. Details are available at the Web Site stated in Clause A.1. above. DSC is given as a USB e-Token.
- 3. The foreign bidders can directly submit their bid through the e-procurement by obtaining their DSC applicable from NIC, India.
- 4. The vendor can search & download N.I.T. & Tender Document(s) electronically from computer once they log on to the website mentioned in Clause A.1. using the Digital Signature Certificate. This is the only mode of collection of Tender Documents.
- 5. **Submission of Tenders**: Tenders are to be submitted through online as stated in Clause A.1. in two folders at a time for each bid, one in Technical Proposal & the other is Financial Proposal before the prescribed date & time using the Digital Signature Certificate (DSC). The documents are to be uploaded should be virus scanned copy duly Digitally Signed. The documents will get encrypted (transformed into non readable formats).
- 5. A. **Technical Proposal:** The Technical proposal should contain scanned copies of the following in two covers (folders).
 - (a) Statutory Cover containing the following documents:
 - (i) NIT (Download the NIT & upload the same using digital signature)
 - (ii) Registration Certificate for enrolment with the Central Purchase Organization / other Govt. Dept. for quoting on behalf of the foreign principals, as per latest notification of Procurement Policy Division, Department of Expenditure, Ministry of Finance.
 - (iii) Bidders' Information Form
 - (iv) Bid Form
 - (v) Techno-Commercial Bid Form
 - (vi) Manufacturer's Authorization Form
 - (vii) Bidder's Performance Statement Form
 - (viii) Service Support Details Form
 - (ix) Technical Compliance Statement Form



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(b) Non-statutory Cover containing the following documents:
For indigenous quotes the bidder has to upload requisite registration / tax certificate like VAT, TAN, PAN, Trade License, CIN, GST etc.

Note: Please note that for cases where quotes are in currency other than INR and the Indian agent, who quotes on behalf of foreign principal does not possess the Registration Certificate as mentioned in 5.A. (a) (ii) their bids will not be considered.

Note: Failure to submit any of the above mentioned documents (listed under 5(a) & (b) may render the bid liable to be summarily rejected for both statutory and non-statutory cover.

5.B. Financial Proposal:

- a. The financial bid should contain the Bill of Quantities (BOQ) corresponding to this tender, which is available on the tender webpage as an MS-Excel file.
- b. This file must be downloaded and opened with MS-Excel. The rate being quoted by the bidder must be entered in the space marked for this purpose in the file. **Quoted rate** will be encrypted under BOQ. In case quoting any rate in Tender Form, the tender is liable to be summarily rejected.
- c. All fields in the BOQ file other than those allocated for the name of the bidder and the rate(s) being quoted are non-editable.
- d. The BOQ file must be saved after this and should be uploaded using digital signature.
- e. OPTIONAL ITEMS/Additional Warranty Charge beyond Standard warranty period and training charges (if any) must be separately quoted and uploaded as PDF file.
- In the BOQ <u>quoted in foreign currency</u> (click to select currency) fill up the applicable column (i.e. 'Ex-works', 'Discount (if any)', 'Freight', 'Insurance', 'other taxes (if applicable), 'Installation & commissioning charges (if applicable)' and ignore the other column.
- In the BOQ <u>quoted in INR</u> (click to select currency) fill up the applicable column (i.e. 'Basic Rate', 'Discount (if any)', 'GST', 'Other taxes (if applicable)', 'Installation & Commissioning charges (if applicable)' and ignore the other.
- Bidders are requested not to put any percentage (%) in any column of the BOQ.

6. Earnest Money Deposit:

- (a). Demand Draft / Bankers Cheque / Bank Guarantee towards Earnest Money (EMD) as prescribed in the N.I.T. should in favour of "Bose Institute, Kolkata" payable at Kolkata.
- (b). Demand Draft / Bankers Cheque / Bank Guarantee towards Earnest Money (EMD) as prescribed in the N.I.T. against each of the instruments in favour of "Bose Institute, Kolkata" payable at Kolkata (original hard copy) alongwith a covering letter stating the bank details for releasing the said EMD online by the Institute, as per norms to be submitted to the Purchase Section (Import) at the Centenary Building, P-1/12, CIT Scheme VII-M, Kolkata 700054.



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THE ABOVE STATED STATUTORY / NON-STATUTORY DOCUMENTS SHOULD BE ARRANGED IN THE FOLLOWING MANNER

Click the check boxes beside the necessary documents in the My Document list and then click the tab " Submit Non Statutory Documents' to send the selected documents to Non-Statutory folder.

Next Click the tab "Click to Encrypt and upload" and then clik the "Technical" Folder to upload the Technical Documents.

N.B.: Failure of submission of any of the above mentioned documents as stated in Sl. No. A.5.(a). and Sl. No. A.5.(b). And 6 (a) & (b) will render the tenderer liable to be rejected for both statutory & non statutory cover.



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- 1. Tender Evaluation Committee (TEC): Evaluation Committee constituted as per Order of the competent authority of Bose Institute, Kolkata.
- 2. Opening & evaluation of tender: If any vendor is exempted from payment of EMD, copy of relevant Government Order needs to be furnished and uploaded in the portal as PDF file.
- 3. Opening of Technical Proposal: Technical proposals will be opened either by the Sr. Prof. & Incharge, Registrar's Office / Assistant Registrar / Accounts Officer / Audit & Finance Officer, Bose Institute, Kolkata or their authorized representatives electronically from the website using their Digital Signature Certificates (DSC).
- 4. Intending tenderers may remain present if they so desire
- 5. Cover (folder) for Statutory Documents (Ref. SI. No. A.5.(a).) will be opened first and if found in order, cover (folder) for Non-Statutory Documents (Ref. SI. No. A.5.(b).) will be opened. If there is any deficiency in the Statutory Documents the bid will summarily be rejected.
- 6. Decrypted (transformed into readable formats) documents of the non-statutory cover will be downloaded & handed over to the Tender Evaluation Committee.
- 7. Pursuant to scrutiny & decision of the Tender Evaluation Committee, the summary list of eligible tenderers will be uploaded in the web portals.
- 8. During evaluation the committee may summon of the tenderers & seek clarification / information or additional documents or original hard copy of any of the documents already submitted & if these are not produced within the stipulated time frame, their proposals will be liable for rejection.

9. Financial Proposal:

- a). The vendor is to quote the rate online in the space marked for quoting rate in the BOQ. For optional items as mentioned in the specifications may be quoted separately in the additional sheet as enclosed in the Financial Cover.
- b). Only downloaded copies of the above documents are to be uploaded virus scanned & Digitally Signed by the vendor.
- c). Penalty for suppression / distortion of facts:
 - If any tenderer fails to produce the original hard copies of the documents on demand of the Tender Evaluation Committee within a specified time frame or if any deviation is detected in the hard copies from the uploaded soft copies, it may be treated as submission of false documents by the tenderer and action may be referred to the appropriate authority for prosecution as per relevant IT Act.
- (d). Rejection of Bid:
 - Director, Bose Institute reserves the right to accept or reject any Bid and to cancel the Bidding processes and reject all Bids at any time prior to the award of Contract without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the ground for Institute's action.
- (e). Award of Contract:

The Bidder whose Bid has been accepted finally (both technical and financial), will be informed by the Institute authority for award of contract.

The notification of award will constitute the formation of the Contract.



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GENERAL INSTRUCTIONS

- The bids would be opened in the presence of the bidders who wish to attend the Bidopening. However, the representative should bring with them a letter of authority from the corresponding bidders, without which, they are not permitted to attend the bid opening.
- The acceptance of the quotation will rest with the competent authority of Bose Institute, Kolkata who does not bind himself to accept the lowest quotation and reserves the right to himself to reject, or partially accept any or all the quotations.
- The offer shall be valid for ninety days from the date of opening of the quotations. No revision in price will be allowed after opening the quotation.
- Unsolicited / conditional / in complete / unsigned digitally tenders shall not be considered.
- Prices are required to be quoted in units. When quotations are given in terms of other units, relationship between two sets of units should be furnished. Quantity discounts, if any should also be indicated. The items should be quoted indicating the serial nos.
- To assess in the examination / evaluation, comparison and post qualification of the bids, purchaser may at its discretion, ask the bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in the prices or substance of the bids shall be sought, offered or permitted. Any clarification submitted by the bidder in respect of its bid which is not in response to a request by the purchaser shall not be considered.
- Either the Indian Agent on behalf of the Foreign principal or the Foreign principal can bid directly in a tender but not both. However, the offer of the Indian Agent should also accompany the authorisation letter from their principal. To maintain sanctity of tendering system, one Indian Agent can not represent two different Foreign principals in one tender.
- Please indicate the agents in India, their address, the details of service rendered by them & the percentage of commission payable to them. In normal courses agency commission is not allowed.
- Two or more vendors cannot submit bid quoting the rates on behalf of same OEM.
- The Institute is registered with Department of Scientific & Industrial Research, Govt. of India and thus is exempted from Customs/Central Excise duty vide notification no. 10/97 dated 01.3.1997 and 16/2007 dated 01.03.2007. The present details of registration are no. 11/106/1988-TU-V dt. 31.3.2018.
- The mode of dispatch of the items must be mentioned clearly in the quotation.
- In case the products are available on DGS&D rate contract, please quote on DGS&D rate contract rates attaching a copy of the RATE CONTRACT.
- Samples, if called for, shall be submitted free of charge and or no obligation basis.
- The offered delivery period shall have to be strictly adhered to in case an order is placed.



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SECTION B

TERMS & CONDITIONS

1. Price:

- Bidders are requested to give their final and best offer. <u>Techno-Commercial</u> Discussions will be held with the Lowest Bidder only, if necessary.
- Vendors, who do not accept our standard commercial terms are liable to be ignored. A categorical confirmation of acceptance of all our terms and conditions in toto will have to be observed which enable speedy processing of the offers.
- Pre-conditioned, incomplete offers, not in line with the terms and conditions of the tender documents, are liable to be rejected.

Indigenous Quotation:

- The price of the goods, quoted (ex-works / ex-factory / ex-showroom / ex-warehouse, or off-the-shelf, as applicable), including all duties and sales and other taxes already paid or payable.
- The amount payable on account of Excise Duty and other applicable taxes (VAT/CST/Service) should be mentioned clearly. If there is no explicit mention of taxes in your offer then quoted price will be deemed inclusive of such taxes. No other charges except those mentioned clearly in the quotation will be paid.
- Rates should be quoted FOR, Bose Institute, Kolkata inclusive of packing, forwarding, installation and documentation & commissioning charges etc. If ex-works prices are quoted then packing, forwarding, documentation, freight and insurance charges must be clearly mentioned separately. Vague terms like "packing, forwarding, transportation etc. extra" without mentioning the specific amount/percentage of these charges will NOT be accepted. Such offers shall be treated as incomplete and rejected. Where there is no mention of packing, forwarding, installation and commissioning, freight, documentation, insurance charges, such offers shall be summarily rejected as incomplete.



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2. Period of validity of Bids:

- Bids shall remain valid at least for 12<u>0 days</u> after the date of bid opening prescribed by the Purchaser.
- In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity.
- 3. **Bid Currencies :** Prices shall be quoted in Indian Rupees.
- 4. Purchaser's Right to vary Quantities at the Time of Award: The Purchaser reserves the right at the time of Contract award to increase or decrease the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions. However, the Purchaser reserves the right to call the lowest firm for negotiation in case of increase in quantity.
- 5. Order acceptance: The successful bidder should submit acceptance of the Purchase Order immediately but not later than 30 days in any case from the date of issue of the Purchase Order failing which it shall be presumed that the vendor is not interested and his bid security is liable to be forfeited.
- 6. **Patent Rights**: The Supplier shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof in India.
- **7. Insurance**: The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner
- **8. Transportation**: Where the Supplier is required under the Contract to transport the Goods to a specified place of destination within India defined as Project site, transport to such place of destination in India including insurance, as shall be specified in the Contract, shall be arranged by the Supplier, and the related cost shall be included in the Contract Price.



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9. Change Orders:

- The Purchaser may at any time, by written notice given to the Supplier make changes within the general scope of the Contract in any one or more of the following:
 - Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
 - The method of shipping or packing;
 - The place of delivery; and/or
 - The Services to be provided by the Supplier.
 - The delivery schedule
 - If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within fifteen (15) days from the date of the Supplier's receipt of the Purchaser's change order.

10. Penalty:

- If the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to the percentage of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage. Once the maximum is reached, the Purchaser may consider termination of the Contract.
- The applicable rate is 0.5% per week and the maximum deduction is 5% of the contract price.
- **11. Applicable Law**: The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction at Kolkata.
- **Right to Use Defective Goods**: 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.

13. Payment:

Payments shall be made promptly by the Purchaser normally after submission of the invoice or claim by the Supplier.



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For Indigenous Payment:

• The general conditions of payment for any indigenous items are 100% payment after successful execution of the complete fabrication set up. In case the equipment does not need any installation & commissioning the period shall be reckoned from the date of delivery & inspection. In case of Purchase Order value equivalent to INR 5 Lakh and above, 10% Performance Bank Guarantee (PBG) should be submitted before release of the payment.

14. **Delivery**:

- Delivery of the consignment(s) / execution of the job should be made within the period mentioned in the specification. The supplier shall mail the following documents to the purchaser with a copy to the insurance company, in any items are imported by them.
 - 4 Copies of the Supplier invoice showing contract number, goods' description, quantity, unit price, total amount;
 - Acknowledgment of receipt of goods from the consignee(s) by the transporter;
 - Insurance Certificate if applicable;
 - Manufacturer's/Supplier's warranty certificate, as applicable
 - Inspection Certificate issued by the nominated inspection agency, if any, and the Supplier's factory inspection report;
 - · Certificate of Origin; and
 - Two copies of the packing list identifying the contents of each package.
- The above documents should be received by the Purchaser before arrival of the consignment(s) (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.



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15. Warranty:

- The Supplier shall warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier shall further warrants that all Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Purchaser's Specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination. The warranty should be comprehensive and on site.
- This warranty shall remain valid at least for 12 months after the Goods or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract, or for 18 months after the date of shipment whichever period concludes earlier. The applicable warranty for each of the instruments are mentioned in the respective specifications.
- 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 a reasonable period, 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. In case any component has to be imported the same shall be done on DDU Kolkata basis and the purchaser shall provide the customs duty exemption certificate. If the supplier having been notified fails to remedy the defects within a reasonable period, 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.
- Warranty period shall be 12 months from date of acceptance of Goods. 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.
- If a different period of warranty has been specified in the 'Technical Specifications' shall stand modified to that extent.
- The necessary warranty certificate in this effect should be furnished along with the consignment.



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- 18. **Training:** The Supplier is required to train the designated Purchaser's technical and end user personnel to enable them to effectively operate the total equipment.
- 19. **Supporting Equipment:** If equipment will require indigenous supporting instruments/accessories (computer, printer, online UPS etc.) at the time of the installation, the same should be quoted in separate quotation.
- 20. **Service Facility:** Supplier should mention about the possible service set up in India and how capable they are to provide after sales service.

21. Force Majeure:

- The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 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.
- 22. Director, Bose Institute reserves the right to accept or reject any or all tenders either in part or in full. The reasons for rejecting the tender of a prospective bidder will be disclosed only when enquiries are made.



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Annexure- I

Technical Specification for Clean room of class 10,000 for gas detector fabrication

Serial	Description of	Specification				
No.	Items					
1.	Required	Class 10,000				
	Cleanliness	(Cleanliness, temperature, pressure and relative humidity				
	Classification	must be regulated)				
		Class 100,00	0			
		(It should have filtered air shower to remove dust particle				
		from clothes	of users)			
		Dress change	e room			
		(With air con	dition)			
2.	List of proposed	Class	1. Gas line (N ₂ , Air and one more)			
	equipment in the	10,000	2. Vacuum cleaner			
	specified area		3. One cabinet			
			4. Granite table			
			5. One automatic temperature			
		controlled box				
		6. Laminar flow table				
		Class 1. Gas lines (Ar, CO ₂ , 3 other gases)				
		100,000	2. One rotary pump (15A socket)			
			3. Ultrasonic bath cleaning system			
			(15A socket)			
		4. Vacuum cleaner				
			5. Electronics Rack (19 inch)			
			6. One cabinet			
		Dress	1. Water basin, soap stand			
		change	2. Cabinet for keeping cleanroom			
		room	cloth			
			3. Cabinet for accessories of			
			cleanroom cloth			
			4. Chair for shoe change			
			Shoe rack			

3.	Control and	Temperature	23°C ±2°C		
	monitor of ambient	Pressure	10-15 mbar (positive		
	parameters in class		pressure)		
	10,000 area		,		
		Relative humidity	50% ± 5% (non-		
		Š	condensing)		
			3,		
4.	Lighting in class	Standard light intensity in	side the clean room. Clean		
	10,000 and class	room compatible white light must be fitted to the false			
	100,000 area	ceiling.			
5.	Internet and	The vendor should install	telephone and internet lines		
	telephone line	with wall sockets.			
6.	Electric power	10 kW			
	requirement for the				
	equipment				
7.	Power Distribution	A power distribution pane			
	panel		placed in an easily accessible		
		region.			
8.	Number of user	4 persons in class 100,000 area and 6 persons in class			
0	working at a time	10,000 area			
9.	Gas lines	As described in item 2.			
10.	Extra passage holes	Extra passage holes are required for future uses like			
11		chiller lines, vacuum line, used gas exhaust line etc.			
11.	Gas exhaust	A gas exhaust line is needed from both class 100,000 and			
			0,000 room (All gas tubes and connectors must be of		
12.	Any hagandang an	Swagelok)	I for detector testing Isomenyl		
12.	Any hazardous or inflammable		sobutane gas may be used for detector testing, Isopropyl lcohol, methanol will be used for material cleaning		
	substances	alconor, methanor will be	used for material cleaning		
	Substances	General room details			
1.	Room size	As per drawing			
2.	Room height	As per drawing			
3.	Glass window	As per drawing			
4.	Doors	As per drawing			
5.	Electrostatic flooring	Floor should be made of	of conductive PVC or equivalent		
		placed on top of ground			
6.	Grounding	Thick copper strip show	ld be placed at the bottom of		
		the wall for grounding			
		(Instrument ground has	to be done by us)		
		formation and ambient con			
1.	Location		Located on the ground floor.		
2.	Ambient Condition	As per location	As per location		

Please quote for the work specified below as separate .pdf file in Additional Folder in the BOQ. The price break up format is given in the additional folder.

I. Room interiors (Clean room areas) 1. Wall Panel: Supply and installation of 100 mm thick Double skin wall panel. 1. Panel type – Non progressive type modular panel 2. Basic frame – Made out of aluminum extracted profile 3. Skin – 0.8mm powder coated galvanized iron sheet on both sides 4. Core – Rock wool of 110 kg/Cu.m density 5. Services – Inclusive of support systems / fittings / All cutouts for electrical, utilities services etc. everything complete 6. Joint filling – All joints to be filled with silicon sealant of Dove Corn.

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2.	Ceiling grid for class 10,000 area:
	Supply and installation of 70 mm thick Double skin walkable false ceiling
	system.
	1. Panel type – Non-progressive type modular panel designed for
	150kg/sq.m live load.
	2. Basic frame – Made out of aluminum extracted profile
	3. Skin – 0.8mm powder coated galvanized iron sheet on both sides
	4. Core – Rock wool of 110 kg/Cu.m density
	5. Services – Inclusive of adjustable type suspension support systems /
	provision to accommodate service e.g. Hepa, light fittings, pendants etc.
	everything complete
	6. Joint filling – All joints to be filled with silicon sealant of Dove Corn.
3.	RA risers:
	Supply, installation, testing and commissioning of in-built return air raisers in
	wall panels. SS perforated grill with or without pre filter and the raiser shall be
	projected above the false ceiling by 150 mm for connection to the duct.
4.	Coving:
	Supply, installation, testing and commissioning of aluminum clip on coving of 50
	Radius @ all right angled joints e.g. floor to wall / wall to wall / ceiling to wall
~	etc.
5.	Flooring:
	Supply, installation, testing and commissioning of flooring as per specifications
	bellow
	1. 3 mm thick conductive PVC or equivalent with seamless joints placed on
	top of grounded copper grid.
	2. Floor should have load-bearing surface that is resistant to chemicals.
	3. Floor to false ceiling clear height must be 8 ft.
6.	Windows:
0.	1. All existing windows must be matched with same size view panel in the
	clean room wall.
	2. No crevices/ joints /sloped profiles to be used for fixing glass.
7.	Doors:
<i>,</i> .	Supply and installation of pre coated G.I.S. / Leaf doors
	1. Double doors air lock should have size nearly 5'x 7'
	2. Door frame –To be of 1.6 mm aluminum extruded profile with in built
	gasket provision
	Sworter brounding

- 3. Shutter Shutters frame made of aluminum-extruded profiles.
- 4. Skin 0.8 mm pre coated galvanized iron sheet on both sides.
- 5. Core Rock wool of 110 kg/Cu.m density
- 6. Electrical interlocking systems for doors
- 7. Fittings and fixtures
 - a. Hermetically sealed double glazed view panel of 750 mm x 450 mm size
 - b. Concealed auto drop door seal
 - c. Door closer
 - d. Handle -SS 304 grades "D" type handle of 200 mm height.
 - e. Push/Pull plate
 - f. Lock Door set make lock (wherever required)
 - g. Door S.S Kick plate (300mm height) on both sides of door (1.2mm thick).
- 8. One door (5'x7') will be used for material entry in the beginning and should be sealed after that. The same should be used as 'emergency exit' later.

8. Clean room compatible electrical and gas line, table, chair and cabinets (to be supplied by the vendor):

Supply, installation, testing and commissioning of electrical, water and gas lines as per specifications below:

- 1. There will be gas supply lines for three SS and one Copper gas lines in class 10,000 and five SS gas lines in class 100,000 (All gas tubes and connectors must be of Swagelok)
- 2. Modular type electrical power sockets with wiring should be installed by the vendor.

Class 10,000	1. Gas line			
	(i) Three (3) SS lines of ¼ inch OD			
	(ii) One (1) Copper line of ½ inch OD			
	(iii) Two conduits at the specified places (see drawing) containing regulators for all 4 lines			
	(All gas tubes, connectors and regulators must be of Swagelok make)			
	2. One clean room compatible cabinet. (2m x 1.3m) depth – 0.5 m, 3 door			
	3. One granite table (2m x 1m); height – 1m			
	4. 8 no. cleanroom compatible chairs			
Class 100,000	1. Gas lines			
,	(i) Five (5) SS lines of ¼ inch OD			
	(ii) One conduit at specified place with regulators for all 5			
	lines.			
	(All gas tubes, connectors and regulators must be of			
	Swagelok make)			
	2. One cleanroom compatible cabinet(2m x 1.3m) depth –			
	0.5 m, 3 door			
	3. One cleanroom compatible working table (1.5m x 1m)			

		height – 1m			
		4. 6 no. cleanroom compatible chairs			
	Dress change	1. Water basin, soap stand			
	room	2. Cabinet for keeping cleanroom cloth (2m x 1.3m) depth			
		– 0.5 m, 3 door			
		3. Cabinet for accessories of cleanroom cloth(2m x 0.8m)			
		depth –	0.5 m, 2 door		
9.	Illumination an	d acceptable no	oise level:		
	1. The illun	nination at work	ing height, like tabletops etc. should not fall		
	below 40	00 lux.			
			an room, arising from the air handling system		
		ot exceed 50db o	on the average.		
10.	Power socket	Class 10,000 1. 15 A / 6 pin wall socket: 15 no.			
		area	2. 5 A / 5 pin wall socket: 15 no.		
		3. 15 A / 3 phase wall socket: 1 no.			
		All the wiring should be put by the vendor			
		Class	1. 15 A / 6 pin wall socket: 5 no.		
		100,000 area	2. 5 A / 5 pin wall socket: 10 no.		
			3. 15 A / 3 phase wall socket: 1 no.		
		All the wiring should be put by the vendor			
		Dress 1. 15 A / 6 pin wall socket: 2 no.			
		change room 2. 5 A / 5 pin wall socket: 4 no.			
		All the wiring should be put by the vendor			

II: HV AC and Air filtration

Supply, Installation, Testing and commissioning of DX based units to maintain laminar flow (without using perforated false flooring) as per specifications below

Temperature: $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$; **Relative Humidity**: $(50 \pm 5)\%$

Relative Pressure: Positive

- 1. Supply, Installation of ducts, manifolds, outlets for AC units
- 2. Supply, Installation of HEPA filters of appropriate grade to ensure Class 10,000. It is estimated that 40-50 air changes per hour would be required.
- 3. Supply, Installation of Electrical panels and similar accessories and controls for the HVAC units.
- 4. Supply, Installation of Digital Humidistat, Digital Thermostat with appropriate setting points.
- 5. Testing of clean room class and air quality.

A. Specification of AHU:

Design, Supply, Installation, Testing and Commissioning of double skin A.H.U. consisting of Aluminum frame work, 3 way corners with double skin panels having outer walls of 0.67 mm thick pre coated sheet insulated with 38 kg/Cu.m. Injected PUF and complete with extruded frame with thermal break for motor and blower duly mounted with DIDW centrifugal BACKWARD curved blower along with its electrical driver motor. Pre-filter section 10 micron and fine filter section 5 micron, Dx coil section with 6 RD coil and view window on the service door and Light in the AHU unit for servicing purpose. Limit switch automatic system on each AHU door etc. complete as required for following area to be maintained as indicated in the layout diagram.

Static pressure: 150 MM WG with Heater Bank for controlling RH.

Option for fine tuning of RH by water spray should be provided.

B. Refrigeration system:

Green refrigerant such as R134A/R404A/R407C should be used.

C. Specification of Ducting Insulation:

- a. Ducting insulation to have low chemical emissions of both Total Volatile Organic compounds (TVOCs) and Formaldehyde. Preferably, materials should hold GREENGUARD Indoor Air Quality (IAQ) Certification.
- b. Manufactured without the use of CFCs, HFCs or HCFCs. They should by fiber-free and dust free, and resist mold and mildew.
- c. Made of a closed-cell structure to prevent moisture from wicking, since moisture accumulation will reduce insulation performance.

D. Specification for Outdoor Units:

Each refrigerating unit will comprise of semi-hermetic / screw compressor suitable for R-22, one cross flow air cooled condenser with cooling air fans, and temperature and relative humidity controller, pipe work and control panel.

E. Control Panel for AHU:

Automatic AHU control panel for AHU ON/OFF incorporating with input MCB TP, CONTACTOR, SPP, OVERLOAD RELAY, HONEYWELL THEMOSTAST with interlock and remote option. Although the Dehumidifier is an optional item, the control panel should have the provision to control parameters of HEATER and HUMIDISTAT.

F. Cost of ducting

The vendors are requested to include the cost of a minimum length of ducting. Tubing, piping etc. in the quotation, along with per unit length cost mentioned. In case additional lengths are required at the time of installation for some reason, the per unit length cost should be used to calculate the additional expense.

G. Entry of ducting in the room:

Should be as close as possible to the AHU.

H. Power consumption:

Total power consumption of the AHU including refrigeration units should be quoted.

III. Safety system, monitoring and validation

1. Fire Detection, Fire Alarm, Fire fighting system:

- 1. Vendor to suggest, supply, install and commission fire detection, fire alarm and fire fighting system.
- 2. The entire area should have optical type detectors below false ceiling.
- 3. Single loop fire panel provided for all the smoke and heat detectors. Fire panel shall be stand-alone type.
- 4. A provision for an EMERGENCY EXIT (break glass type) should be provided. The location and design of this is to finalize after discussion with the customer.

2. **Monitoring Systems:**

Temperature and relative humidity indicators should be supplied, installed, tested and commissioned. An easily visible pressure gauge should indicate pressure.

3. Validation:

Vendor has to perform, witness customer and provide validation certificate for the following tests as per International Clean Room standard. – **Federal 209E** OR **ISO14644-1**.

- 1. **Air velocity test/ CFM balancing** by Digital hot wire Anemometer.
- 2. **Filter Integrity Test** by computer aided DOP photometer and DOP generator.
- 3. **Particle Count Test** by LASER Particle Counting Machine with on line printing facility
- 4. **Recovery Test** by LASER Particle Counting Machine and DOP generator.
- 5. **Air Flow Pattern Test** by DI Water Fogger.
- 6. **Light Intensity Test** by Digital Lux Meter.
- 7. **Sound Level Measurement** by Digital Noise Meter.
- 8. **Temperature and RH mapping** by Digital Thermometer and Digital Hygrometer.
- 9. **Differential Pressure checking/Balancing** by Differential Pressure Gauge.
- 10. **Air Temperature** by Digital IR Thermometer.
- 11. **Swept Test** by LASER Particle Counting Machine and DOP generator.
- 12. **Vibration test** by Digital Vibration meter.
- 13. Third party validation.

All instruments should be calibrated from NABL accredited lab.

IV. Warranty, Annual maintenance and servicing

A. Warranty:

One-year warranty on components and workmanship of this advanced laboratory should be provided.

B. Annual Maintenance Contract (AMC) - Optional

Three year AMC for the laboratory without spares should be quoted. AMC will start after the expiry of one-year warranty.

C. Servicing:

The vendor should have a service center located in Kolkata for speedy execution of service work under AMC. Details of the technical set up of the service center have to be submitted. The vendor must quote the **attending time** to resolve any problem after complaint registration under AMC.

V. Optional items and supporting documents

A. Optional items

Please quote optional items separatelyto enhance the performance of the laboratory.

B. Supporting documents:

- 1. Vendor should furnish detailed specification of each equipment and all electrical, gas, water line drawing should be provided with quotation. (All gas tubes and connectors must be of Swagelok)
- 2. Vendor should furnish detailed DQ, IQ, OQ, PQ with equipment along with supply.
- 3. User manual of small equipment, layout drawing of the laboratory with all electrical, gas, water line etc. should be provided at the time of installation (soft copy as well as hard copy).

VI. Execution of work

The work should be completed within **120 days** after receiving the purchase order.

VII. Other customers

List of customers who built similar laboratory in India (up to 5), with email address and telephone number.

VIII. Execution of work

Compliance table:

Detailed point-by-point compliance of the features with serial number and pricing as mentioned in this tender document has to be provided.

IX. Site visit

Site visit is mandatory before submission of quotation. Drawing of the room will be provided after site visit.

Site Address:: Shyamnagar Campus::

Shaheb Bagan, Shyamnagar 24 Paraganas (North), Pin 743 127 Ph # 91 033 2586 4440 / 41 / 42



Ref: BI-K/E-TEND/24/2017-18

Bidder Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted. This should be done of the letter head of the firm]

Date: [insert date of Bid Submission] Tender No.: [insert number for Invitation for bids]

- 1. Bidder's Legal Name [insert Bidder's legal name]
- 2. In case of JV, legal name of each party: [insert legal name of each party in JV]
- 3. Bidder's actual or intended Country of Registration: [insert actual or intended Country of Registration]
- 4. Bidder's Year of Registration: [insert Bidder's year of registration]
- 5. Bidder's Legal Address in Country of Registration: [insert Bidder's legal address in country of registration]
- 6. Bidder's Authorized Representative Information

Name: [insert Authorized Representative's name] Address: [insert Authorized Representative's Address]

Telephone/Fax numbers: [insert Authorized Representative's telephone/fax numbers]

Email Address: [insert Authorized Representative's email address]

7. Attached are copies of original documents of: [check the box(es) of the attached original documents]

Signature of the Bidder Name Business Address



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BID FORM

(to be submitted on the official letterhead of the bidder)

The Director, Bose Institute

P-1/12, CIT Scheme-VII/M, Kolkata - 700054 (W.B.) India		
Sir, Having examined the bidding documents the large supplies agree to furnish required supplies services in comportions thereof at the prices given in the Price Bid on the supplier supplies.	formity with the	Techno-Commercial Bid or such
I/We agree to hold this offer open untilcommission the equipment and complete the whole of the period of weeks, from the dacceptance of this tender/receipt of supply order.	the work and ha	nd over to the purchaser within
I/We agree to submit the bank guarantee as sp for the due performance of the contract, if our bid is ac		rm prescribed by your goodself
I/We understand that you are not bound to acce	ept the lowest or	any bid you may receive.
With Office Stamp	() Signature of Bidder Name & Address
Telephone No.:		
FAX No.:		
E-mail address:		
Name & Designation of the Contact Person:		



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TECHNO-COMMERCIAL BID FORM

-1	Tandan action and Na		
1.	Tender reference No	:	
_			
2.	Due date of bid submission	:	
3.	Main Item Model No.	:	
4.	Warranty Period (in years)	:	
4.	warranty renod (in years)		
_			
5.	Delivery Period of the Equipment	:	
7.	Details of Bank Guarantee enclosed as Bid Security:		
	Name of the Bank	:	
	Branch		
	Didilcii		
	A LL SI FAVO F LIN		
	Address with Phone, FAX & E-mail Nos.	:	
	Amount Rs.	:	
	Valid Upto		
	Tuna Opto		
<u> </u>	Country of the Origin of the Fautiement		
8.	Country of the Origin of the Equipment	:	
9.	Bid currency	:	
	-		
10.	Schedule of Requirements :		

Contd.....



Ref : BI-K/E-TEND/24/2017-18

1.	Whether agreeing to all the terms and conditions including payment terms as mentioned in the bidding documents		
2.	Port of Shipment		
3.	Approximate Shipment Weight (chargeable weight) in Kg. of the packed consignment		
4.	Approximate Dimensions/ Volume of the packed consignment		
Note:			
1.	Adhering to the format given above is a pre-requisite for considering your bid.		
2.	All columns must be filled up.		
3.	Separate list should be attached where required in the same format giving details of each item.		
4.	Please indicate applicability.		
	certify that I/We have completely read ar ions given in ITB.	nd u	understood and agree to all the terms &
			(
			Signature of Bidder
With	Office Stamp		Name & Address



Ref: BI-K/E-TEND/24/2017-18 **MANUFACTURERS' AUTHORIZATION FORM** Dated _____ No. _____ The Director, Bose Institute, P-1/12, CIT Scheme-VII/M, Kolkata - 700054 (W.B.) India Dear Sir: No company or firm or individual other than M/s. ______ is authorized to bid, and conclude the contract in regard to this business. I/We hereby extend our full guarantee and warranty as per Clause 15 of the General Conditions of Contract and Clause of the Special Conditions of Contract for the goods and services offered by the above firm. Yours faithfully, (Name) (Name of manufacturers)

Note: This letter of authority should be on the <u>letterhead of the manufacturer</u> and should be signed by a person competent and having the power of attorney to bind the manufacturer. It should be included by the Bidder in its techno-commercial unpriced bid.



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Name of the Firm.....

BIDDER'S PERFORMANCE STATEMENT FORM

(For a Period of Last 3 Years)

Order placed by (full address with Tel. No., Fax No. & e-mail address of purchaser)	Date	Description and quantity of ordered equipment	Date of completion of delivery as per Contract/ Actual	Remarks indicating reasons for late delivery, if any	Has the equipment been installed satisfactory? (Attach a certificate from the purchaser/ Consignee)

Place:	Signature :
Date:	Office stamp



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SERVICE SUPPORT DETAILS FORM

SI. No.	Nature of training imparted	List of similar type equipments serviced in the past 3 years	Address, Telephone Nos., Fax and e mail address of the firm located in Kolkata, if any	Value of minimum stock of consumable spares held at all times.

	Signature and Seal of the manufacturer/Bidder
Place :	
Date :	



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TECHNCAL COMPLIANCE STATEMENT FORM

An item-by-item commentary on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.

ITEM NA	ITEM NAME							
SI.No.	Tender Specifications	Bidder's Specifications	Deviation/ Remarks, if any Including justification					

(Technical literature/brochures/manuals should be attached along with this format)

Please note:

- 1. Compliance/Deviation statement comparing the specifications of the quoted model to the required specifications. This statement should also give the page number(s) of the technical literature where the relevant specification is mentioned.
- 2. Bids must have supporting documents (technical literature or copies of relevant pages from the service manual or factory test data) for all the points noted above, failure regarding which may result in rejection of bid.
- 3. In case the bidder furnishes wrong or false information wilfully in the technical compliance chart, such action shall be viewed strictly and the bidders may be blacklisted.
- 4. Where there is no deviation, the statement should be returned duly signed with an endorsement indicating "No Deviations".

Place	:	Signature and Seal of the manufacturer/Bidder
Date	:	



Ref: BI-K/E-TEND/24/2017-18

BID SECURITY FORM

(To be executed by a scheduled Bank in India on non-judicial stamp paper)

To The Director, Bose Institute, P-1/12, CIT Scheme-VII/M, Kolkata - 700054 (W.B.) India

1.

2.

Kolkata - 700054 (W.B.) India
Dear Sir,
Whereas
KNOW ALL PEOPLE by these presents that WE (Name of bank) of
(Name of country), having our registered office at (Address of bank) (Hereinafter called
"the Bank"), are bound unto <i>Director</i> , Bose Institute , Kolkata , INDIA (Hereinafter called "the
Purchaser") for the sum of (Amount of the Guarantee in Words and Figures)
for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its
successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this day
of 20
THE CONDITIONS of this obligation are:
If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity:

contd.....



Ref: BI-K/E-TEND/24/2017-18 3. Fails or refuses to execute the Contract Form if required; or 4. Fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders. This guarantee is valid up to(six months from date). 5. We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions. This guarantee will remain in force up to and including forty-five (45) days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date. Signature..... Seal of Bankers (Complete Address/Contact Details with Tel./Fax/email etc)

Date:

Place:

Witness:

1.

2.



Ref: BI-K/E-TEND/24/2017-18

PERFORMANCE SECURITY FORM

(To be executed by a scheduled Bank in India on non-judicial stamp paper)

To The Director, Bose Institute, P-1/12, CIT Scheme-VII/M, Kolkata - 700054 (W.B.) India

Dear Si	r,											
Sub: Yo												
	have	entered	into	а	contract	with (he	referen rein after	ce no referre	o as ed to as	given the con	tractor)	for the
supply, stores)	install for the	ation, and price and	d common the	nissio term:	ning of _ s and cond	itions co	ntained i	n the sa	(herei	in after ract.	referred	to as
guarant the said	tee for distores	Rs	_ (Rupe to you,	es _ for t	aid contractions did co			only) b	eing 10	% of th	e total v	alue of
guarant demand in the s	tee as plant to us said cor	orincipal on that the contract, we only sum	obligator contracto will pay up	r on or ha y you to	eby expresore behalf of a son writte	the con ormed a n demar num a	tractor th ccording nd, withou imount	nat in the count of Rs	ne ever contract or and v ——	nt you si tual oblic vithout r	ubmit a v gations in eference (written Icluded to the Rupees
		e under th	ne terms	of t	y).Your de he said con st making r	ntract. F	Payment b	by us to	you wi	II be ma	de withir	

4. This guarantee shall not be revoked without your express consent and shall not be affected by your granting any indulgence to the contractor, which shall include but not be limited to postponement from time to time of the exercise of any powers vested in you or any right which you may have against the contractor and to exercise the same in any manner at any time and either to forbear or to enforce any covenant contained or implied in the said contract or any other course or remedy or security available to you, and our Bank shall not be released from its obligations under this guarantee by your exercising any of your rights with reference to matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on your part or any other indulgence shown by you or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving our Bank from its obligation under this guarantee.



Ref: BI-K/E-TEND/24/2017-18 Notwithstanding anything herein contained, our liability under this guarantee is restricted to Rs 5. ______(Rupees ______ only) and the guarantee shall remain in force up to and including the_____ day of being reported to us by you and returned to us duly discharged. Unless a demand or claim under this guarantee is made on us in writing on or before the aforesaid expiry date as provided above or unless this guarantee is extended by us all your rights under this guarantee shall be proscribed and we shall be discharged from the liabilities hereunder. 7. This guarantee shall not be affected by any change in the constitution of our Bank or of the contractor or for any other reason whatsoever. Date: Signature..... Place: Seal of Bankers (Complete Address/Contact Details with Tel./Fax/email etc) Witness:

2.