



Guru Gobind Singh Indraprastha University
("A State University established by Govt. of NCT of Delhi")
Sector 16-C, Dwarka, New Delhi-110 078
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Dated:14.08.2025

TENDER No.04/PUR/GGSIPU/2025-26

E-TENDER (NIT)

Registrar, Guru Gobind Singh Indraprastha University invites e-tender from authorized supplier and Manufactures in two bid systems (Technical & Financial) for the **Supply, Installation, Testing and Commissioning of Lab Equipments for IOT Lab, USAR, East Delhi Campus of Guru Gobind Singh Indraprastha University, Surajmal Vihar, Delhi-110092**. Tender document can also be downloaded from Delhi Govt. e-procurement website i.e. www.govtprocurement.delhi.gov.in. The details of Tender document can also be viewed from University Website <http://www.ipu.ac.in>.

1.	Name of work	Supply, Installation, Testing and Commissioning of Lab Equipments for IOT Lab, USAR, East Delhi Campus of Guru Gobind Singh Indraprastha University, Surajmal Vihar, Delhi-110092
2.	The last date and time of uploading technical and financial bid on e-procurement website.	03.09.2025 Upto 01.00 p.m.
2.	Pre-bid meeting Date & Time	22.08.2025 at 11:00 a.m.
3.	Date and time for opening of Technical bid	03.09.2025 at 02.30 p.m.
4.	Estimated Cost of Material	Rs. 57,04,946/- (inclusive of GST)
5.	Details of EMD	Rs. 1,71,148/- i.e. 3% of the estimated cost of the material.
6.	The bids shall be submitted in two stages viz.(i) <i>Technical bid</i> (ii) <i>Financial bid</i> . Detailed specification of the item(s) to be supplied is placed at <u>Section-III Annexure-K</u> . The Technical & Financial bid should be uploaded on e-procurement website i.e. www.govtprocurement.delhi.gov.in (No documents need to be submitted in hard copy) . All the pages of the Technical Bid shall be numbered and indexed by the bidder failing which the Tender Evaluation Committee reserves the right to reject the bid.	

(REGISTRAR)



TENDER DOCUMENT

FOR

**Supply, Installation, Testing and Commissioning of
Lab Equipments for
IOT Lab, USAR, East Delhi Campus**

AT

**Guru Gobind Singh Indraprastha University,
[A state University under Govt. of NCT of Delhi]
Surajmal Vihar, Delhi-110092**

*Dy. Registrar (Purchase)
Room No. L 010, Ground Floor, Library Block,
GGSIPO, Sector 16C, Dwarka, New Delhi 110078
Contact Nos.011 25302149-150
Email: purchasebranch@ipu.ac.in*

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NOTICE INVITING TENDER

Registrar, Guru Gobind Singh Indraprastha University (GGSIPU) invites e-tender (in two bid system – Part I & II) from authorized supplier and Manufacture for the following on Supply & installation basis:

1. **Particulars of Items:** Details of the items with specification is mentioned at **Annexure-K**
2. **Completion period:** Supply, Installation, Testing and Commissioning within 30 days from the date of issue of award of the tender/issue of Purchase Order, whichever is later.
3. **Availability of Tender Document:** Tender Documents with detail terms & conditions can be downloaded from Delhi govt. e-procurement website.
4. **Qualification of the Tenderer:** The bidder must upload the documents on e-procurement website as per the **tender clause 13**.
5. **Validity Period of Offer:** The rates offered in Part II (Financial bid) should be valid for one hundred and eighty (180) days from the date of opening of Part I (Technical bid) of the Tender.
6. **Receipt and opening of Tenders:** The Technical Bid will be opened on the same day at **02.30 pm**.
7. GGSIPU reserve the right to accept or reject any or all the tenders wholly or partially without assigning any reason thereof.

DETAILED SCOPE OF WORK

8.0 Scope & Work

The work consists of:

8.1 Supply, Installation, Testing and Commissioning of Lab Equipment at East Delhi Campus, Guru Gobind Singh Indraprastha University, Surajmal Vihar, Delhi as per specification in **Section-III (Annexure-K)**.

8.2 Specification for Work and Quality

The procurement of materials shall be either from the manufacturers or their main authorized dealers to ensure that no duplicate/spurious makes are used in the works. The entire work shall be with Comprehensive on-site warranty for a period of 36 months against defective material with liability of replacement or to the satisfaction of the University. **(Annexure-K)**.

8.3 Safety and Security

Safety and Security of workers/staff, material, equipments, etc. will be the responsibility of the bidder. The university will not be held responsible on this account.

8.4 The University reserves the right, without being liable for any damages or obligation to inform the bidder, to:

(a) Amend the scope and value of contract to the bidder.

(b) Reject any or all the applications without assigning any reason.

8.5 Any effort on the part of the bidder or his agent to exercise influence or to pressurize the University would result in rejection of his bid. Canvassing to any kind is prohibited.

8.6 The commissioning and complete installation of all the equipment/machinery, including civil work, electrical work, pneumatic power supply etc. as per the setup finalized by the committee will be done by the supplier only.

8.7 The specifications of the all the equipment(s) provided by the Bidder shall match on the OEM's website alongwith the warranty of the machine. Any mis-match on this account will be treated as deficiency & shall make the product liable for rejection. The University will only accept the warranty given by the OEM & not by the seller/successful bidder.

8.7 In case of software items, the suppliers should ensure that:

a) Legal software is supplied in original sealed pouches/pkt.

b) A license agreement is enclosed with it

c) A registration card is available in software.

SECTION-I

INSTRUCTIONS TO BIDDERS

9.0 Definitions:

- 9.1 **GGSIPIU** means Guru Gobind Singh Indraprastha University, Delhi
- 9.2 **University** means Guru Gobind Singh Indraprastha University, Delhi
- 9.3 **Employer** means the Registrar, GGSIPU and his successor
- 9.4 **Bidder** means Manufacturer, OEM and authorized supplier of OEM Manufacturer/Vendor/Firm. The tenderer must enclose adequate documents to provide their authorization claim.
- 9.5 **“Year”** means “Financial year” unless stated otherwise.
- 9.6 Partial bids shall be summarily rejected. All the bidders must apply for complete scope of work.

10.0 Who can apply:

- 10.1 If the bidder is a proprietary firm, the application shall be signed by the proprietor with his full typewritten name and the full name of his firm with its current address, Contact details etc.
- 10.2 If the bidder is a firm in partnership, the application shall be signed by all partners of the firm with their full typewritten names and current addresses, or alternatively, by a partner holding power of attorney for the firm. In the latter case a certified copy of the power of attorney should accompany the application. In both cases, a certified copy of partnership deed and current address of all the partners of the firm should accompany the application.
- 10.3 If the bidder is a limited company or a corporation, the application shall be signed by a duly authorized person holding power of attorney for signing the application accompanied by a certified copy of the power of attorney. The bidder should also furnish a certified copy of the Memorandum and Articles of Association duly attested by a Public Notary.
- 10.4 **Joint Venture/ Consortiums are not accepted.**

11.0 Sealing and Marking of Bids

- 11.1 Technical bid must be submitted on e-procurement website of each item and the respective Bid-Securing Declaration form for EMD.

12.0 Bid Submission:

- 12.1 The document comprise of the technical bids alongwith Bid-Securing Declaration Form should be uploaded on e-procurement website i.e. www.govtprocurement.delhi.gov.in **only (Not to be submitted in hard copy)**
- 12.2 Technical bid must be uploaded on e-procurement website and EMD (with validity of 180 days i.e. bid validity period +45 days) in FDR/DD/online only should be submitted in the office.

- 12.3 (i) The prospective bidder may submit the EMD in the form of NEFT/RTGS/FDR/DD alongwith the prescribed format (Annexure-J) and upload the copy of the same alongwith Technical Bid documents.
- (ii) The bidder shall submit “**Earnest Money Deposit**” alongwith covering letter in original (No other documents need to be submit in hard copy) in an envelope addressed to Dy. Registrar (Purchase), Guru Gobind Singh Indraprastha University, Sector 16-C, Dwarka, New Delhi-110078 only in case of EMD is in shape of FDR/ DD. The envelope should be super scribed “EMD for Tender of SITC of Lab Equipment(s) for IOT Lab”.
- (iii) EMD can also be deposited in online mode in University Bank Account as per details below:-

RTGS/ECS Details		
1.	Accounts Holder Name	Registrar, Guru Gobind Singh Indraprastha University
2.	Account No.	927860555
3.	IFSC Code	IDIB000G082
4.	Bank Name	Indian Bank
5.	MICR Code	110019071
6.	Account type	SB (Saving)
7.	CBS Code/ Branch Code	02029
8.	Branch Name & Address	GGSIPIU, Sector-16C, Dwarka, New Delhi - 110078
9.	Banker’s Phone No.	011-28035244

(iv) EMD EXEMPTION:

- The bidder seeking EMD exemption, must submit the valid supporting document.
- Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy.
- For startups no relaxation in the turnover criteria or experience criteria shall be given.

12.4 The envelope containing EMD shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared late or is declared non-responsive.

12.5 In case of submission of EMD Online (RTGS/ NEFT), there is no requirement of physical submission. A Declaration should be submitted with details of RTGS/ NEFT.

12.6 A **pre-bid meeting** shall be held on **22.08.2025 at 11:00 AM** in the Purchase Branch, GGSIPU University with the interested and prospective bidders to resolve their queries and issues clarification (if any).

12.7 The “**Financial Bid**” shall comprise of the price bids uploaded on e-tender website i.e. www.govtprocurement.delhi.gov.in

12.8 Each page of the Technical Bid, Tender Document must be signed by the authorized signatory of the bidder and shall be indexed properly. Incomplete tender bids or Bids without proper page numbering may be rejected as Technically Disqualified. No claim or requests shall be entertained later.

12.9 Conditions other than those laid down in the Tender document will not be entertained.

13.0 ELIGIBILITY CRITERIA FOR TECHNICAL BID

The formats/Annexure for the documents to be submitted, with Technical bids are placed at **(Annexure– A, A1, A2 to Annexure I)**:

13.1	Letter of Transmittal	Annexure – A
	Declaration by Bidder	Annexure – A1
	Compliance to Bid Requirement	Annexure – A2
	A declaration by the bidder that the item for which we have quoted our price in the Financial Bid would not be an item used so far for demo/any other purposes and will be unused (brand new).	Annexure – A3
	Organizational Structure: - Legal status of the company/ organization with legal proof along with certified copies.	Annexure - B
13.2	Income Tax Registration (PAN No.),	Attach certified copies
	GST Registration Number	
13.3	Experience Criteria: The Bidder or its OEM {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt. Organization / PSU / Public Listed Company for 3 years before the bid opening date. Copies of relevant contracts to be submitted along with bid in support of having supplied some quantity during each of the year. In case of bunch bids, the primary product having highest value should meet this criterion.	Annexure C
13.4	Average financial turnover of Rs. 57,04,946/- during the immediate last three consecutive financial years ending 31.03.2024, duly audited, signed & stamped by a Chartered Accountant. The bidder should not have incurred losses in more than two years in the last 3 consecutive financial years along with copies of audited profit and loss account of last three years ending 31.03.2024.	Annexure D
13.5	Firm should have executed at least one of the following in the last three years:	Annexure E
	One single order of similar work having value of Rs.45,63,957/- (i.e. 80% of estimated value) OR	
	Two similar work having value of Rs. 34,22,968/- (i.e. 60% of estimated value). OR	
	Three similar work having value of Rs.22,81,978/- each (i.e. 40% of estimated value).	
Explanation:		
<ul style="list-style-type: none"> • Same and Similar nature of items means the work of supply and installation of similar or equivalent items mentioned at Annexure-G in public sector undertaking, Govt. department, Educational Institutions, Research Institutional or in reputed private sector. • This should be certified by an authorized officer of the client organization on its letter-head. Work orders without proper completion certificate will not be considered. • Bunching of work orders from same / one firm in a financial year or multiple financial years will not be considered for Clause 13.4. Further, escalation in cost due to any reason will 		

	<p>not be considered.</p> <ul style="list-style-type: none"> • Clear-cut completion certificate with work order meeting the criteria should be submitted failing which the Tender Evaluation Committee is Authorised to reject the bid. 	
13.6	That the bidder/ organization has not been debarred or blacklisted by any of the Central/State Government/Departments /Organizations/Central or State PSU in last 3 years. In case the debarment or blacklisted has been revoked by the department or court then it shall not be considered as blacklisting or debarment. A declaration of fair business practice by the Bidder.	Annexure – F
13.7	An Undertaking (duly filled/ tick mark wherever applicable) is required to be submitted by the prospective bidders in the prescribed format as per Rule 144 (xi) of GFR 2017 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws.	Annexure – I
13.8	The Manufacturer/firm/vendor should have an authorized service centre in Delhi/NCR only.	Attach copy of proof
13.9	The bidder shall upload the printed brochure / catalogue of the offered item as available on OEM website.	Attach copy of proof
13.10	Authorization letter of the OEM Upload Manufacturer authorization: Wherever Authorised Distributors/Resellers are submitting the bid, Manufacturers Authorisation Form (MAF)/Certificate with OEM details such as name, designation, address, e-mail Id and Phone No. required to be furnished along with the bid.	Attach copy of proof
13.11	Comprehensive on-site warranty for a period of 36 months from the last date of completion/ installation for all the items supplied as certified by the University. The bidder shall be required to depute service engineer at both campuses during the period of comprehensive warranty.	Certificate to be given
13.12	The intending bidder must attach Income Tax return for the last three years with the bid document or Gross Annual Income Certificate for the last three years duly certified by the Chartered Accountant.	Attach copy of proof
13.13	MII Purchase Preference Minimum local content – 30% The bidder shall be required to submit a certificate in support of minimum local content which will be issued by the OEM.	Yes

All the documents should be self attested by the bidder. University reserves the right to independently verify the documents submitted by the bidder form issuing authority.

14.0 OPENING OF TECHNICAL BIDS & EVALUATION:-

- 14.1 The details submitted by the bidders will be evaluated in the following manner:
- 14.2 The “initial eligibility criteria” prescribed in para **13.1 to 13.13 above** in respect of experience in similar class of works completed, financial turnover, profitability and valid registrations will first be scrutinized.
- 14.3 Examination of the specification of all the items will be done by specialized specification evaluation committee.
- 14.4 Even though any bidder may satisfy the above requirements, he/she would be liable to disqualification if he/she has:-
- 14.5 Misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the eligibility criteria document may lead to disqualification / rejection of the Bid at any stage or even after award of work and may lead to forfeiture of EMD/ Performance Guarantee as the case may be.
- 14.6 Record of poor performance such as abandoning work, not properly completing the contract, or financial failures/weaknesses etc. may also lead to disqualification or rejection of Bid.

15.0 Opening of Financial bid and evaluation:

After the Technical evaluation of the bids and pre-inspection of the products, the University will open the ‘Financial Bids’ of all the bidders who have qualified in the Technical Eligibility Criteria as per Clause 13, at notified time, date and place, if any. **The lowest financial bidder total-wise for equipments shall only be considered for award of work.**

16.0 Earnest Money Deposit:

- 16.1 The Earnest Money Deposit (EMD) along with covering letter must be submitted in hard copy as per date and time mentioned above at **point No.12.3 to 12.5 and as per annexure-J.**
- 16.2 Tenders with no earnest money deposit will summarily be rejected. In case of successful bidder of the financial bids, the earnest money will be returned after obtaining the required **5% Performance Security** in the form of FDR/BG (**FDR/BG should be valid for a period of 38 months**) from the date of installation.
- 16.3 In the case of unsuccessful bidders, the Earnest Money Deposit will be refunded without any interest.
- 16.4 Those firms/ suppliers which are registered with MSME /MSE for the items mentioned in the tender document, are exempted for submission of EMD only and are required to submit a copy of valid registration certificate in place of EMD as per GFR 170(i) and clause 12 (iii) of the tender document.

17.0 Financial Bid:

The bidder shall quote unit item rates in INR only. No alterations in the form of tender, in the schedule of quantities or additions (Financial Bid) etc. shall be permitted. In case of difference between the rates of items written in figures and in

words, the rates of items written in words shall be taken as correct. The rates quoted in schedule of quantity (Financial Bid) are for finished and completed items and no extra amount for cartage or transporting material, labour etc. shall be paid. The rates should be inclusive of all loads and lifts for all materials for the completed items and also include all taxes, insurance, royalties etc. as applicable. Indian Supplier has to quote the all inclusive of rate product i.e. freight, insurance, packing, handling, assembling, installation, commissioning upto the University or as given in the work order. Part bids or conditional bids shall be summarily rejected.

18.0 General:

- 18.1 All information called for in the enclosed forms should be furnished against the relevant places in the forms. If for any reason, information is furnished on a separate sheet, this fact should be mentioned against at the relevant place. Even if no information is to be provided in a column, a “Nil” or “No Such Case” entry should be made in that column. If any particular/query is not applicable in case of the bidder, it should be stated as “not applicable”. The bidders are cautioned that incomplete information called for in the tender document or deliberate suppression of any information may result in the bid being summarily disqualified. Bids received after the expiry of the stipulated date and time mentioned in the tender document will not be entertained.
- 18.2 Overwriting should be avoided. Correction, if any, should be made by neatly crossing out, initialing with date and rewriting. Pages of the eligibility criteria document are to be numbered. Additional sheets, if any added by the bidder, should also be numbered. Bid should be submitted as a package with signed letter of transmittal.
- 18.3 References, information and certificates from the respective clients certifying suitability, technical knowledge or capability of the bidder should be signed by officer of the client organization with name & designation.
- 18.4 The bidder may furnish any additional information which he thinks is necessary to establish his capabilities to successfully complete the envisaged work. He is, however, advised not to furnish superfluous information. No information shall be entertained after submission of tender document unless it is called for by the University.
- 18.5 Any information furnished by the bidder found to be incorrect either immediately or at a later date, would render him liable to be debarred from tendering/taking up of any work in GGSIPU **which may also result in forfeiture of performance security.**
- 18.6 The successful bidder shall have to work in co-ordination and co-operation with any other agencies appointed by the University to work simultaneously in the same or adjoining area. The decision of the University in case of any dispute between the different agencies appointed by the University shall be final and binding.
- 18.7 Income tax, Works Contract Tax and any other tax at the rates in force during the progress of contract / **award of work** that will be in force from time to time shall be recovered / deducted from the released payment amount.
- 18.8 GST or any other tax on material applicable on the date of submission of bid in respect of this contract shall be payable by the bidder and University will not entertain any claim whatsoever in respect of the same.

- 18.9 The bidder shall have to make his own arrangement at no extra cost to the University for water Supply & Installation, sanitation and electric Supply & Installation etc. at the site of work.
- 18.10 On acceptance of the tender, the name of the accredited representative(s) of the bidder who would be responsible for taking instructions from the University shall be communicated in writing to the Registrar.
- 18.11 If the bidder shall obtain a contract with GGSIPU as a result of wrong tendering or other non-bonafide methods of competitive tendering, the University reserves the right to terminate the contract may also forfeit the performance security.
- 18.12 Without prejudice to any of the rights or remedies under this contract if the bidder dies, the University shall have the option of terminating the contract without compensation to the legal heir of the bidder.
- 18.13 Escalation: Increase in rates of material / Labour shall not be payable on any account. Price quoted shall be firm and no escalation will be allowed on any account.
- 18.14 A bidder's bid security will be forfeited if the bidder: i) withdraws or amends its/ his tender; ii) impairs or derogates from the tender in any respect within the period of validity of the tender; iii) If the bidder does not accept the correction of his bid price during evaluation; and iv) If the successful bidder fails to sign the contract or furnish the required performance security within the specified period.

19.0 Final decision making authority

The University reserves the right to accept or reject any bid and to annul the process and reject all bids at any time, without assigning any reason or incurring any liability to the bidders. No claim whatsoever will be entertained / paid by the university to the bidder (s).

20.0 Summary Rejection of tender:

- 20.1 The tenders submitted without the form for Bid-Securing Declaration for EMD (**Annexure-H**) shall be summarily rejected. Similarly, if the bidder proposes any alternation in or additions to the prescribed form of tender or decline to carry out any work of the tender document; or any conditions mentioned, etc., his tender is liable to be rejected.

21.0 Particular provisions

- 21.1 The University reserves the right to execute the work or reject the tender without assigning any reason or incurring any liability to the bidder.
- 21.2 The University has the power to make alteration in, omission from, addition of or substitution for the original specifications, drawings, designs.

22.0 Amendment of tender document:

- 22.1 Before the deadline for submission of tender, the University may modify the tender document by issuing addenda.
- 22.2 Any addendum thus issued shall be a part of the tender document and shall be uploaded on the e-procurement website (www.govtprocurement.delhi.gov.in). Prospective bidders must visit the website before filling and submission of Tender Document for such information.

23.0 Validity of Tender:

One Eighty days from the date of opening of **Technical Bid** of the tender. During this period no bidder shall be allowed to modify/ withdraw his tender.

24.0 Pre-dispatch inspection at Seller: Before dispatch, the University reserves the right to conduct for pre-dispatch inspection by the Authorized Representative (independently or jointly with Buyer or Consignee as decided by the Buyer) at Seller premises (or at designated place for inspection as declared / communicated by the seller) for their compliance to the contract specifications. For in-house testing, the Sellers will provide necessary facilities free of cost. Seller shall notify the Buyer through e-mail about readiness of goods for pre-dispatch inspection and Buyer will notify the Seller about the Authorized Representative and the date for testing.

25.0 Performance Guarantee:

25.1 The successful bidder shall be required to furnish a **Performance Guarantee of 5%** after successfully installation of the product at site. Performance Security should remain valid for a period of 60 days beyond contractual obligations of the supplier including warranty obligations i.e. 36 months onsite warranty. The Performance Guarantee shall be accepted in the following form and shall be in favour of “Registrar, GGSIPU”, payable at Delhi with a validity of months as under:-

- i. Fixed deposit receipt (FDR) of a nationalized bank
- ii. Bank Guarantee (As per Annexure-G)

25.2 Performance Guarantee will be refunded after completion of the warranty period i.e. 36 months comprehensive onsite warranty + 02 months beyond contractual obligations of the supplier including warranty obligations.

25.3 In case of non submission of Performance Guarantee a week from the installation of equipments, the University shall deduct the same value from the Bill and process the release of remaining payment subject to the other conditions being satisfied.

25.4 In case a fixed deposit receipt/ Bank Guarantee of any bank is furnished by the bidder to the University as part of the Performance Guarantee and the Bank is unable to make payment against the said item. The loss caused thereby shall fall on the supplier and the supplier shall forthwith on demand furnish additional security to the University to make good the deficit.

26.0 Warranty

26.1 The bidder shall provide **Comprehensive on-site warranty for a period of 36 months** for all items from the last date of completion/ installation as certificate issued by the University and shall be responsible for any defects that develop in the item. They shall also replace any defective part of the product supplied and other accessories, without any exception and recourse, free of cost.

26.2 The bidder is responsible for all packing, unpacking, assembly, installation of units. The bidder will test the products and accomplish the adjustments necessary for successful and continuous operation of the products supplied at all installation sites and shall ensure maintenance of the supplied products during the warranty period. All the repairing / replacing of defects shall be done by the bidder totally free of cost.

26.3 The Bidder will also depute Service Engineer/ Trained Personnel to carryout the services / problem resolution within the time period specified as per the Clause 30 of the tender and Annexure-K (Additional Terms and Conditions).

27.0 Duration

The Supply, Installation, Testing and Commissioning under this tender are required to be completed within 30 days at East Delhi Campus of Guru Gobind Singh Indraprastha University, Surajmal Vihar, Delhi-110092.

28.0 Payment Terms

- 28.1 The payment will be released after satisfactory complete installation, commissioning, training, receipt of performance guarantee and inspection by the University Inspection Committee.
- 28.2 Each invoice should be submitted in duplicate clearly specifying contact no, goods description, quantity, unit price, total amount, bank details along with warranty certificate, etc.
- 28.3 No advance payment will be made under any circumstances.

29.0 Delay and Non Conformance

- 29.1 If the bidder fails to Install the equipments with in the period specified in the Purchase Order, University shall without prejudice to its other remedies under the Purchase Order, deduct from the contract price, as liquidated damages, a sum equivalent to 1% (one percent) of the contract price of the delayed goods weekly or part thereof of delay until actual delivery. The penalties will be maximum of 10% of the contract amount / awarded value.
- 29.2 In case of extraordinary delay or beyond 90 days of stipulated delivery period, University reserves the right to terminate the contract, without any liability to cancellation charges, forfeit/en-cash the submitted Performance Guarantee and blacklist/debarred the defaulting firm.

30.0 Services during warranty period

- 30.1 After having been notified of the defects/ service requirement during warranty period, Seller has to complete the required Service / Rectification within **05 days time limit**.
- 30.2 **Default in After Sales Services:** In the event of any default and/or unsatisfactory after sales service by the supplier/tenderer/vendor/firm, the Competent Authority will be at liberty to repair during warranty/get the item repaired/serviced from other source/party at the cost of vendor. All the cost has to be paid by the vendor / supplier of equipments as the case may be. The successful bidders has to sign an irrevokable indemnity Bond with the University and shall be required to make good all the losses or expenses which the University may have to incur due to the unsatisfactory performance/ after sales by the Bidder.
- 30.3 If the Seller fails to complete service / rectification with defined time limit, a penalty of 0.5% of Unit Price of the product shall be charged as penalty for each week of delay from the seller. Seller can deposit the penalty with the Buyer directly else the Buyer shall have a right to recover all such penalty amount from the Performance Security.
- 30.4 Cumulative Penalty cannot exceed more than 10% of the total contract value after which the Buyer shall have the right to get the service / rectification done from alternate sources at the risk and cost of the Seller besides forfeiture of Performance Security. Seller shall be liable to re-imberse the cost of such service / rectification to the Buyer.

31.0 Packing and Marking

31.1 All packing should be strong enough to withstand rough handling during loading/unloading and transporting. Fragile articles should be packed with special precaution and should bear the marking like Fragile, handle with care, This side up etc.

32.0 Substitution and Wrong Supplies

Unauthorized substitution or materials delivered in error of wrong description or quality or supplied in excess quantity or rejected goods shall be returned to the bidder at bidder's cost and risk.

33.0 Insurance, Freight and Deliveries

33.1 The supplier shall make his own arrangements towards safe and complete delivery including insurance, freight, state level permits etc. as applicable at the designated locations indicated by University in the Purchase Order.

33.2 The bidder will keep University informed about changes, if any, in various stages of deliveries, installation.

34.0 Arbitration and Settlement of Disputes:

34.1 University and the bidder shall make every effort to resolve amicably by direct information negotiation by difference or dispute arising between them under or in connection with the University order.

34.2 If after thirty (30) days from the commencement of such informal negotiations, University and the supplier are unable to resolve amicably the dispute, either party may require that the dispute be referred for resolution to the formal mechanisms as specified hereunder:

34.2.1 Any dispute or differences whatsoever arising between the parties out of or relating to the manufacturing, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall be settled by arbitration in accordance with the provisions of the Arbitration & Conciliation Act, 1996 and the award made in pursuance thereof shall be binding on the parties. The sole arbitrator shall be appointed by the Vice Chancellor, GGS Indraprastha University.

34.2.2 The performance under this contract shall not stop for any reason whatsoever during the said dispute/proceedings, unless the bidder is specifically directed by University to desist from working in this behalf.

34.2.3 The venue of arbitration shall be Delhi/ New Delhi. The language of proceedings shall be English. The Law governing the substantive issues between the parties shall be the Laws of India. All disputes are subject to the jurisdiction of the Delhi Courts only

34.2.4 It is also a term of that if any fees are payable to the arbitrator, these shall be paid equally by both the parties. It is also a term of the contract that the arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties calling them to submit their statement of claims and counter statement of claims.

35.0 Force Majeure For purpose of this Clause, Force Majeure shall mean fires, floods, natural disasters or other acts, that are unanticipated or unforeseeable, and not brought about at the instance of the party claiming to be affected by such event, or which, if anticipated or foreseeable, could not be avoided or provided for, and which has caused the non-performance or delay in performance, such as war, turmoil, strikes, sabotage, explosions, quarantine restriction beyond the control of either party. A party claiming Force Majeure shall exercise reasonable diligence to seek to overcome the Force Majeure event and to mitigate the effects thereof on the performance of its obligations under this Supply Order.

If a Force Majeure situation arises, the supplier shall promptly notify the University in writing of such conditions and the cause thereof. Unless otherwise directed by the University in writing, the Supplier shall continue to perform its obligations under the Purchase Order as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

SECTION II
INFORMATION REGARDING TECHNICAL ELIGIBILITY
(Annexure A to J)

INDEX/ CHECK LIST
(To be filled by the Bidder)

Clause No.	Documents required	Annexures	Page Nos.
13.1	Letter of Transmittal	Annexure – A	
	Declaration by Bidder	Annexure – A1	
	Compliance to Bid Requirement	Annexure – A2	
	A declaration by the bidder that the item for which we have quoted our price in the Financial Bid would not be an item used so far for demo/any other purposes and will be unused (brand new).	Annexure – A3	
	Organizational Structure: - Legal status of the company/ organization with legal proof along with certified copies.	Annexure - B	
13.2	Income Tax Registration (PAN No.),	Attach certified copies	
	GST Registration Number		
13.3	Experience Criteria: The Bidder or its OEM {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt. Organization / PSU / Public Listed Company for 3 years before the bid opening date. Copies of relevant contracts to be submitted along with bid in support of having supplied some quantity during each of the year. In case of bunch bids, the primary product having highest value should meet this criterion.	Annexure C	
13.4	Average financial turnover of Rs. 57,04,946/- during the immediate last three consecutive financial years ending 31.03.2024, duly audited, signed & stamped by a Chartered Accountant. The bidder should not have incurred losses in more than two years in the last 3 consecutive financial years along with copies of audited profit and loss account of last three years ending 31.03.2024.	Annexure D	
13.5	Firm should have executed at least one of the following in the last three years:	Annexure E	
	One single order of similar work having value of Rs.45,63,957/- (i.e. 80% of estimated value) OR		
	Two similar work having value of Rs. 34,22,968/- (i.e. 60% of estimated value). OR		
	Three similar work having value of Rs.22,81,978/- each (i.e. 40% of estimated value).		
	Explanation:		

	<ul style="list-style-type: none"> • Same and Similar nature of items means the work of supply and installation of similar or equivalent items mentioned at Annexure-G in public sector undertaking, Govt. department, Educational Institutions, Research Institutional or in reputed private sector. • This should be certified by an authorized officer of the client organization on its letter-head. Work orders without proper completion certificate will not be considered. • Bunching of work orders from same / one firm in a financial year or multiple financial years will not be considered for Clause 13.4. Further, escalation in cost due to any reason will not be considered. • Clear-cut completion certificate with work order meeting the criteria should be submitted failing which the Tender Evaluation Committee is Authorised to reject the bid. 		
13.6	That the bidder/ organization has not been debarred or blacklisted by any of the Central/State Government/Departments /Organizations/Central or State PSU in last 3 years. In case the debarment or blacklisted has been revoked by the department or court then it shall not be considered as blacklisting or debarment. A declaration of fair business practice by the Bidder.	Annexure – F	
13.7	An Undertaking (duly filled/ tick mark wherever applicable) is required to be submitted by the prospective bidders in the prescribed format as per Rule 144 (xi) of GFR 2017 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws.	Annexure – I	
13.8	The Manufacturer/firm/vendor should have an authorized service centre in Delhi/NCR only.	Attach copy of proof	
13.9	The bidder shall upload the printed brochure / catalogue of the offered item as available on OEM website.	Attach copy of proof	

13.10	<p>Authorization letter of the OEM</p> <p>Upload Manufacturer authorization: Wherever Authorised Distributors/Resellers are submitting the bid, Manufacturers Authorisation Form (MAF)/Certificate with OEM details such as name, designation, address, e-mail Id and Phone No. required to be furnished along with the bid.</p>	Attach copy of proof	
13.11	<p>Comprehensive on-site warranty for a period of 36 months from the last date of completion/installation for all the items supplied as certified by the University. The bidder shall be required to depute service engineer at both campuses during the period of comprehensive warranty.</p>	Certificate to be given	
13.12	<p>The intending bidder must attach Income Tax return for the last three years with the bid document or Gross Annual Income Certificate for the last three years duly certified by the Chartered Accountant.</p>	Attach copy of proof	
13.13	<p>MII Purchase Preference</p> <p>Minimum local content – 30%</p> <p>The bidder shall be required to submit a certificate in support of minimum local content which will be issued by the OEM.</p>	Yes	
	BID SECURING DECLARATION	Annexure-H	
	FORMAT FOR DETAILS OF EMD	Annexure-J	
	TECHNICAL SPECIFICATIONS	Annexure-K	

LETTER OF TRANSMITTAL

From:

To

The Registrar
GGG IPU
Sector 16C, Dwarka,
Delhi

Sub:Submission of Tender Document for “**Supply, Installation, Testing and Commissioning of Lab Equipment(s) at Guru Gobind Singh Indraprastha University, Sector-16C, Dwarka, New Delhi-110078**”.

Sir,

Having examined the details given in Tender document for the above work, I/we hereby submit the relevant information:-

1. I/we hereby certify that all the statement made and information supplied in the enclosed annexure / forms accompanying statement are true and correct.
2. I/we have furnished all information and details necessary for eligibility and have no further pertinent information to Supply, Installation, Testing and Commissioning.
3. I/we submit the requisite certified solvency certificate and authorize the Registrar, GGSIPU to approach Bank issuing the solvency certificate to confirm the correctness thereof. I/we also authorize the GGSIPU to approach individuals, employers, firms and corporation to verify our competence and general reputation.

Name & Signature(s) of Bidder(s) with seal

DECLARATION BY THE BIDDER

We _____ (Name of the Bidder) hereby represent that we have gone through and understood the Bidding Document (which in two parts) in Part-I (Commercial Section & Technical Section) and Part-II (Schedule of Quantities) and that our Bid has been prepared accordingly in compliance with the requirement stipulated in the said documents.

We are submitting a copy of Bidding Document marked “Original” as part of our Bid duly signed and stamped on each page in token of our acceptance. We undertake that Part-I and Part-II of the Bidding Document shall be deemed to form part of our bid and in the event of award of work to us, the same shall be considered for constitution of Contract Agreement. Further, we shall sign and stamp each page of this Part-I and Part-II as a token of Acceptance and as a part of the Contract in the event of award of Contract to us.

We further confirm that we have indicated prices in Schedule of Quantities and submitted in Price Bid in separately sealed envelope. We confirm that rate quoted by us includes price for all works/activities/supply etc. as mentioned in item description of the items in Schedule of Quantities.

SIGNATURE OF BIDDER : _____

NAME OF BIDDER : _____

COMPANY SEAL : _____

Note : This declaration should be signed by the Bidder’s representative who is signing the Bid.

COMPLIANCE TO BID REQUIREMENT

We hereby agree to fully comply with, abide by and accept without variation, deviation or reservation all technical, commercial and other conditions whatsoever of the Bidding Documents and Addendum to the Bidding Documents, if any, for subject work issued by GGSIPU.

We hereby further confirm that any terms and conditions if mentioned in our bid (Un-priced as well as Priced Part) shall not be recognized and shall be treated as null and void.

SIGNATURE OF BIDDER : _____

NAME OF BIDDER : _____

COMPANY SEAL : _____

DECLARATION BY THE BIDDER

We _____ (Name of the Bidder) hereby declare that the item for which we have quoted our price in the Financial Bid would not be an item used so far for demo/any other purposes and will be unused (brand new).

SIGNATURE OF BIDDER : _____

NAME OF BIDDER : _____

COMPANY SEAL : _____

Note: This declaration should be signed by the Bidder’s representative who is signing the Bid.

ORGANISATION STRUCTURE

1. Name & Address of the Bidder :
2. Telephone No./Fax No./ e-mail :
3. Legal status of the Bidder (attach copies of original document defining the legal status)
 - a) An Individual
 - b) A proprietary firm
 - c) A firm in partnership
 - d) A limited company or Corporation
 - e) A Public Sector Undertaking
4. Particulars of registration with various Government Bodies (Attach attested Photo Copy)

Organization /Place of registration	Registration No
-------------------------------------	-----------------
5. A. PAN No. -----
B. GST No. -----
6. Names and Titles of Directors & Officers with designation to be concerned with this work. :
7. Name & Designation of individuals authorized to act for the organization :
(Pl attach power of attorney in favour of authorized representative duly signed by authorized signatory)
8. Has the Bidder ever required to suspend work for a period of more than six months continuously after you commenced the business? If so, give the name of the project and reasons of suspension of work. :
9. Has the Bidder, or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment. :
10. Has the Bidder, or any constituent partner in case of partnership firm, ever been debarred/ black listed for tendering in any organization at any time? If so, give details. :
11. Has the Bidder, or any constituent partner in case of partnership firm, ever been convicted by a court of law? If so, give details. :
13. Any other information considered necessary but not included above. :

(Stamp, Name & Signature of Bidder)

DETAILS OF SUPPLY OF ITEMS (AS PER SPECIFICATION GIVEN IN SECTION III BELOW) IN LAST 03 (THREE) YEARS i.e. Financial Year 2021-22, 2022-23 and 2023-24

(I) S. No.	(ii) Postal address of client with contact numbers	(iii) Starting date	(iv) Scheduled completion date	(v) Actual completion date	(vi) Reasons for delay, if, any	(vii) Contract value	(viii) Contract goods/ items*	(ix) Any other information	(x) Page nos.

Instructions –

- I. ***The Bidder is required to showcase his capabilities with reference to the past experience through similar work as per this tender.**

In case, the projects/ works shown above does not match the requirement of this University, the said bid shall be liable to be rejected. The decision of the University shall be final.

- II. **The above details should be properly indexed with page numbers, failing which the bids shall be summarily rejected**

(Stamp, Name & Signature of Bidder)

DETAILS OF ANNUAL TURNOVER

A. FINANCIAL DETAILS

Financial Years	Gross Annual Turnover (In Lakhs)	Profit/Loss (In Lakhs)
2021-2022		
2022-2023		
2023-2024		

B. Audited balance sheet and profit & loss account for above three years to be submitted. Must be attested by the Chartered Accountant.

Signature & stamp by Chartered Accountant

(Stamp, Name & Signature of Bidder)

DETAILS OF WORK COMPLETION

Sl. No.	Order No./dated	Name of the Organization	Description of Item	Order / Quantity	Total value Amount	Date of start	Date of completion	Attach work completion certificate on the letter head of the client Organisation	Performance Assessment for last 05 years.

(Stamp, Name and Signature of Bidder)

PERFORMANCE REPORT OF EACH WORK REFERRED IN ANNEXURE-C

1. Name of work / Project & Location :
2. Name of Client and Address with contact details :
3. Agreement No./Work Order No. :
4. Value of work as per work order/ Award : **Rs.**
5. Total value of actual work done : **Rs.**
6. Date of start :
7. Date of completion :
8. Performance Report (Pls. tick one) :

(Outstanding/ Very Good/Good Satisfactory /Unsatisfactory/ Poor)

(Signature & Stamp of Director/Registrar/Admin.Officer/Ex. Engineer or Equivalent)
With Phone No./Mob.No. & E-mail address

(Stamp & Signature of Bidder)

Dated:

Note:

1. This Annexure should be submitted separately for each work completed by the Bidder and the works indicated in the Annexure-C.
2. This ANNEXURE shall be signed & stamped by the Bidder's client not below the rank of Asstt. Registrar / Admn. Officer/ Executive or equivalent.
3. The Name, Address, Contact details (Mobile, Fax, E-mail, and Landline Phones) of Client should be indicated to facilitate confirmation of work.

DECLARATION FOR FAIR BUSINESS BY THE BIDDER

This is to certify that We, M/s _____ in submission of this offer confirm that:-

- i) We have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements;
- ii) We do not have records of poor performance such as abandoning the work, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.
- iii) Business has not been banned with us by any Central / State Government Department/ Public Sector Undertaking or Enterprise of Central / State Government.
- iv) We have submitted all the supporting documents and furnished the relevant details as per prescribed format.
- v) The information and documents submitted with the tender by us are correct and we are fully responsible for the correctness of the information and documents submitted by us.
- vi) We understood that in case of any statement/information/document furnished by us or to be furnished by us in connection with this offer is found to be incorrect or false, our EMD in full will be forfeited and business dealings will be banned.
- vii) We have not been punished / penalized by way of imprisonment in last three years.
- viii) We have not been blacklisted/ debarred by any of the Government/Public Sector Agency in last three years.
- ix) The proprietor/partners of the agency do not have any relative employee in the University.

SEAL, SIGNATURE & NAME OF THE BIDDER

Signing this document

**Form of Performance Guarantee
Bank Guarantee Bond**

1. In consideration of the GGSIPU (hereinafter called “The University”) having offered to accept the terms and conditions of the proposed agreement between ---
----- and ----- (hereinafter called “the said bidder(s)”) for the work ----- (hereinafter called “the said agreement”) having agreed to production of a irrevocable Bank Guarantee for Rs.----- (Rupees ----- only) as a security/guarantee from the bidder (s) for compliance of his obligations in accordance with the terms and condition in the said agreement.

We, ----- (indicate the name of the Bank) ----- (hereinafter referred as “the Bank”) hereby undertake to pay to the University an amount not exceeding Rs.----- (Rupees ----- only) on demand by the University.

2. We, -----(indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demure, merely on a demand from the University stating that the amount claimed is required to meet the recoveries due or likely to be due from the said bidder (s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.----- (Rupees ----- only).
3. We, the said bank further undertake to pay the University any money so demanded notwithstanding any dispute or disputes raised by the bidder(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the bidder(s) shall have no claim against us for making such payment.

4. We, -----(indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the University under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Project-in-Charge on behalf of the University certified that the terms and conditions of the said agreement have been fully and properly carried out by the said bidder(s) and accordingly discharges this guarantee.
5. We, -----(indicate the name of the Bank) further agree with the University that the University shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said bidder(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the University against the said bidder(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said bidder(s) or for any forbearance, act of omission on the part of the University or any indulgence by

the University to the said bidder(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the bidder(s).
7. We, -----(indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the University in writing.
8. This guarantee shall be valid upto ----- unless extended on demand by the University. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs.----- (Rupees ----- only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Dated the ----- day of ----- for ----- (indicate the name of the Bank)

BID SECURING DECLARATION

I.....(Name of the Bidder).....
Designation, of (Name of the Company) do hereby submit
this Bid Securing Undertaking that, if I withdraw or modify my Bid during the
validity or, if I am awarded the contract and failed to sign the contract or to submit
the Performance security before the deadline defined in the tender document, I shall
be **suspended** for the period specified in the tender document from being eligible to
submit Bids for contract with the entity that invited the Bids.

Name of the Bidder

Name of the Company

Dated

Form 1.2: Eligibility Declarations

(Ref ITB-clause 9.2)

(To be submitted as part of Technical bid)

(On Company Letter-head)

(Along with supporting documents, if any)

Tender Document No. Tend No./ xxx; Tender Title: GOODS

Bidder's Name _____

[Address and Contact Details]

Bidder's Reference No. _____ Date.....

Note: The list below is indicative only. You may attach more documents as required to confirm your eligibility criteria.

Eligibility Declarations

(Please tick appropriate boxes or cross out any declaration not applicable to the Bidder)

We hereby confirm that we are comply with all the stipulation of NIT-clause 3 and ITB-clause 3.2 and declare as under and shall provide evidence of our continued eligibility to the Procuring Entity as may be requested:

- 1) **Legal Entity of Bidder:** _____
- 2) **OEM/ Manufacturer/ Agent/ Dealership Status:** _____
- 3) We are/ are not a JV _____
- 4) We solemnly declare that we (including our affiliates or subsidiaries or constituents):
 - a) are not insolvent, in receivership, bankrupt or being wound up, not have our affairs administered by a court or a judicial officer, not have our business activities suspended and are not the subject of legal proceedings for any of these reasons;
 - b) (including our Contractors/ subcontractors for any part of the contract):
 - (i) Do not stand declared ineligible/ blacklisted/ banned/ debarred by the Procuring Organisation or its Ministry/ Department from participation in its Tender Processes; and/ or
 - (ii) Are not convicted (within three years preceding the last date of bid submission) or stand declared ineligible/ suspended/ blacklisted/ banned/ debarred by appropriate agencies of Government of India from participation in Tender Processes of all of its entities, for offences mentioned in Tender Document in this regard. We have neither changed our name nor created a new "Allied Firm", consequent to the above disqualifications.

- c) Do not have any association (as bidder/ partner/ Director/ employee in any capacity) with such retired public official or near relations of such officials of Procuring Entity, as counter-indicated, in the Tender Document.
 - d) We certify that we fulfil any other additional eligibility condition if prescribed in Tender Document.
 - e) We have no conflict of interest, which substantially affects fair competition. The prices quoted are competitive and without adopting any unfair/ unethical/ anti-competitive means. No attempt has been made or shall be made by us to induce any other bidder to submit or not to submit an offer to restrict competition.
- 5) **Restrictions on procurement from bidders from a country or countries, or a class of countries under Rule 144 (xi) of the General Financial Rules 2017:** We certify as under:

"We have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries, and solemnly certify that we fulfil all requirements in this regard and are eligible to be considered. We certify that:

- (a) *we are not from such a country or, if from such a country, we are registered with the Competent Authority (copy enclosed). and;*
 - (b) *we shall not subcontract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.*
- 6) **MSME Status:**

Having read and understood the Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 (as amended and revised till date), and solemnly declare the following:

- a) We are - Micro/ Small/ Medium Enterprise/ SSI/ Govt. Deptt. / PSU/ Others:.....
 - b) We attach herewith, Udyam Registration Certificate with the Udyam Registration Number as proof of our being MSE registered on the Udyam Registration Portal. The certificate is the latest up to the deadline for submission of the bid.
 - c) Whether Proprietor/ Partner belongs to SC/ ST or Women category. (Please specify names and percentage of shares held by SC/ ST Partners):.....
- 7) **Start-up Status**

we confirm that we are/ are not a Start-up entity as per the definition of the Department of Promotion of Industrial and Internal Trade – DPIIT.

8) **Make in India Status:**

Having read and understood the Public Procurement (Preference to Make in India PPP - Mil) Order, 2017 (as amended and revised till date) and related

notifications from the relevant Nodal Ministry/ Department, and solemnly declare the following:

(a) **Self-Certification for the category of suppliers:**

(Provide a certificate from statutory auditors/ cost accountant in case of Tenders above Rs 10 Crore for Class-I or Class-II Local Suppliers). Details of local content and location(s) at which value addition is made are as follows:

Local Content and %age	
Location(s) of value addition	

Therefore, we certify that we qualify for the following category of the supplier (tick the appropriate category):

- Class-I Local Supplier/
 Class-II Local Supplier/
 Non-Local Supplier.

(b) **We also declare that**

- There is no country whose bidders have been notified as ineligible on a reciprocal basis under this order for an offered Goods, or
 We do not belong to any Country whose bidders are notified as ineligible on a reciprocal basis under this order for the offered Goods.

9) **Self-Declaration by Indian Agents/ Associates of Foreign Principals**

- (a) Self-attested documentary evidence about their identity (PAN, Aadhar Card, GSTIN registration, proof of address, etc.), business details (ownership pattern and documents, type of firm, year of establishment, sister concerns etc.) to establish that they are a bonafide business as per Indian Laws – are submitted as part of Form 1.1 annexed herewith.
- (b) Agency Agreement shall be submitted with Form 1.4. It shall cover
- (i) the precise relationship, services to be rendered, mutual interests in business - generally and/ or specifically for the tender and
 - (ii) any payment the agent or associate receives in India or abroad from the foreign OEM/ principal, whether a commission or a general retainer fee.
- (c) Our Foreign principals, explicitly authorizing us to make an offer in response to the tender, either directly or in association with them, are listed in Form 1.3 and 1.4 annexed herewith. That also indicates their name, address, nationality, status (i.e., whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal).
- (d) The amount of commission/ remuneration included in the price (s) quoted by Bidder for agents or associated bidder is detailed in Form 1.4.
- (e) Confirmation is given in Form 1.4 annexed herewith from the foreign principals that the commission/ remuneration, reserved for Bidder in the quoted price(s), if any, shall be paid by the Procuring Entity in India, in

equivalent Indian Rupees on satisfactory completion of the Project or supplies of Goods and Spares.

10) Penalties for false or misleading declarations:

We hereby confirm that the particulars given above are factually correct and nothing is concealed and undertake to advise any future changes to the above details. We understand that any wrong or misleading self-declaration would violate the Code of Integrity and attract penalties as mentioned in this Tender Document.

.....
(Signature with date)

.....
(Name and designation)

Duly authorized to sign bid for and on behalf of

.....
.....

[name & address of Bidder and seal of company]

DA: As in Sr 9 to 14 above, as applicable

Annexure-J

FORMAT FOR DETAILS OF EMD

Details of EMD applied by M/s. _____ as per E-Tender No. _____

Sl.No.	Description	Please Tick Applied (/) Not applied (x)	EMD Amount	Mode of Payment (DD/FDR/NEFT /RTGS)
1.	Lab Equipments			

(SEAL, SIGNATURE & NAME OF THE BIDDER)

SECTION IIITECHNICAL SPECIFICATIONS

Sl.No.	SPECIFICATIONS	Quantity	Unit Price	GST	Total Estimated price (inclusive of GST)
1.	Arduino Educational Kits - From basics to complex projects, teach students about IoT, electronics & programming. Used to teach students about current, voltage, and digital logic as well as the fundamentals of programming. There's an introduction to sensors and actuators and how to understand both digital and analog signals. Within all this, you'll be teaching students how to think critically, learn collaboratively, and solve problems.	10 Sets	17,900/-	18%	Rs. 2,11,220
2.	Arduino IoT Kit [Advanced]: An open programmable IoT platform that allows building custom IoT devices with full control over algorithms and data. This IoT kit offers 8 versatile projects and is a physical interface to the IoT cloud. Kit features a crypto chip for secure data transfer and includes MKR Wi-Fi 1010 board. This IoT kit is used in applications such as a smart thermostat, motion sensor, smart gardening, and remote control for lights and other home appliances. This Kit allows you to add connectivity to devices around the home or workplace that can be controlled with your mobile phone.	05 Sets	22,500/-	18%	Rs. 1,32,750
3.	IoT Kit For Beginners: The ultimate IoT kit for beginners and hobbyists of all ages to dive into the world of the Internet of Things and get a taste of the magic it holds. Comes the most versatile electronics prototyping platform Contains a variety of IoT sensors, WiFi module, and other components, project-making app allowing access to inbuilt Smartphone sensors Supports both Arduino IDE and graphical programming 15+ self-explanatory online tutorials and DIY projects	05 Sets	19,900/-	18%	Rs. 1,17,410
4.	IoT House Kit: is perfect for those looking to explore the Internet of Things world. With 15+ activities, this kit will guide you through the basics of IoT and help you better understand how these systems work. The Quarky IoT House kit has the following sensors/actuators: Motor with Fan, Flame Sensor, Infrared Distance Sensor, Gas Sensor, Humidity and Temperature Sensor, Light Sensor, Soil Moisture Sensor, Motion Sensor, RFID Sensor, Servo Motor, Relay module. Kit comes with wooden parts to assemble it as House based on IoT features.	05 Sets	12,000/-	18%	Rs. 70,800
5.	IoT Explorer Kit: An AI based kit consisting of 1 x Quarky Robot 10 x AI Recognition Cards 1 x USB C Cable 1 x Safety Guide 1 x Robot Skin 1 x	05 Sets	5,500/-	18%	Rs. 32,450

Sl.No.	SPECIFICATIONS	Quantity	Unit Price	GST	Total Estimated price (inclusive of GST)
	Getting Started Coding and AI Made Superfun: Learn basic Artificial Intelligence, Coding and Physical Computing with engaging hands-on experience. 15+ Projects: Provide the experience for complete project making lifecycle.				
6.	ESP 8266 based IoT Kit: ESP 8266 IoT Starter Kit can also be called as Orange ESP32 Cam Starter kit. This kit is exclusively created to learn and build the Project based on an IoT camera that can be accessed remotely over the internet network. You can use this module to create WiFi/Bluetooth projects that allow remote access to images. Package Includes: 1 x ESP8266 Board 1 x Bread Board With Power Supply Module 1 x ESP8266 Shield 1 x LDR Sensor Module 1 x PIR Sensor Module 1 x IR Sensor 1 x Active Buzzer 1 x 10pin (MM/MF/FF) Dupont Cables-3 type 1 x R/Y/B 5mm LED EACH 5PCS 1 x USB to Micro-USB Cable 1 x Switches x 5 10 x 1K Resistors 10 x 1K Resistors 1 x Plastic Container Box	05 Sets	4,950/-	18%	Rs. 29,250
7.	Ultimate Kit For IoT with AI / ML applications: An Intermediate and Advanced programmable robot to learn Artificial Intelligence, Coding & Robotics to create real-life projects for all ages. With engaging hands-on experience on 50+ projects by constructing, programming and debugging 10+ different Robotics configurations. Contents: 1 x Quarky Robot 1 x Blue Arena 1 x Green Arena 1 x Getting Started + Safety Guide 10 x AI Recognition Cards 8 x Robot Face Cutouts 1 x QR Code Sticker + Wood 1 x USB C Cable 2 x Plastic Box 1 x Servo Motor 1 x Battery 1 x Ultrasonic Sensor 2 x Motor 2 x Wheel 2 x Motor Mount 10 x Spacers 20 x Jumper Cable 1 x Screwdriver 2 x Motor Connector 1 x Purple Plastic Set 1 x Green Plastic Set 1 x Blue Plastic Set 1 x Wooden Box 1 x Fastener Set etc.	10 Sets	16,500/-	18%	Rs. 1,94,700
8.	All-in-one Sensor Kit: This kit has 30 different Grove modules for a never-ending session of creativity! You can use it altogether with Arduino, Raspberry Pi, or microbit. 30 different Grove modules in a kit All modules are packed in protective plastic bags Grove connector cables Comes with 107 colored pages printed manual book Compatible with: i) Arduino, Raspberry Pi, microbit etc.	05 Sets	12,590/-	18%	Rs. 74,281
9.	Advance IoT Platform kits consisting of <ul style="list-style-type: none"> • WSN IoT Gateway • IoT Node • ZigBee Module • IoT Sensor Pack • IoT Actuator Pack • Development Suite • Open Source / Public Cloud Setup (Cloud Stack for data integration & analysis) etc. 	05 Sets	3,42,000/-	18%	Rs. 20,17,800

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	As per the below specs & qty. mentioned in line items 9.1 to 9.6				
9.1	<p>WSN IoT Gateway with cable and supported accessories Must come with 7" Capacitive Touch Screen Display with Processor: Broadcom BCM2711, quad-core Cortex-A72 (ARM v8) 64-bit SoC @1.5GHz RAM: 8GB LPDDR4SDRAM Connectivity: 2 × USB 2.0Ports 2 × USB 3.0Ports 2.4 GHz and 5.0 GHz IEEE 802.11b/g/n/ac wireless LAN BLE Gigabit Ethernet Bluetooth5.0 Operating Power: 5V 3A DC via GPIO Header 5V 3A DC via USB Type-C Connector Power Over Ethernet (PoE)–Enabled (requires separate PoE HAT) GPIO: (Fully backwards-compatible with previous boards) Standard 40-pin GPIO Header Multimedia: H.264(1080p60 decode, 1080p30 encode); H.265(4Kp60 decode); OpenGL ES, 3.0 Graphics Display: 7" touch screen display Video and Sound: 2 × micro-HDMI ports (upto 4Kp60 supported) 2-Lane MIPI CSI Camera Port 2-Lane MIPI DSI Display Port 4-Pole Stereo Audio and Composite Video Port Clock Speed: 1.5GHz Micro-SD Card Slot: Yes (FAT32 format), support maximum 32G Micro SD Card Memory Operating Temperature Range: 0 to 50 deg Celsius Dimensions (mm) LxWxH: 85 x 56 x 19 UPC: 692759968863 Memory: 32 GB with external connectivity support Wireless Standard: IEEE 802.3, IEEE 802.315.4 Gateway should be compatible with open-source cloud and private/secure cloud platform.</p> <p>Gateway Software Application Container or Runtime Environment–OSGi based Runtime providing Cohesive and integrated app environment Communication and Connectivity–Eclipse Kurai includes API to interface with the gateway I/O and support for many field protocols that can be used to connect to devices, e.g. MODBUS, CANbus, etc. Data management & Messaging– Implements a native MQTT-based messaging solution, that allows application running on the gateway to transparently communicate with a Cloud Platform.</p>				

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	<p>without having to deal with the availability of the network interfaces, Remote management– Provides a remote management solution based on the MQTT protocol, that allows to monitor the overall health of an WSN gateway, in addition to control (install, update, modify settings) the software while it's running HW abstraction layer: GPIO, SPI, PWM, I2C, GPS,BT/BLE Field protocol libraries: OPC UA, Modbus, Can Bus, S7etc. Development tools including graphical programming environments to quickly develop WSN appproto types</p>				
9.2	<p>WSN Node with cable and supported accessories</p> <p>Discrete Node with Advance Kit Processor: Single or Dual-Core32-bit LX6 Micro processor with clock frequency upto 240MHz RAM: 520 KB of SRAM, 448 KB of ROM and 16 KB of RTCSRAM Connectivity: Supports 802.11b/g/nWi-Fi connectivity with speeds upto 150 Mbps, Support for both Classic Bluetooth v 4.2 and BLE specifications, upto 18 channels of 12-bit SARADC and 2 channels of 8-bitDAC, Serial Connectivity includes 4xSPI, 2xI2C, 2xI2S, 3xUART, Ethernet MAC for physical LAN Communication (requires external PHY), 1 Host controller for SD/SDIO /MMC and 1 Slave controller for SDIO/SPI, Motor PW Mand upto16-channels of LED PWM. GPIO: 34 Programmable GPIOs Bootling: Secure Boot and Flash Encryption Security: Cryptographic Hardware Acceleration for AES, Hash (SHA-2), RSA, ECC and RNG.</p> <p>Integrated Node Processor System: 240MHz dual core, 600 DMIPS, 520KB SRAM, Wi-Fi, dual mode Bluetooth Flash Memory: 16MB (old:4MB) Port: Type C x 1, GROVE(I2C+I/O+UART) x1 IPS Screen: 2 inch, 320x240 Colorful TFT LCD, ILI9342C, max brightness853nit Core Bottom Port: PIN (G1, G2, G3, G16, G17, G18, G19, G21, G22, G23, G25, G26, G35,G36) MEMS: BMM150 +MPU6886 Battery: 110mAh @ 3.7V Antenna: 2.4G 3DAntenna Operating Temperature: 0°C to60°C Features:32-bitProcessorcore-based,Built-inSpeaker,Buttons,LCDTFcardslot(Upto16GBsup port), Battery Socket & Lipo Battery, Extendable Pins & Holes, M-Bus Socket & Pins, Development Platform UIFlow</p>				

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	<p>Wireless Connectivity Frequency band:LTE-FDD/LTE-TDD/WCDMA /GSM Network protocol: TCP/IP/IPV4/IPV6/ Multi-PDP/FTP/FTPS/HTTP/HTTPS/DNS Communication: UART 115200 bps DC interface specifications: 5.5mm Data transmission speed: UL:50 Mbps; DL:150Mbps HSPA+: UL:5.76 Mbps; DL:42Mbps Other Features: Support voice calls, SMS text messages, cellular data transmission, Independent external power supply, AT command control, SIM card type: Micro SIM, Status signal: two LED indicators, External antenna: SMA antenna, Serial communication: UART 115200bps</p>				
9.3	<p>Zigbee Module with Advanced Kit Data Rate: RF 250 Kbps, Serial up to 1 Mbps Indoor/Urban Range: Up to 200 ft (60 m) Outdoor/Rf Line-Of-Sight Range: Up to 4000 ft (1200 m) Transmit Power: 3.1 mW (+5 dBm) / 6.3 mW (+8 dBm) boost mode Receiver Sensitivity (1% Per):-100 dBm/-102 dBm boost mode Serial Data Interface: UART, SPI Configuration Method: API or AT commands, local or over-the-air (OTA) Frequency Band: ISM 2.4 GHz. Interference Immunity: DSSS (Direct Sequence Spread Spectrum) Adc Inputs: (4) 10-bit ADC inputs Digital I/O: 15, Antenna Options: Through-Hole: PCB Antenna, UFL Connector, RPSMA Connector, or Integrated Wire SMT: RF Pad, PCB Antenna, or UFL Connector Operating Temperature: -40° C to +85° C Networking and Security Protocol: Zigbee PRO 2007, HA-Ready with support for binding/multicasting Encryption: 128-bit AES, Reliable Packet Delivery: Retries /Acknowledgements Ids: PAN ID and addresses, cluster IDs and endpoints (optional) Channels: 16 Programmability: Memory: Programmable: 32 KB Flash/2 KB RAM CPU/Clock Speed: Programmable: HCS08/up to 50.33 MHz Power Requirements Supply Voltage: 2.1 to 3.6V Transmit Current: Standard: 33 mA @ 3.3 VDC/45 mA boost mode Programmable: 47 mA @ 3.3 VDC/59 mA boost mode Receive Current: Standard: 28 mA @ 3.3 VDC/31 mA boost mode Programmable: 42 mA @ 3.3 VDC/45 mA boost mode Power-Down Current: Standard: <1 µA @ 25° C;</p>				

Sl.No.	SPECIFICATIONS	Quantity	Unit Price	GST	Total Estimated price (inclusive of GST)
	Programmable: 1.5 μ A @ 25° C				
9.4	<p>Sensor Pack with Advanced Kit</p> <p>Light Sensor Input Voltage (V): 3.3 to 5 No. of pins: 4 Measurement Type: Analog, Digital, Light Adjustable Sensitivity: Yes Driving Ability: 15mA</p> <p>Pressure Sensor Input Supply Voltage (VDC): 1.8 ~ 3.6 Interface Type: I2C Max I2C Speed: 3.5 MHz Pressure Range: 300hPa to 1100hPa (+9000m to -500m) Noise Level: up to 0.02hPa (17cm) Calibration: Fully Calibrated Temperature & Humidity Sensor Humidity Measuring Range (%): 20 to 90 Temperature Measuring Range(\hat{A}°C): 0 to +50 Humidity Measurement Accuracy (%): $\hat{A}\pm 5.0$ Temperature Measurement Accuracy(\hat{A}°C): $\hat{A}\pm 2.0$ Response Time(s): <5 Measurement Type: Digital, Temperature, Humidity Sensor reading Interval(s): 2</p> <p>Button Sensor Keyboard Module Matrix: 2x2 with 4 Buttons No. of Pins: 4-Pins and Keys Pin Spacing (mm): 2.54 Switch Type: Momentary</p> <p>Ultrasonic Sensor Operating Voltage (VDC): 5 Average Current Consumption (mA): 2 Frequency (Hz): 40000 Sensing Angle: 15\hat{A}° Max. Sensing Distance (cm): 450 Sonar Sensing Range (cm): 2-400 Ranging Accuracy (mm): 3</p> <p>Soil Moisture Sensor Operating Voltage (VDC): 3.3 ~ 5 Soil Probe Dimension: Approx. 6cm x 3cm Cable Length (cm): 20 Measurement Type: Dual Output Mode, Analog Output More Accurate Chipset: Comparator Chip LM393</p> <p>Motion Sensor Operating Voltage (VDC): 4.5 ~ 20 Average Current Consumption (mA): 0.06 Distance Measuring Range (CM): 300 ~ 700 Output Type: (High/ Low-level Signal) 3.3V TTL output Working Temperature Range ($^{\circ}$C): -20 to 80 Detection Angle: <140$^{\circ}$ Delay Time: 5 to 200s (Can be Adjusted, Default 5s +/- 3%) Blockade Time (s): 2.5 (Default)</p> <p>Gas Sensor Operating Voltage: 5V $\hat{A}\pm 0.1$ Current Consumption: 150mA Operation Temperature: -10$^{\circ}$C ~ +70$^{\circ}$C</p>				

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	Concentration: 0.05 mg/L ~ 10 mg/L Alcohol Load resistance: 200 kΩ Measurement type: Benzine, CH4, Hexane, LPG, CO, Alcohol GPS Sensor Receiver Type: 50 Channels; GPS L1 frequency, C/A Code SBAS: WAAS, EGNOS, MSAS Input Supply Voltage (VDC): 2.7 ~ 6 Navigation Update Rate: 5Hz Position Accuracy (Meter): 2 Operating Temperature Range (°C): -24 to 84 Tracking Sensitivity (dBm): -161 dBm Maximum Speed: 500 M/s Baud Rate: 4800 to 115200. (default 9600) Camera Module Resolution: 5MP Still Picture: 2592×1944 Max Video: 1080P Max Frame Rate: 30fps@1080P, 60fps@720P IR sensitivity: NOIR filter, sensitive to IR Focus Type: Fixed focus Field of View: 54°×41° (Horizontal × Vertical) Board Size: 25mm × 24mm Connector: 15pin MIPI CSI				
9.5	Actuator Pack with Advanced Kit Dual Channel Relay Relay Type: Low Level Trigger Logic Input (V): 3.3 ~ 5 Trigger Voltage (VDC): 5 Switching Voltage (VAC): 250@10A Switching Voltage (VDC): 30@10A DC Motor Driver Operating Voltage (VDC): 5 ~ 35 Peak Current (A): 2 Continuous Current (A): 0-36mA No. of Channels: 2 Over-Current Protection (A): Yes Thermal Protection: Yes LED Indicator: Yes Servo Motor Operating Voltage (VDC): 3.0 ~ 7.2 Operating Speed @4.8V: 0.10sec/60° Stall Torque @ 4.8V (Kg-Cm): 1.2 Stall Torque @6.6V (Kg-Cm): 1.6 Operating Temperature (°C): -30 to 60 Dead Band Width (μs): 7 Gear Type: Glass Fiber Rotational Degree: 180° Servo Plug: JR DC Motor Gear Material: Plastic Rated Speed (RPM): 300 Operating Voltage (VDC): 12 Rated Torque(kg-cm): 1.2 Stall Torque (Kg-Cm): 3.5 Load Current Max: 300 No-Load Current (mA): 60 Gearbox Diameter (mm): 37 Motor Diameter(mm): 32 Motor Length (mm): 75 Stepper Motor Rated Voltage(V): 5 Rated Current (mA): 500 mA Step Angle: 5.625°/64 Reduction ratio: 64:1				

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	<p>Resistance (Ω): 50 In-Traction Frequency (Hz): >600 Hz Out-Traction Frequency (Hz): >1000 Hz In-traction Torque(mN-m): 34.3 Self-positioning Torque(mN-m): 34.3 Friction Torque(gf-cm): 600-1200 Pull in Torque(gf-cm): 300 Insulation Grade: A Shaft Type: Double D-Type Resolution: 128 x 64 Pixels Active Display Area: 21.74 x 10. 86mm Driving Voltage: 3.3-5V Operating Temperature: -40$^{\circ}$~70$^{\circ}$ Celsius Interface Type: I2C IIC Solenoid Valve Operating Voltage: 12V/24V DC Current Requirement: 400mA Nozzle Diameter (mm): 6.3 Valve: Normally Closed Stepper Motor Driver Power Supply: 5V to 12V Signal Indicator: 4-way LED LED Size: 5 mm Lens colour: Diffusion Colour: Red, Green Operating Voltage: R/G/Y: 1.8-2.0V; B/W: 2.8-3.0V Operating Current: 20mA Mounting Type: On PCB through Hole OLED Driver IC: SSD1306 Support wide voltage: 3.3V-5V DC Communication: IIC Working temperature: -30-80 degrees Buzzer Resistors Pack USB Cables HDMI cable</p>				
9.6	<p>System Software, Apps, IDE, Pre-installed Development Environment Ability to run multiple Operating Systems like Raspbian (based on Debian 10 i.e., Linux4.19 operating system), as well as third-party Ubuntu core, Ubuntu server, Windows 10 WSN Core, Mozilla Web Things, Microsoft Sphere, Amazon Green Grass, IBM etc. The gateway should be configured with system software (i.e., Raspbian based on Debian 10 i.e., Linux4.19 operating system). It should support Python and Scratch as the main programming languages, with support for many other languages like C, C++, Java.</p> <p><u>Third-party application software Support required</u> AstroPrint, C/C++ Interpreter Ch, Mathematica & the Wolfram Language, Real VNC</p> <p><u>Software Development Suite capability required:</u> Able to program Arduino, Algoid, Blue J, Greenfoot – for object orientation with Java, Julia – an interactive and cross-platform programming language/environment, Live Code, Ninja-IDE–integrated development environment(IDE) for Python. Processing – an IDE built for the electronic arts,</p>				

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	<p>new media art, and visual design communities; Scratch–across-platform teaching IDE using visual blocks that look like Lego, originally developed by MIT's Life Long Kindergarten group.</p> <p>Tensor Flow – an artificial intelligence framework developed by Google</p> <p>Thonny&C-STEMStudio–aplatformforhands-onintegratedlearningofcomputing,science, technology, engineering, and mathematics (C-STEM) with robotics.</p> <p><u>AWS Cloud Platform</u></p> <p>Recommended Cloud Infrastructure facility required for Analytics: The solution should include the cloud infrastructure solution with analytics samples. Cloud infrastructure should be compatible with Node, Gateway devices offered. Further, the complete solution should include integration of node, gateway with cloud and prepaid red it of USD\$100 per kit.</p> <p><u>Cloud Computing Software Platform</u></p> <ul style="list-style-type: none"> • Software platform should provide a Platform as a Service (PaaS), for computational environment & should also make available a certain set of Software Development Kit where user can create cloud applications of his own. • Software platform should provide SDK which helps you easily and quickly connect your hardware device or your mobile application to AWS IoT Core. Device SDK enables your devices to connect, authenticate, and exchange messages with AWS IoT Core using the MQTT, HTTP, or Web Sockets protocols. The AWS IoT Device SDK supports C, Java Script, and Arduino, and includes the client libraries, the developer guide, and the porting guide for manufacturers. You can also use an open-source alternative or write your own SDK. • Software platform should not need any additional computational hardware and should be capable to make use of already available computers in institute’s labs in order to create a high-end computational environment & should automatically manage all load balancing and jobs scheduling issues with these computers • Softwareplatformshouldprovidethesupporttouse publiccloudssuchasAmazonec2and is able to allot the resources of any public cloud by using it. • Software should provide the facilities to alter your computational environment even if it is PaaS software. • Software platform should provide the Device Gateway serves as the entry point for IoT 				

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	<p>devices connecting to AWS. The Device Gateway should manage all active device connections and implements semantics for multiple protocols to ensure that devices are able to securely and efficiently communicate with AWS IoT Core. Currently the Device Gateway should support the MQTT, Web Sockets, and HTTP 1.1 protocols. For devices that connect using MQTT or Web Sockets the Device Gateway should maintain long lived, bidirectional connections, enabling these devices to send and receive messages at any time with low latency. The Device Gateway should be fully managed and scaled automatically to support over a billion devices without requiring you to manage any infrastructure. For customers migrating to AWS IoT, the Device Gateway should offer capabilities to transition infrastructures with minimal impact to existing architectures and IoT devices. To learn more about Configurable End points.</p> <ul style="list-style-type: none"> • Software platform should provide mutual authentication and encryption at all points of connection, so that data is never exchanged between devices and AWS IoT Core without a proven identity. Software platform should support the AWS method of authentication (called ‘SigV4’), X.509 certificate-based authentication, and customer created token-based authentication (through custom authorizers.) Connections using HTTP can use any of these methods, while connections using MQTT use certificate-based authentication, and connections using Web Sockets can use SigV4 or custom authorizers. • Software platform should use AWS IoT Core generated certificates, as well as those signed by your preferred Certificate Authority (CA). You should be able to map your choice of policies to each certificate, so that it can authorize devices or applications to have access, or change your mind and revoke access altogether without ever touching the device. 				
10.	<p>IoT Desktop Trainer Kit: must be consisting of 3 Controllers with following specifications: Broadcom BCM2837B0, Cortex-A53 (ARMv8) 64-bit SoC @ 1.4GHz, 1GB LPDDR2 SDRAM 2.4GHz and 5GHz IEEE 802.11.b/g/n/ac wireless LAN, Bluetooth 4.2, BLE, Gigabit Ethernet over USB 2.0 (maximum throughput 300 Mbps), Extended 40-pin GPIO header, Full-size HDMI, 4 USB 2.0 ports, CSI camera port for connecting a Raspberry Pi camera, DSI display port for connecting a Raspberry Pi touch screen display, 4-pole stereo output and composite video port,</p>	15 sets	Rs. 37,400/-	18%	Rs. 6,61,980/-

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	<p>Micro SD port for loading your operating system and storing data, 5V/2.5A DC power input, Power-over-Ethernet (PoE) support (requires separate PoE HAT) Arduino NANO ESP-01; and a variety of sensors and actuators like: SD card, PIR, HCSR04, DHT11, Joystick Module, ESP8266, Bluetooth Module, Membrane keypad. Relay, Breadboard, Buzzer, LED, RGBLED, 16X2LCD, Stepper Motor, Servo Motor and kit accessories like:</p> <p>4 pin RMC cables, 8 pin RMC cable, Ethernet Cable, 12V-5amp Power Adapter. Lab Manual. Casing, HDMI cable, High quality ABS case; 1 yr Manufacturer Warranty</p> <p>PCB Design, Assembly, Case- Make in India, CE and RoHS complaint</p> <p>Product dimensions: 38.2x30x9.15cm</p> <p>Product weight: 1.8kg</p> <p>List of Experiments must be performed using the kits:</p> <p>Digital outputs: -Controlling digital output devices (buzzer, leds)</p> <p>Digital Inputs: -Reading digital sensors(PIR)</p> <p>PWM outputs: -Controlling RGB leds</p> <p>Interfacing servomotor</p> <p>Interfacing stepper motor</p> <p>Interfacing LCD screen</p> <p>Interfacing ultrasonic sensor</p> <p>Interfacing temperature and humidity sensor(DHT11)</p> <p>Interfacing 4x4 matrix keypad membrane.</p> <p>Use of Breadboard to connect extra sensors, actuator.</p> <p>Interface with Joystick Module.</p> <p>Interface with Bluetooth Module.</p> <p>Interface with relay module.</p> <p>List of Experiments using Raspberry Pi 3</p> <p>Introduction to R-Pi</p> <p>Digital outputs: -Controlling digital output devices</p> <p>Digital Inputs: -Reading digital sensors(PIR)</p> <p>PWM outputs: -Controlling RGB leds</p> <p>Interfacing servomotor</p> <p>Interfacing stepper motor</p> <p>Interfacing LCD screen</p> <p>Interfacing ultrasonic sensor</p> <p>Interfacing temperature and humidity sensor(DHT11)</p> <p>Interfacing 4x4 matrix keypad membrane.</p> <p>List of Experiments on Internet of Things</p> <p>Update sensor data to Thing speak servers.</p> <p>Control various actuators using blynk.</p> <p>Send e-mails/ messages using Cayenne and/or Node-Red.</p> <p>Build your own basic server to log data updated from sensors.</p>				

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	Upgrade the server to trigger actuator events based on data input from sensors. Communicate between 2 IOTIFs using MQTT. Remote home monitoring and control. Environment monitoring and data logging.				
11.	<p><u>IoT Learning & Simulation Software Platform</u></p> <ul style="list-style-type: none"> • Software Platform should be cloud based for Teaching IoT Network Applications & Experimentation • Software platform should provide all-in-one cloud-based virtual IoT hardware in your computer for modeling and simulation of IoT devices & its application • Software platform should provide the online workspace where students can quickly assemble their own virtual IoT hardware & modules. • Cloud platform must include the simulation of IoT components & kits like Raspberry PI, Arduino Uno, STM 32, Ultrasonic Sensor HCSR04, Light Sensor APDS 9301, Pressure & Temperature Sensor BMP 180, Ethernet Module spi Addr-5 W5500, Temp & Humidity SHT 21, Stepper Motor DRV8834 etc. • Cloud Platform must support one-to-one hardware level simulation, whatever works in the real world must be work with this IoT virtual lab platform. • IoT Virtual lab must be a browser based software platform and must easily scalable & collaborative. • Software platform should have the capability to boot an operating system or build a firmware of your choice and begin programming right away on the hardware virtually. • Software platform should have the various options available from existing hardware and sensor combination or build your own project. • Software platform should provide the freedom to choose operating system which matches user requirement or build a firmware for your microcontroller. • Should have some real life sample projects for the students like Hello IoT, Hello Motor, Smart Trash, Custom Lab, Alexa Smart Light etc for the students • Software platform should have the capability to develop software on your virtual hardware in the language of user's choice, connect to internet or run a web server on the virtual target itself. • Software should be tailor made for remote learning. • Software platform should have the options to share the project with your colleagues, faculties 	45 users	Rs. 31,500/-	18%	Rs. 16,72,650/-

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	<p>and collaborate on IoT projects together.</p> <ul style="list-style-type: none"> • Software platform should be accessible from any web / internet browser. • Software platform should be available 24 x 7 x 365 days throughout three years on the cloud for uninterrupted education. • Software platform should be accessible from anywhere in the world without any geographical limitations. • Dedicated sample experiments with documentation & user manuals should be available for the students & faculties. • Free software updates & upgrades should be provided free of cost for three years from the date of successful installation. • Free technical support & warranty for one year. • Software platform should be independent to System OS. i.e should be able to run on Windows, Linux or MAC OS. • Software must have supplied to other reputed govt. institutes like NIT's / IIT's/State/Central Universities. • Dedicated training for the students must be given. <p>Qty: 01 Academic Bundle, 45 user license, 03 yr term.</p>				
12	<p>ANNEXURE - L Additional Material For Lab Use [Package]: Consisting of Individual hardware equipment's required for building real-life customized IoT projects for education, lab experimentation, project work, research & development</p>	01 set/ package	Rs. 4,15,000/-	18%	Rs. 4,89,700/-

The bidder shall provide **Comprehensive on-site warranty for a period of 36 months followed by 2 years AMC** on all items from the last date of installation and shall be responsible for any defects that develop in the item. They shall also replace any defective part of the product supplied and other accessories, without any exception and recourse, free of cost. The period of warranty will automatically be treated as extended beyond 36 months if the instrument remains non-functional more than 15 days after reporting non-functional.

Sr.	ITEM NAME	SPECIFICATION	QTY
1	Arduino Uno or equivalent	ATmega328P - 8 bit AVR family microcontroller, equivalent or better. Operating Voltage: 5V Digital I/O Pins: 14 (of which 6 provide PWM output) PWM Digital I/O Pins : 6	10
2	Arduino Nano or equivalent	ATmega328P - 8 bit AVR family microcontroller, equivalent or better. Operating Voltage: 5V Digital I/O Pins : 14 (of which 6 provide PWM output) Analog Input Pins : 8	10
3	Arduino Mega or equivalent	AT mega 2560P - 8 bit AVR family microcontroller, equivalent or better. Operating Voltage: 5V Digital I/O Pins : 54 (of which 6 provide PWM output) Analog Input Pins: 16	10
4	Raspberry Pi equivalent or better	Raspberry Pi 4 equivalent or better Accessories – MicroSD card - 32 GB, USB 3.0 cable (1meter), HDMI to VGA – 1meter, HDMI to VGA adapter, Case shell enclosure	5
5	Breadboards & Mini Breadboard	Solderless 400 pin breadboard	15
		Solderless 800 pin breadboard	15
		Self-Adhesive Proto Shield	10
6	General Purpose Solderable Board	FR2 A Grade Material (140 x 90 mm)	15
		FR2 A Grade Material (80 x 55 mm)	15
	Berg Strips	Female Berg Strip, 2.54mm pitch, 40 pin single row, breakable pin	10
		Male Berg Strip, 2.54mm pitch, 40 pin single row, breakable pin	10
7	16x2 LCD display	Dot matrix LCD display. 16 characters X 2 lines. I2C	10
8	USB Cables	USB Cable Set (A to B, 12 inch or more)	5
9	USB Cables	USB Cable Set (Mini, 12 inches or more)	5
10	Battery	9-12V 2000 to 2500 mAh rechargeable battery with 2 chargers. Equivalent or better	5
11	Resistor Kit	One kit contains -carbon film resistors of different resistance values each assorted, packaged together and labelled. Wattage: 0.125W to 1W Values: 00, 1.50, 4.70, 100, 470, 1000, 2200, 3300, 4700, 6800, 1k0, 2.2k0, 3.3k0, 4.7k0, 10k0, 22k0, 47k0, 100k0, 330k0, 1M0	10
12	Capacitor Kit	One kit contains -electrolytic capacitors of 10 different capacitance values each. Assorted kit packaged together and labelled. Values: 10pF, 22pF, 100pF, 1nF, 10nF, 100nF, 1.1F, 14F, 1001.1F, 1000pf	10
13	Linear Voltage Regulator	7805, 7812, 7809	15
14	Water Pump module	DC12V 3W Submersible Water Pump	2
15	Piezoelectric Plate	Normal Copper based 4 cm Diameter approx.	15
16	8*8 LED Matrix Module	Max7219 Dot LED Matrix Module. MCU Control LED Display Module	5
17	Bluetooth module	HC 05 Bluetooth module Voltage Rating: 5 V	8
18	7 Segment Led Display	LED 4-Digit Display Module Voltage Rating: 2.4V to 5.5V 4-Pin interface: Vcc, Gnd, Data, Clock	10
19	GSM	Sim 900 GPRS Transfer Board Micro Sim Gsm Core TTL Port Module for Arduino	2

20	GPS	GY-NEO6MV2 new GPS module	2
21	Laser Diode Emitter	650 nm 5mW Mini Laser Dot Diode Module	5
22	LDR Module	5mm/12mm, Photosensitive LDR Light Sensor Module	15
23	Keypad	Universal 16 Key Switch Keypad	5
24	Joy Stick	2-axis joystick with push button function	5
25	Active Buzzer	Small 5 volt	20
		Big 5 volt	20
26	Motor driver Module	L293D	5
27	Sound Playback Module	ISD1820 voice recording module or equivalent	5
28	DC Plastic Gear motor with wheel	12V, 150RPM, Side Shaft BO (Battery operation) Motor	20
29	Node MCU	ESP 8266 I2C, 1 wire, plug and play	3
30	WeMos D1 R2	WeMos D1 R2 with WiFi ESP 8266 Operating Voltage: 5V	3
31	Vibrating Motor	Weight: 10 Grams	10
		Operating Voltage: 1.5 to 3V	
32	Alligator Connectors	Multi-Colour Alligator Connectors - 12 inch	100
33	Battery clips with DC Jack	9-volt battery clips with DC Jack	20
34	Hook-up Wires	Red & Black set 100 Meters each	2
35	Jumper Cable	Male-Male	500
		Male-Female	300
		Female-Female	200
36	RGB LEDs	Regular 5mm 3-5 volt Range	100
37	LEDs (Red)	Regular 5mm 3-5 volt Range	400
38	LEDs (Green)	Regular 5mm 3-5 volt Range	400
39	LEDs (Blue)	Regular 5mm 3-5 volt Range	400
40	LEDs (Yellow)	Regular 5mm 3-5 volt Range	400
41	LEDs (White)	Regular 5mm 3-5 volt Range	400
42	Timer IC -LM 555	LM 555 Timer IC. Voltage range - 4.5V to 16V	15
43	Atmega16u2	8 bit microcontroller Individual IC (DIP). Voltage range: 2.7V to 5.5V. Operational Range: -40°C to +80°C	5
44	Diodes and transistors kit	25 Assorted Basic Diodes of 4 different types each. Types: NPN Transistor -2N3904, BC547 PNP Transistor - 2N3906, BC557 Silicon Diode - 1N4148, Power Diode - 1N4004/4001 Equivalent or better. Wattage: 1W, Current: 1A Assorted kit packaged together and labeled.	2
45	Electronic button switch set	Electronics buttons of different types. Types: Push, toggle, rotary, selector and slide switch. Assorted kit packaged together and labeled.	2
46	capacitive touch module	MPR 121 with I2C. Voltage Range:2.5V to 3.6V DC.	10
47	capacitive touch switch module	Digital Capacitive touch switch module -TTP223B Voltage Range: 2V to 5V DC.	5
48	IR sensors, obstacle avoider sensor module	LM393 Detection distance:2 - 30 cm. Detection angle: 30 - 40°	10
49	Triple Axis magnetometer	3-Axis Magneto resistive Sensors I2C Digital Interface Integrated 12-bit ADC Range of -8 to +8 Gauss 160 Hz Maximum o/p rate	5

50	Humidity Sensor	Operating range: 20 - 95 % RH Temperature: 0 - 60 Celsius Power supply: 1.5V AC Operating frequency: 500Hz - 2kHz	5
51	MQ Series	MQ- 2 Smoke Detection	2
		MQ-3 Alcohol - Ethanol Sensor	2
		MO-4 Methane Natural Gas Sensor	2
		MQ-5 Methane Liquified Gas Sensor	2
		MQ-6 Liquified Petroleum Gas Sensor	2
		MQ-7 High Sensitivity CO Carbon Monoxide Sensor Detector	2
		MO-8 Hydrogen Gas Sensor	2
		MQ-135 Air Quality Sensor	2
52	IR Transmitter/ Receiver	TSOP 1738 Switching rate: 38 KHz Voltage Rating: 5V	5
53	Ultrasonic Sensor Module HC-SR-04 or compatible	Working Voltage - DC 5V Working current - 15 mA Working Frequency - 40 Hz Range - 1 cm to 4 m Effectual Angle - <15° Measuring Angle - 30° Resolution - 0.3 cm	20
54	Triple Axis Accelerometer- LFCSP	3-axis sensing Small, low profile package 4 mm x 4 mm x 1.45 mm Low Power: 350 pA (typical) Single-supply operation: 1.8 V to 3.6 V Temperature stability	10
55	PIR Motion Detector Module	High digital pulse when motion detected Low digital pulse when idle /no motion detected Sensitivity range (up to 6 m) Power supply: 5V — 12V	20
56	Pulse Rate Heart Sensor	Pulse Rate Sensor Finger Based (finger or earlobe) Working voltage 3-5V	4
57	Relay Module	5V 10A - 2 Channel Relay Module. Compatible with Arduino.	10
58	Relay Module	5V 10A - 1 Channel Relay Module. Compatible with Arduino.	10
59	Big Sound microphone module	Large Electret capsule sound module	5
60	Soil Moisture Sensor module	FC-28 with LM293 comparator Operating Voltage: 3.3V to 5V.	3
61	Touch Sensor	Capacitive Touch Sensor Module. TTP22X series. Voltage Range: 2.4V to 5.5V	3
62	Metal Touch Sensor Module	KY-036 or equivalent metal touch sensor module	3
63	Rain Drop Sensor	Rain Sensitive, Rain Drop Detection Sensor Module. Voltage Range: 3.3V to 5.5V. Size: 5mm X 40mm or equivalent.	3
64	Flex Sensor	Flex Sensor. Size - 2.2 Inches	3
65	Temperature Sensor	LM35 Full range temperature sensor. Voltage Range: 4V to 30V. Error: ±0.5°C	3
66	Temperature and humidity sensor module	DHT 11 Voltage Range: 3V to 5V	20
67	Force Pressure Sensor	Force sensitive resistor with a square, 1.75x1.5" sensing area	4
68	Colour Recognition Sensor	TCS3200 Colour Recognition	4
69	Water Flow Sensor	Arduino Compatible Water flow sensor. 5V DC Input.	2
70	Sound Sensor	Sound Sensor Module, Microphones module	5
71	IR Sensors Array module for Line Following	8 IR Sensors Array module for Line Following Operating Voltage: 5V	5

72	Power Bank	10000 mAh 5-volt Power Bank	2
73	RFID Reader — Tags	Current :13-26mA / DC 3.3V Idle Current :10-13mA Sleep Current<80uA Peak Current<30mA Operating Frequency: 13.56MHz<30mA Read range between 20 cm to 1m	5
74	RF Modules Tx& Rx 315 MHz ASK	Frequency Range: 433.92/315 MHz Supply Voltage: 3 — 6 V Output: 4 — 16 Dbm Low power consumption Easy application	5
75	Stepper motor with Driver board	28BYJ-48 ULN2003 5V Stepper Motor + ULN2003 Driver Board	5
76	DC motor	12V DC Gear 150 RPM	10
77	Servo motors	Position Servo Angle based Metal Gear	5
		Small Servo Metal Gear	5
		Continuous Metal Gear Servo 360	5
		Small Servo Plastic Gear	20
78	150 RPM BO Motor	150 RPM BO Motor	5
79	L298P Motor Driver	L298P Motor Driver Shield or relative Driver Shield	5
80	Servo Motor Tester	CCPM 3 channel Servo Tester	2
12	<p>Lab Manual and Code-commit for all the levels</p> <p>Documentation for all the components (Sensors, actuator, nodes) with circuit and connection diagram, working procedure and code commit should be provided.</p> <p><u>LEVEL1</u></p> <p>Interfacing the sensors and actuators with Node.</p> <p>Experiments List:</p> <ul style="list-style-type: none"> • Light Sensor • Temperature Sensor, Pressure, Altitude - BMP180 • Temperature, Humidity - DHT11 • Accelerometer Sensor - On board Accelerometer onM5Stack • Geomagnetic sensor (3 axis compass) - BMM150(M5Stack) • Button • Ultrasonic Sensor - HC SR04 Module • Soil Moisture Sensor • PIR Motion Sensor - HC-SR501Module • Servo Motor • Gas Detection Sensor -MQ3 • GPS Sensor <p><u>Actuators</u></p> <ul style="list-style-type: none"> • LED • Buzzer • Relay • Motor Drives - DC Motor DriverL298D • 0.96" OLED Module • Solenoid Valve with Relay • Stepper Motor - using ULN2003Driver <p><u>LEVEL2</u></p> <ul style="list-style-type: none"> • Interfacing multiple sensors and actuators with node. Experiments List: • Sensor station • Actuating Solenoid Valve based on Soil Moisture 		01

	<ul style="list-style-type: none"> • Distance based servo motor control • Actuation of light bulb based on light sensor • "IoT Controlled LED using Node with Blynk App" • Room Temperature Over Internet with BLYNK Node MCU and temperature sensor • Ultrasound with buzzer-Node MCU • Temperature monitoring using integrated node and temperature sensor • Internet clock using integrated node • IOT based soil moisture monitoring system <p><u>LEVEL 3</u> Interfacing multiple sensors and actuators with node and communicating the data with Gateway. Experiments List:</p> <ul style="list-style-type: none"> • Smart Home Automation • Smart Agriculture Automation • Smart Security and Surveillance • Safety applications with gas sensor <p><u>LEVEL 4</u> Interfacing multiple sensors and actuators with node and node monitoring with Gateway and Communicating Data to AWS Cloud with Analytics. Experiments List:</p> <ul style="list-style-type: none"> • Smart Home Automation • Smart Agriculture Automation • Other advanced applications 	
13	<p><u>Onsite Training to be provided</u> Two days training on IOT platform for Faculty members.</p> <ul style="list-style-type: none"> • IoT From GroundUP. Points to be covered: <ul style="list-style-type: none"> • Introduction to IoT, Success stories, Layers of IoT of Basic Electronics, Sensors and Signals overview of Microcontroller concepts • Introduction to Arduino, Arduino code language, H/w overview • Intro to NodeMCU, Networking basics, Sensor log • NodeMCU with Blynk, Weather station project • Introduction to RasPi, Real power of RasPi and CLIo Sensor integration - Control devices from mobileo True Power of IoT with Node-RED • Running web application in RasPi – sensor log • IoT and the Cloud. Points to be covered: <ul style="list-style-type: none"> • Introduction to IoT and The Cloud • Introduction to Raspberry Pi and Express JS in RasPi • Cloud Services: SaaS, PaaS and IaaS • AWS quick start • Case Study: Home Automation • Running services: MQTT • Cloud based home automation • Connectivity Technologies: LPWAN, LoRa, BT and NFC • Complete IoT Cloud Project • Data Science and Analytics. Points to be covered: <ul style="list-style-type: none"> • Introduction to IoT and Analytics in the context of IoT • IoT Reference architecture, IoT Data overview • IoT Use cases, IoT Data Processing • Introduction to ML and Python for ML 	01

	<ul style="list-style-type: none"> • IoT Analytics Data Science Life Cycle • KPIs in IoT Analytics and Data Acquisition for IoT • IoT Data Cleaning, Descriptive IoT Data Analytics • Inferential Data Analytics, Predictive Data Analytics • Exploratory IoT Data Analytics • Prescriptive Analytics 	
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- Vendors must provide entire supply, installation, testing & commissioning onsite at university.
- Vendor must provide dedicated training on both software & hardware, onsite.
- Vendors quoting must have the MAF (Manufacturer Authorization Form / Certificate) for the respective hardware & software items they'll be quoting.

SECTION IV
FINANCIAL BID

Supply and Installation of Lab Equipments i.e. Supply, Installation, Testing and Commissioning of Lab Equipments for IOT Lab, USAR, East Delhi Campus of Guru Gobind Singh Indraprastha University, Surajmal Vihar, Delhi-110092.

S.No.	Description	Qty.	Unit Cost (in Rs.)	GST	Total Amount (in Rs.)
1.	Arduino Educational Kits	10			
2.	Arduino IoT Kit [Advanced]	05 Sets			
3.	IoT Kit For Beginners:	05 Sets			
4.	IoT House kit	05 Sets			
5.	IoT Explorer kit	05 Sets			
6.	ESP 8266 based IoT Kit	05 Sets			
7.	Ultimate Kit IoT with AI / ML applications	10			
8.	All-in-one Sensor Kit	05 Sets			
9.	Advance IoT Platform kits	05 Sets			
10.	IoT Desktop Trainer kit	15 Sets			
11.	IoT Learning & Simulation Software Platform	45 Users			
12.	Additional Material For Lab Use Package	01 Set / Package			
Total Amount in Rs.(including all taxes, GST)					

Note:-

- The total wise lowest financial bidder shall only be considered for award of work.**
- The rate of item should be inclusive of all taxes, packing forwarding, transit etc.
- The bidder shall provide **Comprehensive on-site warranty for a period of 36 months** followed by 02 years AMC on all items from the last date of installation and shall be responsible for any defects that develop in the item. They shall also replace any defective part of the product supplied and other accessories, without any exception and recourse, free of cost. The period of warranty will automatically be treated as extended beyond 36 months if the instrument remains non-functional more than 15 days after reporting non-functional.
- The rates of the items supplied by the bidder through local market/India must be quoted in INR only.

(SEAL, SIGNATURE & NAME OF THE BIDDER)