

राष्ट्रीय प्रौद्योगिकी संस्थान अगरतला^{stant} Registrar

NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA

Fax: 0381 254-6360, Website: http://www.nita.ac.in

No.F.NITA 14 Physics/Procurement/Lab Equipment/2023

/3253-56

Date: 4 / 9 /2023

E-Tender Notice

On behalf of National Institute of Technology Agartala, online quotation through Central Public Procurement Portal (CPPP) are invited from the reputed resourceful Manufacturers / Authorized Distributors/Authorized Suppliers for supply of item(s)/goods/software/chemicals etc. as per specification mentioned in Annexure of tender document available at our website www.nita.ac.in and central public procurement portal i.e. www.eprocure.gov.in. The tender document can be downloaded from the website http://eprocure.gov.in.

Sl. No	Department / Section	Ref. No.	Items	Estimated cost (Rs.)	Last date of receipt of tender	Time and date of opening of Technical bid
1	Physics Department	No.F.NITA 14 Physics/Procurement/ Lab Equipment/2023	Laboratory and Scientific Equipment	9,97,415.00	03//0/2023 Up to 3:00 PM	04/10/2023 At 3:00 PM

The interested Manufacturers / Authorized Distributors/Authorized Suppliers may arrange online submission of the tender through www.eprocure.gov.in along with scan copy of essential documents mentioned in the tender document.

Tender(s) is/are to be submitted only online through central public procurement portal i.e. "http://eprucure.gov.in". All the documents are to be scanned and uploaded along with the tender documents.

Tender sent by any other mode will not be accepted.

Registrar

Registrar (NIT Agartala)

Copy to:

- The P.S. to the Director for kind information.
- The Nodal Officer, e-Procurement, NITA with a request to kindly arrange uploading the Tender Documents in the CPP portal https://eprocure.gov.in/cppp.
- 3. Dr. Suman Deb, Asstt. Prof. & Head CSE Department with a request to uploading the Tender documents in the Institute website site.

4. The Deputy Registrar (F & A).

Registrar
(NIT Agartala)



National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

No.F.NITA 14 Physics/Procurement/Lab Equipment/2023/

Date:

/2023

E- Tender Enquiry

IMPORTANT INFORMATION

Name of the Institute

NATIONAL INSTITUTE OF TE CHNOLOGY

AGARTALA

GST Number of the Institute

: 16AAAGN0550K1ZG

PAN of the Institute

: AAAGN0550K

TAN of the Institute

: SHLN00719F

DSIR No.

: TU/V/RG-CDE(1053)/2017 dated 15/03/2018

Institute Bank A/C No.

: 030936141729 (IFSC: SBIN0011491) under SBI, NIT

Agartala Branch.

Name of Department / Branch

: Physics Department

Enquiry / Reference Number

: No.F.NITA 14 Physics/Procurement/Lab Equipment/

2023

Some important/Critical dates:

Uploading on CPP Portal and Department's web-site	Date: 12 09 2023 Time: 5:00 PM
Bid submission start date	Date: 12/69 /2023 Time: 5:00 PM
Bid submission end date	Date: 03/10 /2023 Time: 3:00 PM
Opening of technical bid	Date: 04/10 /2023 Time: 3:00 PM



National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

Details of e-tender document.

NIT, Agartala intends to purchase the commodities/serrie(s) specified in Annexure enclosed and invites quotations in accordance with the terms and conditions detailed in the bid document. If you are interested, kindly submit your offer with prices within the time mentioned above fulfilling all the terms and conditions marked in the bid documents.

Registrar
National Institute of Technology
Agartala – 799 046, Tripura

Encl:

- Schedule of requirement, specifications, dates etc.
- (2) Bid document containing detail terms and conditions.



National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

1. Schedule of requirements

Sl. No.	Description of Goods/Service	Quantity
01	Laboratory & Scientific Equipment (Details as per list at Annexure-A)	As per list at Annexure-A

Specifications and allied Technical Details

Laboratory & Scientific Equipment (Details as per list at Annexure-A)

Estimated Cost

₹ 9,97,415.00

- Quotations should be valid for a period of 180 days from the opening date of the technical bid.
- Bid Security or EMD: 2% of the estimated cost of the tender or Bidders should submit "Bid Security Declaration Form" on company letter head as per annexure-D of this tender document.
- 4. Performance Security: The amount of the Performance Security shall be 3%(three percent) (not applicable for consumable item(s)) of the Purchase Order / Contract value, valid up to 60 days after the date of completion of contract obligations including warranty obligations.
- 5. Delivery Option: 60 (sixty) days after receipt of the purchase/work order(s).
- Please go through the enclosed "bid document" carefully for other bidding instructions.
- 7. For any technical details, you may contact through email-id: buycon6.nit.tr@gembuyer.in.

Yours sincerely,

Registrar

National Institute of Technology Agartala – 799 046, Tripura



National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

No.F.NITA 14 Physics/Procurement/Lab Equipment/2023/

Date:

/2023

BID DOCUMENT

Instructions to the bidders:

- 1.1 Bids are invited through e-tender on behalf of the National Institute of Technology Agartala, Tripura, Agartala-799046 from the intending bidders for supply of the goods/stores/ equipments/Learning resources for the Institute as detailed in the enquiry letter.
- 1.2 The bidders should quote their rates in clear terms without ambiguity. The quotation should be only in Indian Rupees.
- 1.3 The last date & time for submission of the bid is marked in the enquiry.
- 1.4 The bids should be submitted online through www.epuocure.gov.in before the last date & time of submission specified in tender document.
- 1.5 Bids received after the deadline of receipt indicated in para 1.4 above, shall not be taken into consideration.
- 1.6 Each bidder shall submit only one bid against one enquiry. A bidder, who submits more than one bid against single enquiry, shall be disqualified and considered non-responsive.
- 1.7 The bidder has to enclose a check list at per Annexure C duly filled in along with all relevant/supporting documents while submitting technical bid through www.eprocure.gov.in.
- 1.8 Opening of Bids by the Purchaser will be done as per the provisions of the eprocurement system.
- 1.9 At any time prior to the due date for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment.
- 1.10 All prospective bidders are expected to surf the website before formulating and submitting their bids to take cognizance of the amendments.
- 1.11 Custom Duty Exemption Certificate will be provided from the Institute for availing Custom Duty Exemption in trams of notification No. 51/96-Custom dated 23-07-1996, amended by notification No. 43/2017 dated 30-06-2017, further amended by notification No. 42/2022 dated 13-07-2022, as amended from time to time in case of imported items per OM No. F.4/1/2021-PPD dated 01-09-2021.

Yours sincerely,

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Registrar

National Institute of Technology Agartala – 799 046, Tripura



National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

No.F.NITA 14 Physics/Procurement/Lab Equipment/2023/

Date:

/2023

2. General Terms & Conditions:

- 2.1 The rates quoted by the Supplier/Bidders should preferably be on basic price, Annual Maintenance Charges(if applicable), packing, forwarding, freight, Insurance and all other incidental charges including delivery of the Materials at National Institute of Technology, Agartala.
- 2.2 All taxes and duties will be paid extra and such amounts of mandatory/statutory taxes & duties shall be explicitly mentioned in BOQ while submitting of bid. If GST amount not quoted in the BOQ (price bid), the total cost will be treated as inclusive of GST.
- 2.3 Price has to be filled through CPP portal as per BOQ (https://www.eprocure.gov.in). The scanned copy of Price Bid, dully filled in, has to be uploaded on the above e-procurement site. The prices filled in the e-procurement site will be treated final and shall be binding to the vendor.
- 2.4 Insurance: The Goods supplied under the Contract shall be fully insured against any loss or damage incidental to manufacture or acquisition, transportation, storage and delivery up to the final destination.
- 2.5 All the Machines/Equipments/goods will be covered by Annual Maintenance Contract (AMC) / CMC/ Warranty beyond the normal warranty/guarantee period. Interested bidders are requested to quote price against AMC/Extended warranty as an optional item in the price bid. Optional items will not be taken into consideration while selecting L₁ bidder.
- 2.6 AMC/CMC/Extended Warranty will be awarded after completion of standard warranty period. AMC/CMC/Extended Warranty may be carried out only after receipt of confirmation letter from this Institute. The Institute will not be responsible for any due payments / obligations may arise as a result of execution of AMC/CMC/Extended Warranty without confirmation letter from this Institute.
- 2.7 Conditional discount, if any, offered by the bidder shall not be considered at the time of evaluation.
- 2.8 The bidders who are registered as a Micro or Small Enterprise as per latest definitions under MSME rules, Govt. of India for exemption of submitting EMD/Bid security must enclose relevant documentary proof of authentication of their firm's registered as a Micro or Small Enterprise as per latest definitions under MSME rules, Govt. of India.

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National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

- 2.9 If the bidder is a Micro or Small Enterprise as per latest definitions under MSME rules, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria". If the bidder is OEM of the offered products, it would also be exempted from the "OEM Average Turnover" criteria. In case any bidder is seeking exemption from Turnover /Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded with technical bid.
- 2.10 If the bidder is a Startup, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria". If the bidder is OEM of the offered products, it would also be exempted from the "OEM Average Turnover" criteria. In case any bidder is seeking exemption from Turnover / Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded with technical bid.
- 2.11 National Institute of Technology, Agartala is following and abide with the Public Procurement (Preference to Make in India), Order 2017, DIPP, MoCI Order No. P-45021/2/2017-B.E.II dated 15th June 2017 and subsequent amendments to the order. Accordingly preference will be given to the Make in India products while evaluating the bids, however, it is the sole responsibility of the bidder(s) to specify the product quoted by them is of Make in India product along with respective documentary evidence as stipulated in the aforesaid order in the technical bid itself. A self-declaration as per Annexure- G should be enclosed in the technical bid.

2.12 On site Comprehensive Warranty:

- The successful bidder shall provide a Comprehensive Warranty for minimum period of 2 years (not applicable for consumable item(s)) after the installation and commissioning of the instrument / software/items. If within a warranty period after installation any such product or component is proven to be defective such product shall be repaired or replaced by the supplier/vendor. Such repair and replacement shall be sole obligation of supplier/vendor. Supplier / vendor shall be responsible for payment for all charges (to-and-fro) for repair/ replacement. Any design defects or installations deficiencies or any outer defects, if noticed during the warranty/ maintenance period, shall be rectified promptly by the successful bidder with no cost at all the places, which also includes the field installations.
- · Down-time call attendance should be within 48 hrs.
- In case the Equipment / System remains non-operational for more than 5 days then warranty period will be extended for the equal period for which Equipment / System remained non-operational. Warranty extension in such case shall be done without prejudice to any other Term & condition of the contract.

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National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

- 2.13 The documentary evidence of the bidders qualification to perform the contract if the bid is accepted shall establish to the purchasers satisfaction that:
 - (a) The bidder meets the qualification criteria listed in bidding documents, if any.
 - (b) Bidder who doesn't manufacture the goods it offers to supply shall submit Manufacturers' Authorization Form using the form specified in the bidding document to demonstrate that it has been duly authorized by the manufacturer of the goods to quote and / or supply the goods/services.
- 2.14 The successful bidder has to furnish "Performance Guarantee/Security" (not applicable for consumable item(s)) for an amount specified in the enquiry by E-Payment System to NITA Account within 15(fifteen) days of intimation of contract/supply order.

Alternatively, "Performance Guarantee/Security" will be retained by the Institute from the billed amount of the contract/supply order which will be released two months after the completion of warranty period (not applicable for consumable item(s)).

2.15 **Delivery Schedule**: As per e-Tender.

The item(s)/goods are required to be delivered at the indenting Department of National Institute of Technology, Agartala, and must be dispatched within specified days from the date of placement of the supply/purchase/work order.

If the supplier fails to Supply, Install and Commission the system/instrument as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of 0.5% of order value per week of delay subject to a maximum of 3%, as the case may be, beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier. Any exemption towards delay without LD can be resolved through mutual consent under exceptional circumstances.

- 2.16 Force Majeure: Notwithstanding the provisions of clauses relating to Extension of Time, Penalty and Termination for Default the Supplier shall not be liable for forfeiture of its Performance Security, Liquidated Damages or Termination for Default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 2.17 Evaluation of Bid: The Technical Bid shall be evaluated on the basis of technical and other parameters usually taken in to consideration. Financial bid shall be evaluated on the basis of financial parameters. Govt. of India rules shall be taken in to account for evaluating both technical and financial bids.
- 2.18 The successful bidder(s) may be required to execute a contract on the basis of evaluation as per annexure(s) (as applicable).

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National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

- 2.19 NIT Agartala will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.
- 2.20 The bidder has to submit valid trade license, GST registration certificate, Last filled ITR and last filed GST return.
- 2.21 Payment: 100% will be made in INR (Indian National Rupees) after successful Installation, Commissioning of item against submission of Performance Guaranty (PG) otherwise an equal amount of PG will be retained by the Institute till the completion of warranty obligations.

Note: All payments due under the contract shall be paid after deduction of statutory levies at source (like ESIC, IT (TDS), GST, LBT / Octroi etc.), wherever applicable.

- 2.22 In the event of any dispute arising out of the bid or from the resultant contract, the decision of the Competent Authority, National Institute of Technology, Agartala shall be final.
- 2.23 The bid document/resultant contract will be interpreted under Indian Laws.
- 2.24 National Institute of Technology, Agartala will not take any responsibility for arranging road permit/way bill or clearance from tax department for delivery of goods. All such requirements should be completed by the bidder for delivery of goods at National Institute of Technology, Agartala. GST payment, if required, should be paid by successful bidder and if GST not paid, National Institute of Technology, Agartala will deduct the applicable amount from successful bidder's bills and pay the same to Tax Authority. If there is any mandatory tax(es) other than GST/other taxes mentioned in this tender document, imposed by State Govt., the same may also be deducted from the bills of the successful bidder, as applicable.
- 2.25 Competent Authority of National Institute of Technology, Agartala reserves the right to cancel the entire e-tendering process at any stage of the procurement process without mentioning any reason.
- 2.26 Legal disputes, if any with NIT Agartala will be restricted within the jurisdiction of Agartala only.

Yours sincerely,

Registrar

National Institute of Technology Agartala – 799 046, Tripura



National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

No.F.NITA 14 Physics/Procurement/Lab Equipment/2023/

Date:

/2023

3. Special Terms & Conditions:

- 3.1 Acceptance of Technical bid strictly depends on National Institute of Technology, Agartala's requirements credentials, manufacturing capability, quality control systems, past performance, after-sales service, financial background, commercial terms & conditions etc. of the supplier(s).
- 3.2 Detailed Specifications, brand, make, model & parts number, tolerance limit, resolution, corresponding ISO standard etc. of quoted Equipments/Items should be mentioned with supported leaflet/catalogue/brochure and list of buyers for acceptance of technical bid.
- 3.3 The technical bid and the financial bid should be submitted through www.eprocure.gov.in. The technical bids shall be opened and evaluated by the competent committee/authority. At the second stage, financial bids of only the technically qualified bidders shall be opened for further evaluation and recommendations for awarding the purchase order/contract.

It may specifically be mentioned whether quotation is strictly as per terms and conditions of the tender. Deviation, if any, must be spelt out specifically in technical bid. In the absence of this, the quotation may be rejected.

- 3.4 Installation & Commissioning: Within 15 (fifteen) days after delivery (if applicable).
- 3.5 The Quantity of each Item(s)/Equipment(s) may increase (as per Govt. Norms) or decrease at the time of issued of Purchase / Supply / Work Order. The Institute reserves right to purchase partly or not to purchase any item / cancel the entire process at any stage of procurement process.
- 3.6 Penalty: Penalty will be charged @ 0.5 % of per week except for force majeure conditions for the unexecuted part of the supply/work order.
- 3.7 Arbitration: All disputes should be attempted to be resolve mutually between the National Institute of Technology, Agartala and the suppliers failing which jurisdiction of any Court of Agartala shall be applicable.
- 3.8 The successful bidder has to give at least 3-4 days on site training for each & every items/equipments by Certified Person (if required).
- 3.9 Model No. of the product should be given with catalogue (if any).
- 3.10 Items/Goods should be sent through Registered Transporter (preferably).

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National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

- 3.11 Bidders are required to upload a declaration on letter head stating that the bidder has not been black-listed & holiday listed by any Ministry/Department/Organization.
- 3.12 Bidder(s) is/are required to upload a self-certificate as per applicability (Annexure- E or F) regarding offered item(s) as per Office Memorandum No. 6/18/2019-PPD dated 23-07-2022 & 24-07-2020 and Office Memorandum No. F.18/37/2020-PPD dated 8th February, 2021 issued by Department of Expenditure, Procurement Policy Division, Ministry of Finance, Govt. of India.
- 3.13 Bidders are requested to provide valid e-mail ID and phone number for further communication.
- 3.14 Bank A/C in the Exact Name of Bidder/Firm/Supplier with Name, A/C No., IFSC code must be furnished with technical bid.

Yours sincerely,

Registrar

National Institute of Technology Agartala – 799 046, Tripura

Amnexure - A

	List of Experiments: Exp. 1 Determination of the mean coefficient of linear expansion of a		
		Solid	
w	Required Features/Required Compatibility for the	Linear Expansion of	w
	Complete in all respect.		
	headphones.		
	frequency oscillator and 3 values of unknown inductance supplied with		
	Compact type. Made using metal film resistors. With builtin fix		
	Specifications		
	Experimental Kit		
	Required Components For the experimental Set-Ups		
	Bridge		
	Exp – 1 To Determine the Self-Inductance of a Coil with Anderson's		
	List of Experiments:		
	Experiments	Experimental Kit	
7	Required Features/Required Compatibility for the	Anderson Bridge	2
	Complete in all respect.		
	(current), and 4 different LED's mounted in A Box.		
	finecontrol and having 2 digital meters to read V (Voltage) and I		
	The setup consists of A highly regulated power supply unit with extra		
	Specifications		
	Experimental Kit		
	Required Components For the experimental Set-Ups		
	(LED's)		
	Exp - 2 Determination of Planck's constant using light emitting diodes		
	(LED's)		
	Exp - 1 Determination of barrier potential of light emitting diodes		
	List of Experiments:		
	Experiments	apparatus using LED's	
4	Required Features/Required Compatibility for the	Planks constant	
Quantity		Experimental Setup	No
Required	Required Specification	Name of the	31.

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Annexure - A

and current of outoe with holder meaning on no			
Experimental Kit Specifications With continuously variable DC regulated power supply. With 2 meters to work voltage and current 6W hulbe with holder mounted on front	Specifications With continuousl monitor voltage a		
Required Components For the experimental Set-Ups	Required Com		
Resistant Measurement and to Verify Stefan's Law	Resistant Meas		
<u>List of Experiments:</u> Exp - 1 To Estimate the Temperature of a Torch Bulb Filament from	Exp – 1 To Estimate t		
	Experiments		
Required Features/Required Compatibility for the		Stefan constant	4
Alcohol Filled (Red column) calibrated in batches (mass calibration)	Alcohol Filled		
	Range - 10 to 1		
Thermometer: Thermometer 110 × 1/2°C Regular. Alcohol measuring	Thermometer:		
Joint less bottom fitted with infer and odder tube. Rubber tube: Rubber tubing 8 mm regular quality	Ruhher tuhe: 1		
Steam boiler: steam boiler 2 L capacity, made of stout copper sheet,	Steam boiler: s		
bh.	and on/off switch.		
heating, long life and low maintenance. With on and heating indicator	heating, long lif		
Diameter cast Iron Ton. 1500 W with energy regulator control. Fast	Diameter cast I		
outlet and tube for inserting thermometer.	outlet and tube		
Steam jacket: Having length 50 cm. It is fitted with steam inlet and	Steam jacket: 1		
	length 50 cm.		
Test rods of 3 different materials: steel, brass, aluminum, having	Test rods of 3		
Component wise Specification:	Component wi		
	steam boiler 2 I	77	
inlet and outlet and tube for inserting thermometer, Laboratory hot plate,	inlet and outlet		
Required Components For the experimental Set-Ups Test rods of 3 different materials. Steam jacket, and is fitted with steam	Test rods of 3 d		
	microscope		
solid for between footh temperature and steam temperature by navening	Solid lod octives		

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Annexure - A

6 Linear	5 Co-efficient viscosity (Po Method)
Linear Air track	Co-efficient of viscosity (Poisullies Method)
Experiments List of Experiments: Exp-1 To Study The Linear Motion Under Virtually Frictionless Conditions. Exp-2 To Study The Elastic And Inelastic Collision. Exp-3 To Study The Concept Of Velocity. Exp-4 To Study The Conservation Of Momentum & Energy. Exp-6 To Study The Dependency Of Mass Ratio To Kinetic Energy Required Components For the experimental Set-Ups Linear air track, Air Blower, Linear Air track accessories, Digital timer with photo gate pair, Boss head, Support Base, Support Rod Component wise Specification: Linear Aluminium alloy.	Required Features/Required Compatibility for the Experiments List of Experiments: Exp - 1 To find the coefficient of viscosity of water by Poiseuille's Method Required Components with specifications For the experimental Set- Ups Constant water level reservoir with stand, rubber tube of length 1m, stopwatch thermometer, pinch cock, Graduated cylinder 100 ml, Manometer on wooden stand, Glass capillary tube of length 38 cm on stand.
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Annexure - A

		Complete in all respect.	
	Co-efficient of viscosity (Poisullies Method)	Required Features/Required Compatibility for the Experiments List of Experiments: Exp - 1 To find the coefficient of viscosity of water by Poiseuille's Method Required Components with specifications For the experimental Set- Ups Constant water level reservoir with stand, rubber tube of length 1m, stopwatch thermometer, pinch cock, Graduated cylinder 100 ml, Manometer on wooden stand, Glass capillary tube of length 38 cm on stand.	
9	Linear Air track	Experiments List of Experiments: Experiments: List of Experiments: Exp-1 To Study The Linear Motion Under Virtually Frictionless Conditions. Exp-2 To Study The Elastic And Inelastic Collision. Exp-3 To Study The Concept Of Velocity. Exp-4 To Study The Concept Of Accelerations. Exp-5 To Study The Conservation Of Momentum & Energy. Exp-5 To Study The Dependency Of Mass Ratio To Kinetic Energy Exp-6 To Study The Dependency Of Mass Ratio To Kinetic Energy Exp-6 To Study The Dependency Of Wass Ratio To Rinetic Energy Exp-6 To Study The Dependency Of Wass Ratio To Kinetic Energy Exp-6 To Study The Dependency Of Wass Ratio To Kinetic Energy Exp-6 To Study The Dependency Of Wass Ratio To Kinetic Energy Exp-6 To Study The Dependency Of Wass Ratio To Kinetic Energy Exp-6 To Study The Dependency Of Wass Ratio To Kinetic Energy Exp-6 To Study The Dependency Of Wass Ratio To Kinetic Energy Exp-6 To Study The Dependency Of Wass Ratio To Kinetic Energy Linear air track, Air Blower, Linear Air track accessories, Digital timer with photo gate pair, Boss head, Support Base, Support Rod Component wise Specification: Material: Aluminium alloy. Length: 200cm.	

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Support feet: Three. Connection: Air inlet. Very low frictionless surface maintain by small tiny holes for air. Air Blower House: Air outlet, Plastic, 35 mm dia Operating Voltage: 220 V AC, 50 Hz Air Speed: Speed regulator switch, 30 ± 1 ms-1 Switch: ON/OFF Dimension: 230 x 185 x 250mm (LxWxH) Suppled with shrinkable plastic pipe. Linear Air track accessories Vehicle 200 g Plug with screen Plug with careful plug with careful plug with careful plug with card (black AI sheet) Plug with to rubber band Weight 50 g Plug with hook for attaching card Plug with pulley Rubber band Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operation: Infra-Red
Connection: Air inlet. Very low frictionless surface maintain by sma Air Blower House: Air outlet, Plastic, 35 mm dia Operating Voltage: 220 V AC, 50 Hz Air Speed: Speed regulator switch, 30 ± 1 ms. Switch: ON/OFF Dimension: 230 x 185 x 250mm (LxWxH) Suppled with shrinkable plastic pipe. Linear Air track accessories Vehicle 200 g Plug with aluminium strip Plug with aluminium strip Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with hook for attaching card Plug with hook for attaching card Plug with pulley Rubber band Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC Photocate detector: Infra-Red
Air Blower House: Air outlet, Plastic, 35 mm dia Operating Voltage: 220 V AC, 50 Hz Air Speed: Speed regulator switch, 30 ± 1 ms. Switch: ON/OFF Dimension: 230 x 185 x 250mm (LxWxH) Suppled with shrinkable plastic pipe. Linear Air track accessories Vehicle 200 g Plug with aluminium strip Plug with aluminium strip Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with hook for attaching card Plug with hook for attaching card Plug with holley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Air Blower House: Air outlet, Plastic, 35 mm dia Operating Voltage: 220 V AC, 50 Hz Air Speed: Speed regulator switch, 30 ± 1 ms. Switch: ON/OFF Dimension: 230 x 185 x 250mm (LxWxH) Suppled with shrinkable plastic pipe. Linear Air track accessories Vehicle 200 g Plug with aluminium strip Plug with aluminium strip Plug with clay Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
House: Air outlet, Plastic, 35 mm dia Operating Voltage: 220 V AC, 50 Hz Air Speed: Speed regulator switch, 30 ± 1 ms. Switch: ON/OFF Dimension: 230 x 185 x 250mm (LxWxH) Suppled with shrinkable plastic pipe. Linear Air track accessories Vehicle 200 g Plug with aluminium strip Plug with aluminium strip Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5 V DC Photogate detector: Infa-Red
Air Speed: Speed regulator switch, 30 ± 1 ms. Switch: ON/OFF Dimension: 230 x 185 x 250mm (LxWxH) Suppled with shrinkable plastic pipe. Linear Air track accessories Vehicle 200 g Plug with aluminium strip Plug with stream Plug with screen Plug with pin Fork for rubber band Weight 50 g Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC Photogate defector: Infa-Red
Air Speed: Speed regulator switch, 30 ± 1 ms. Switch: ON/OFF Dimension: 230 x 185 x 250mm (LxWxH) Suppled with shrinkable plastic pipe. Linear Air track accessories Vehicle 200 g Plug with aluminium strip Plug with screen Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with poor for attaching card Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC Photogate detector Infa-Red
Switch: ON/OFF Dimension: 230 x 185 x 250mm (LxWxH) Suppled with shrinkable plastic pipe. Linear Air track accessories Vehicle 200 g Plug with aluminium strip Plug with screen Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with hook for attaching card Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Dimension: 230 x 185 x 250mm (LxWxH) Suppled with shrinkable plastic pipe. Linear Air track accessories Vehicle 200 g Plug with aluminium strip Plug with screen Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with hook for attaching card Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Linear Air track accessories Vehicle 200 g Plug with aluminium strip Plug with screen Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with hook for attaching card Plug with hook for attaching card Plug with holes Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Linear Air track accessories Vehicle 200 g Plug with aluminium strip Plug with screen Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with hook for attaching card Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Vehicle 200 g Plug with aluminium strip Plug with screen Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with hook for attaching card Plug with hook for attaching card Plug with pulley Rubber band Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Plug with aluminium strip Plug with screen Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with hook for attaching card Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Plug with screen Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with card(black Al sheet) Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Plug with clay Plug with pin Fork for rubber band Weight 50 g Plug with card(black Al sheet) Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Plug with pin Fork for rubber band Weight 50 g Plug with card(black Al sheet) Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Fork for rubber band Weight 50 g Plug with card(black Al sheet) Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Weight 50 g Plug with card(black Al sheet) Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Plug with card(black Al sheet) Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC Photogate detector: Infra-Red
Plug with hook for attaching card Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Plug with pulley Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC
Rubber band Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC Photogate detector: Infra-Red
Digital timer with photo gate pair Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC Photogate detector: Infra-Red
Display: 2 line LCD Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC Photogate detector: Infra-Red
Type: Micro controller based Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC Photogate detector: Infra-Red
Time resolution: 0.1 milli second Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC Photogate detector: Infra-Red
Mode: Time, Speed & Acceleration Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC Photogate detector: Infra-Red
Photogate: 2 Nos. Interface: USB Operating voltage: 5V DC Photogate detector: Infra-Red
Interface: USB Operating voltage: 5V DC Photogrape detector: Infra-Red
Operating voltage: 5V DC Photogrape detector: Infra-Red
Photogate detector: Infra-Red
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Microcontroller based and in-built test functions.
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Supplied with a pair of photogate and photogate mounting rod. Boss head Object type: Square & round shape Object size: Up-to 13mm dia Material: Aluminium alloy Object can be held both vertically and horizontally. Support Base Dimension: 160x100mm (LxW), Material: Mild steel Support Rod Dimension: 250x10mm (LxΦ)	Experiments Experiments List of Experiments: Exp-1 To measure the light intensity of plane polarized light as a function of the analyzer position. Exp-2 To verify Malus law. Exp-3 To verify Malus law. Exp-3 To verify inverse square law. Required Components For the experimental Set-Ups He-Ne laser, Optical bench, 1.5m, Connecting leads pair 1m, Digital multimeter, Polarizer / Analyzer, Transverse saddle, Photo detector, Flexible plug lead red, Flexible plug lead black. Component wise Specification: He-Ne laser Wavelength: 632.8nm Working Current: 4mA ~ 6mA) Output Power: > 2 mW Working Time: > 8 hrs. Working Voltage: 220V AC, 50Hz Input Power: <2 W Dimension: 300x62x82 mm
	Malu's Law apparatus
	_

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Wairlet 1 5 les fourness	
weight, 1.5 ng (approx.)	
Optical bench, 1.5m Material: Aluminium alloy Type: Hexagonal section Scale: 0-150cm Least count: 1mm	
Digital multimeter Resistance: 200W, 2000W, 20k, 200k & 2000k W. D.C.Voltage: 200 & 2000 mV : 20, 200 & 600 V A.C.Voltage: 200 & 600 V D.C.Current: 200 & 2000 mA : 20 & 200 mA : 10 A Testing: Diode & transistor Battery: 9V	
Polarizer / Analyzer Angle: Adjustable (0°-90°) Aperture: 21mm dia. Frame: 130mm dia., to avoids scattering of lights Rod: 10 mm dia.	
Transverse saddle Material: Aluminium Locking: Spring loaded Motion: X-Y axis Holder: 10mm dia.	
Photo detector Detector: Silicon photocell	

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Terninals: 4mm safety socket Aperture: 1mm Rod: 10mm dia. Connecting leads pair 100 cm (2 nos) Flexible plug lead red Length: 100 cm Type: banana Plug Colour: Black Length: 100 cm Type: banana Plug Colour: Black Colour: Black	Experiments List of Experiments: List of Experiments: List of Experiments: Exp-1 Determination of Planck's Constant by Photoelectric Effect Exp-2 Determination of work function of materials by photo electric effect Exp − 2 Determination of work function of materials by photo electric effect Exp − 3 To verify inverse square law of radiation using a photoelectric cell Required Components For the experimental Set-Ups Required Components For the experimental Set-Ups Photo sensitive device, Light source, colour filters, Accelerating Voltage, Current Detecting Unit, Optical Bench. Component wise Specification: 1. Photo sensitive device: Vaccuum Photo tube 2. Light Source: Halogen Tungsten lamp 12V/35W 3. Colour Filter: 635nm, 570 nm, 540 nm, 500 nm and 460 nm 4. Accelerating Voltage: Regulated Voltage Power Supply Output: ± 15 V continuously variable through multi-turn.pot Display: 3 ½ digit 7 segment LED Accuracy: ± 0.2 %
Terninals: 4mm safety socket Aperture: 1mm Rod: 10mm dia. Connecting leads pair 100 cn Flexible plug lead red Length: 100 cm Type: banana Plug Colour: Black Length: 100 cm Type: banana Plug Colour: Black Colour: Black	Experiments List of Experiments: Exp-1 Determination effect Exp - 2 Determination effect Exp - 3 To verify invecell Required Component Photo sensitive device Current Detecting Unicurent Surface Su
	Planks constant apparatus with different colour filters
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to install color	to install color filters
framaw table is provided to instant color	ixed in the back end.
the distance between light source and photo tube. Scale length is 400 mm. A draw tube is provided to install color filters; a focus	the distance between light source and page 100 mm. A draw tube is provided to in lense is fixed in the back end.

Our Standard Terms & Condition as Follows:-

- Total price must include packing and NETT F.O.R Destination in Rupees.
- 100% Payment after Supply, Installation, Demonstration.
- Will be charge 5% against DSIR Certificated otherwise 18% as per Government Rules and Regulations.
- Delivery will be made within (4-6) Weeks from the date of receipt of your order complete in all respects.
 - Packing Charges must be included in total Price.
 - Freight Charges must be included in total Price.
- Quoted item carrier Two Years (24 Months) Warranty against any manufacturing defects. . 6.



National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

No.F.NITA 14 Physics/Procurement/Lab Equipment/2023/

Date:

/2023

ANNEXURE - B

PRICE BID

As per BOQ



National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

No.F.NITA 14 Physics/Procurement/Lab Equipment/2023/

Date:

/2023

ANNEXURE - C

Documents for Comprising the Bid

Sr.No.	TENDER REQUIREMENT	COMPLIANCE	Document Submitted
1	Name of the Firm / Agency / Dealer / Supplier with full address including contact number and email id etc.	Yes / No	Yes / NA
2	Trade License issued by Government / Statutory Body or Company Registration on the item(s) related to this tender.	Yes / No	Yes / NA
3	GST Registration of the Supplier/Firm/Bidder.	Yes / No	Yes / NA
4	PAN Registration of the Supplier/Firm/Bidder	Yes / No	Yes / NA
5	Financial Solvency issued by Bank(as per RBI guidelines) (in case of estimated cost is Rs.25.00 lakhs and above).	Yes / No	Yes / NA
6	Up to date GST return / any other tax clearance certificate. (last filed GST return)	Yes / No	Yes / NA
7	Up to date Income Tax Return (Last filled ITR)	Yes / No	Yes / NA
8	"Bid Security Declaration form" on Company Letter Head (Scanned copy to be uploaded along with Technical bid).	Yes / No	Yes / NA
9	Service Support details (if applicable)	Yes / No	Yes / NA
10	Certification of holiday and non-black listing (Self Certification)	Yes / No	Yes / NA
11	Certification as per memorandum No. F.18/37/2020-PPD dated 8th February 2021, Dept. of Expenditure, Ministry of Finance, Govt. of India (Self Certification)	Yes / No	Yes / NA
12	Proprietary Certificate from OEM to be uploaded along with the Technical Bid in case of Proprietary items	Yes / No	Yes / NA
13	Manufacturers Authorization Form (MAF) (if applicable)	Yes / No	Yes / NA
14	Certificate under MSME, NSIC, Make-in-India & Startup as per Govt. of India Norms (if applicable).	Yes / No	Yes / NA
15	Experience, if any, with govt. sector /Public Undertaking /Private sector (if applicable) (May be relaxed for MSME, NSIC & Startup as per Govt. of India Norm)	Yes / No	Yes / NA
16	Any other criteria related to this tender.	Yes / No	Yes / NA
17	Supplier/Firm/Bidder should accept all Terms & Conditions and specification of the items given in the Tender Document.	Yes / No	

(Signature of the bidder)



National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

No.F.NITA 14 Physi	Annexure-D
	Bid Securing Declaration Form
Date:	Tender Ref. No: Tender ID:
To (insert comple	ete name and address of the purchaser)
I/We. The unders	igned, declare that:
I/We understand Declaration.	that, according to your conditions, bids must be supported by a Bid Securing
I/We accept that year from the date because I/We	I/We may be disqualified from bidding for any contract with you for a period of one e of notification if I am /We are in a breach of any obligation under the bid conditions,
	vn/modified/amended, impairs or derogates from the tender, my/our Bid during the dity specified in the form of Bid; or
(i) fail or reuse t	to execute the contract, if required, or (ii) fail or refuse to furnish the Performance dance with the Instructions to Bidders.
Bidder, upon the	this Bid Securing Declaration shall cease to be valid if I am/we are not the successful earlier of (i) the receipt of your notification of the name of the successful Bidder; or ter the expiration of the validity of my/our Bid.
Signed: (insert sig	gnature of person whose name and capacity are shown)
in the capacity of	f (insert legal capacity of person signing the Bid Securing Declaration)
Name: (inse	ert complete name of person signing he Bid Securing Declaration)
Duly authorized t	to sign the bid for an on behalf of (insert complete name of Bidder)
Dated on	day of (insert date of signing)
Corporate Seal (v	where appropriate)
(Note: In case of	a Joint Venture, the Bid Securing Declaration must be in the name of all partners to

the Joint Venture that submits the bid)



National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

No.F.NITA 14 Physics/Procurement/Lab Equipment/2023/

Date:

/2023

Annexure-E

(Compliance to be submitted in the bidder's letterhead) (as applicable)

Sub: Compliance to Government of India order OM No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020 and OM No. F.18/37/2020-PPD dated 8th February, 2021 regarding restrictions under Rule 144 (XI) of the General Financial Rules (GFRs), 2017.

Item Name:	
Enquiry No.:	
Procurement D PPD dated 23.0	(name of the bidder company) have ses pertaining to the Department of Expenditure's (DoE) Public ivision Order (Public procurement no 1,2 & 3 vide ref. F.No.6/18/2019-07.2020 & 24.7.2020) regarding restrictions on procurement from a bidder at shares a land border with India.
We hereby cert this tender.	ify that we are not from such a country and eligible to be considered for
(Note: Non-cor by any bidder(s	inpliance of above said GoI Order and its subsequent amendment, (if any), shall lead to commercial rejection of their bids by NIT-Agartala)
For and behalf	of(Name of the bidder)
(Signature, dat	e & seal of an authorized representative of the bidder)



National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

No.F.NITA 14 Physics/Procurement/Lab Equipment/2023/

Date:

/2023

Annexure-F

(Compliance to be submitted in the bidder's letterhead) (as applicable)

Sub: Compliance to Government of India order OM No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020 and OM No. F.18/37/2020-PPD dated 8th February, 2021 regarding restrictions under Rule 144 (XI) of the General Financial Rules (GFRs), 2017.

Item Name:	
Enquiry No.:	
read the clau Procurement D PPD dated 23.0	ses pertaining to the Department of Expenditure's (DoE) Public division Order (Public procurement no 1,2 & 3 vide ref. F.No.6/18/2019-17.2020 & 24.7.2020) regarding restrictions on procurement from a bidder at shares a land border with India.
registered with	such a country which shares a land border with India & have been the Competent Authority as specified in the above-said order. We hereby fulfill all requirements in this regard and are eligible to be considered.
Evidence of val	lid registration by the Competent Authority is attached.
	inpliance of above said GoI Order and its subsequent amendment, (if any), shall lead to commercial rejection of their bids by NIT-Agartala)
For and behalf	of(Name of the bidder)
(Signature, date	e & seal of an authorized representative of the bidder)



National Institute of Technology Agartala AGARTALA - 799 046 (TRIPURA)

No.F.NITA 14 Physics/Procurement/Lab Equipment/2023/

Date:

Mobile no:

Office Telephone No: Email ID: Office Seal

/2023

Annexure -G

Self-Certification	on the letterhead of the company
In line with Government Public F 15.06.2017, P-45021/2/2017-PP (BF dated 29.05.2019 and P-45021/2/201	Procurement Order No. P-45021/2/2017-BE-II dt E-II) dated 28.05.2018, P-45021/2/2017-PP (BE-II 17-PP (BE-II) dated 16.09.2020,
supplier meeting requirement of mir in as above orders for the	
Details of the location at which local	value addition will be made are as follows:
Rule 175(1)(i)(h) of the General Fina	ns will be in breach of the Code of Integrity under ancial Rules for which a bidder or its successors can represent the Rule 151 (iii) of the General Financial Rules along rmitted under law.
	C:turn
Date: Place:	Signature: Name and Designation:
I lucc.	