

**TENDER DOCUMENT FOR SUPPLY OF BASIC MECHANICAL ENGINEERING (1ST YEAR)
LABORATORY ITEMS**



**BIJU PATNAIK UNIVERSITY OF TECHNOLOGY, ODISHA,
CHHEND, ROURKELA-769015**

TECHNICAL DOCUMENT FOR DEPT. OF MECHANICAL ENGINEERING
LABORATORY TESTS



BIJU PATNAIK UNIVERSITY OF TECHNOLOGY, ODISHA
TRENDS FOR KEY AREAS

**TENDER DOCUMENT FOR SUPPLY OF BASIC MECHANICAL ENGINEERING LABORATORY
ITEMS**

Tender Notice no: BPUT/XII/CAPGS/MECH LAB/81/2022/5864

Date:29.09.2022

BIDDING DATA SHEET

A. GENERAL INFORMATIONS:

Sl. No.	Item	Details
01	Bid Identification No.	
02	Name of the Work	PROCUREMENT OF LAB EQUIPMENTS, INSTRUMENTS & ITEMS FOR BASIC MECHANICAL ENGINEERING LABORATORY
03	Officer inviting tender	REGISTRAR, BPUT ODISHA, ROURKELA
04	Accepting Authority	VICE CHANCELLOR, BPUT ODISHA, ROURKELA

B. BID INFORMATIONS:

Sl. No.	Item	Details
01	Pre Bid Discussion	11.10.2022 at 4.00 PM
02	Last date of Bid submission	29.10.2022 by 5.00 PM
02	Date of Opening of Technical bid	01.11.2022 at 11.30 AM
03	Date of Opening of Financial bid	02.11.2022 at 4.00 PM
04	Bid Processing Fee	Rs. 1000 (DD in favour of "Biju Patnaik University of Technology" payable at Rourkela)
05	Earnest Money Deposit (EMD)	Rs. 1,00,000.00 (DD in favour of "Biju Patnaik University of Technology" payable at Rourkela)
06	Intended completion period/Time period assigned for Completion of supply.	By 30.11.2022

Quotations are invited for the above items sealed in **Two Bid system (One is Technical Bid and Second is Financial Bid)** separately super scribing the cover with "**Tender for Supply of Equipments & Instruments for Basic Mechanical Engineering Laboratory**" for CAPGS, BPUT, Rourkela. The outer cover should bear only the addresses. Offer with complete details on the following should reach **The Registrar, Biju Patnaik University of Technology, Chhend, Rourkela-769015** on or before **29.10.2022 by 5.00 PM through Speed Post or Registered Post only**. Technical Queries if any please contact: **The Director I/c, CAPGS, BPUT (capgs.rkjena@bput.ac.in)**.

You are requested to kindly go through the detailed instructions and terms & conditions mentioned below and overleaf and submit your most competitive offer by the last date and time of submission cited above.

INSTRUCTIONS

1. Bidders must submit their bids in three separate sealed covers i.e., the first sealed cover is "**Bid Processing Fee & EMD**", the second sealed cover is "**Technical Bid**" and the third sealed cover in "**Financial Bid**". These three bids should be put in a

separate cover. This outer cover must be sealed and mentioned **Tender for Supply of Equipments, Instruments & Items for Basic Mechanical Engineering Laboratory** on the top of the envelope.

2. Please submit copy of your Income Tax return copies of last three years and copy of PAN along with offer.
3. The offer must be submitted in **Two Bids** in a single cover. Tender should be sent through Speed Post / Registered Post only addressing to **The Registrar, Biju Patnaik University of Technology, Chhend, Rourkela-769015**. Other mode of delivery shall not be accepted.
4. Tenders/Quotations must be sent sufficiently in advance so that it reaches us on or before the due date and time. Quotation received after the due date & time will not be considered.
5. Quotation document (s) and all enclosures must contain the signature on each page of the competent authority of the firm.
6. The Bank/RTGS detail must be submitted along with the quotations /Tenders on the letter head. A Scan copy of the cancelled Cheque can also be attached for verification of IFSC code (if required).
7. The firm quoting for above mentioned items should be the authorized dealer of the manufacturer / manufacturer. Copy of authorization certificate should be enclosed with the quotation. Offers submitted without proper authorization shall be rejected summarily.

ELIGIBILITY CRITERIA FOR BIDDERS

1. The bidder must be a Proprietary/Partnership firm/Limited Company/Agency/Society legally constituted or registered under the relevant Act.
2. Must be in the same business for supplying of above items for **at least Five or more years** as on **29.10.2022**.
3. Must be registered and submit the documents such as PAN, TAN, Goods & Service Tax Registration etc. with proper validity.
4. Must have an average annual turnover of **Rs. 1 Crores** or more from supply of items during the last three financial Years [2018-19, 2019-20, 2020-21 and 2021-22] in the books of account.
5. The Bidder whether manufacturer/ distributor/ dealer must have experience of supply and installation of the quoted items in five different **IITs/ NITs/ Govt. Institutions** during last preceding **3 (Three) years** reckoned from the date of bid opening and the details must be submitted along with documentary proof.
6. The Bidders shall have to produce document in support of their service associates preferably nearest to **Bhubaneswar/ Rourkela**, Odisha.
7. The Bidder shall quote items of one reputed Brand/model with all accessories in complete to perform functionality of Equipment/Machinery.
8. The instruments and equipment offered against the schedule of requirement of instruments, equipment and Machineries should be in accordance with the stipulated specifications and of one reputed brand/model (N.B: Variation in specification is allowed up to $\pm 5\%$ in case of Machineries/Equipments).
9. The documentary evidence establishing the brand and the model may be in the form of literature, pamphlets, manuals, drawing, circuit diagram etc.
10. Detailed description of instruments and equipment with essential technical and performance characteristics may also be furnished.

11. Where the Bid is signed by any official other than MD/CMD or Proprietor / Owner of the Agency, then the person signing the Bid must have to submit duly signed power of attorney from the MD/CMD or the proprietor/owner of the Agency to the effect that the person signing the bid is legally authorised and competent to sign the bid and negotiate on behalf of the Agency concerned. **All the pages of the bid must be serially numbered and duly signed and sealed by the Authorized signatory giving detail of the page numbers in the index of the bid.**
12. Self-Attested copy of Memorandum of Understanding (MoU) shall be provided in case the Bidder comprises of Joint venture/Consortium/Partnership or relevant document about sole proprietorship.
13. The bidder shall submit full details of his ownership and control or, if the Bidder is a partnership, joint venture or consortium, full details of ownership and control of each member thereof
14. **The bidder shall submit an Undertaking that the said items(s) of respective item should be delivered within 1 (one) month of receiving work order.**
15. **All supporting documents in respect of the Bid must be submitted duly self-attested by the person signing the Bid.**
16. **Non-submission of these documents will make the bid as un-responsive and such bids shall not be considered as valid.**
17. Canvassing or offer of an advantage or any other inducement by any person with a view to influencing acceptance of a bid will be an offence under Laws of India. Such action will result in the rejection of bid, in addition to other punitive measures.
18. Bank Mandate as per the format at Annexure-IV is required to be submitted.
19. The Bidder/ Firm should not have been blacklisted by any Government Organization nor should have any criminal background. An undertaking in this regard should be submitted by the bidder.

Technical Bid **(ANNEXURE – II)**

The following documents should be submitted in Technical Bid

1. Earnest Money Deposit
2. Technical details of the equipment and machineries as per **Annexure-I.**
3. Copy of the manufacturing license/ import license/ Authorized Distributor/ Dealer certificates
4. Copy of the authorization from the Manufacturing Company in case of Authorized Distributor /Dealer in **Annexure-VII** along with Manufacturer Industry Registration and Tax Registration Certificate.
5. GST clearance certificate **up to date** where applicable.
6. **Performance/ Market standing certificate establishing that the Bidders have executed supply of similar items as mentioned in Schedule of Requirement of instruments and equipment to 5 different IIT/ NIT/ Govt. Institutions. (proof of documents) N.B: Variation in specification is allowed upto±5% in case of Machineries/Equipments)**
7. Copy of the IT Return & PAN Card.
8. Detail name, address, telephone no. fax, and e-mail of the firm and of the Director / Managing Director / Proprietor of the firm (As per **Annexure VII**)
9. Address, Telephone No., e-mail, Fax of the Branch Office/ Contact Person/ Liaising Office in Odisha. (As per **Annexure VIII**)
10. Power of Attorney/ Authorization to a person for liaising and monitoring the business on behalf of the manufacturer / bidder but not entitled to raise the bills.

11. **The original bid document signed & sealed by authorized person in each page as a token of acceptance of all terms and conditions of the tender with original receipt.**
12. Any deviation in the specification of the item including standard accessories / optional accessories in complete for functionality of Machine should be marked in **bold letters**.
N.B: Variation in specification is allowed up to ±5% in case of Machineries/Equipments)

Finance Bid (Annexure-III (a))

1. The hard copy of price bid giving the rates for various instruments & equipment and other items should be submitted along with sealed soft copy of **Finance bid in Excel format through CD/Pen drive** both in separate sealed cover here in after called **Cover for Finance Bid**). **Finance Bid** of the bidders who qualify in **Technical Bid** will only be opened and will be communicated through **E-mail/Fax**. The Finance bid as per format (Annexure-III (a)) shall be considered for comparison.
2. The price of each item shall be quoted as per the prescribed Price Schedule Format at **Annexure-III(b)** along with price break up of custom duty, Excise Duty, CST, Packing, Forwarding and Handling charges, Insurance charges, ET, freight up to destination including unloading, GST, commissioning including testing and training with total price per item at **FOR** destination. The bidders are required to submit the individual price of each instrument(s) and equipment(s) as indicated in the schedule of requirements.
3. Each quoted item and all accessories should cover the warranty / guarantee for **3 (three)** year from the date of commissioning (**Annexure-VI**).
4. The **Cover containing price bid** of the technically qualifying bidders shall be only opened at the Office of the "**The Registrar, Biju Patnaik University of Technology (BPUT), ODISHA Rourkela**" on the date and time to be communicated to them after technical evaluation of **Cover A** by **E-mail/Fax**.

TERMS & CONDITIONS

The offer must comprise of the following failing which it will be treated as un-responsive hence rejected:

1. The basic price must not be higher than price of the principal, if any additional accessories required, as per technical specifications, it must be quoted separately. Price list in case of proprietary items must be submitted.
2. The items under each serial number should be treated as one bundle. The total price for each serial number is considered rather than each individual under that serial number.
3. The bidders should verify the sites of existing laboratories of Department of Mechanical Engineering, CAPGS, BPUT, Rourkela and the proposed lay out Plan indicating the location of each unit for necessary Technical Evaluation. The scope of Supply as mentioned in the schedule of requirements if not sufficient for full function of the Equipment/Machinery should be intimated in writing with the technical bid.
4. The quoted rate shall not vary with the quantum of order placed or destination point.
5. A copy of the original bid conditions and the schedules should be signed by the bidder at the bottom of each page with the office seal duly affixed and returned along with the bid. Bid schedule should be duly filled in with an index and page number for the documents, enclosures & EMD etc. Paging must be done for all the documents submitted.
6. Bids should be type written or Computerized and every correction/ over writing in the bid

should invariably be attested with signature of the bidder with date before submission of the bids to the authorities concerned. No revision of price upward or downward will be allowed once the bid is opened. However, the purchaser shall have the right for considering the exchange rate of foreign currencies on verification of documents

7. **Bid Processing fee (Non-refundable) Rs. 1,000/- (One Thousand Only) in favour of BPUT, Rourkela, to be submitted in the form of Demand Draft (DD) only. EMD (Refundable) of Rs. 1,00,000.00 in favour of BPUT, Rourkela, to be submitted in the form of Demand Draft (DD) from any Nationalized/ Scheduled Commercial Bank payable at Rourkela and it should be valid for a period of 45 days beyond the bid validity period. Bids received without, Bid Processing fee, EMD, Bank mandate, and other essential documents will be rejected. The EMD amount will be refunded after submission of Performance Bank Guarantee.**
8. **NSIC/SSI/MSME Units are exempted for submitting EMD as per Govt. Of India order.**
9. **Conditional tenders will not be accepted.**
10. Bidders submitting bids would be considered who have considered and accepted all terms and conditions. No enquiries, verbal or written, shall be entertained in respect of acceptance or rejection of the bid.
11. Genuine equipment and instrument etc. should be supplied. Bidders should indicate the source of supply i.e. name and address of the manufacturers from whom the items are to be sourced.
12. Supply of equipment means – Installation and Commissioning (except civil works), Demonstration as well as Training at site. No separate charges will be paid on this account.
13. **Late and delayed quotation:** Late and delayed tender will not be considered. If, in any case, unscheduled holiday occurs on prescribed closing/opening date, the next working day shall be the prescribed date of closing/opening. It will be the sole responsibility of the firm that quotation should reach on or before the due date and time.
14. **Pre-installation Requirement:** The bidder should mention pre-installation requirements for the equipment like ambient temperature, humidity, weather specification, power specifications, etc., when items are provided full performance satisfactions, should be demonstrated.
15. **TAXES:** The percentage of taxes must be either inclusive/extra in exact figure and should be mentioned clearly by the supplier.
16. Authorization Dealer Certificate of Principal or manufacturer certificate shall be submitted.
17. The exact days of delivery period, installation & commissioning schedule.
18. The exact figure of percentage of discount offered.
19. **The quoted price (final offer) must be F.O.R (Freight on Road). i.e. BPUT, Rourkela including Packing & Forwarding, Freight, and Insurance etc. with detail break-up.**
20. Packing, Forwarding, Transporting, Postage/Courier, Octroi, Freight, Insurance, Any Certificate(s), Extra Warranty, Installation, Commissioning any, any levy, any other charge(s) must be inclusive of the price against the item(s).
21. **Finance Bid: The L1 bidder of respective item(s) shall be selected as per the recommendation of the Tender Committee.**
22. **DELIVERY:** Locally made Items should be supplied on the basis of free delivery at BPUT, Rourkela, Items manufactured outside Rourkela should be supplied on the basis of door delivery on working days.
23. **SPECIFICATION AND MAKE:** Quotation should be given for the exact specification and make as shown in the **Technical Specification (Annexure-I)** against the items along with

the order copy of similar equipment supplied to any Govt. Institution including detail of price & all charges must be attached.

The supplier should also provide a list of IIT/ NIT/ Govt. Institutions (if any) to which similar product has been supplied with product details in the Technical bid.

24. The date of delivery should be strictly adhered to failing which the purchase order is liable to be cancelled. Penalty may be imposed as per P.O. terms & conditions. Goods should be securely, safely and adequately packed & dispatched at the risk of supplier and packing costs quoting this order reference should be kept in all package. Local firms are requested to deliver the goods in our designated store place before 3.00 PM on any working day at BPUT Campus, Chhend, Rourkela.
25. **VALIDITY PERIOD:** The validity period of the offer should be clearly specified. It should be at least for **180 days** from the last date of submission of quotations.
26. **PAYMENT:** Full payment within 30 days from the date of received, tested/inspected/commissioned and found satisfactory with regard to quality, quantity and specifications and acceptance by the Indenter subject to submission of 10% PBG.
27. **PERFORMANCE BANK GUARANTEE (PBG):** The firm has to submit Performance Security of **10% of the total order value to be submitted on or before installation of equipment.** Performance Security must **valid for 38 (Thirty-Eight) months i.e. 2 months** beyond the warranty period to cover the warranty. Performance security is to be issued and sent directly from an Indian Nationalized bank.
28. **WARRANTY:** The items should be onsite comprehensive Warranty/Guarantee against any manufacturing defect for a period of **03 years** from the date of successful installation and authorization. In case any part or whole of the equipment is found to be defective during the guarantee period, then the same will have to be replaced/repaired free of cost at our premises by the supplier.
29. **LIQUIDATED DAMAGES:** As time is the essence of this order, the date of delivery should be strictly adhered to, otherwise the delivery in full or in part may not be accepted and penalty for late delivery will be imposed @ 0.5% per week subject to a maximum of 10% of the total value of supply order & beyond 10% subject to approval of Vice Chancellor, BPUT. In case of delay in installation/ supply the same rate of penalty shall be leviable. In case of cancellation of order, no compensation will be paid towards progress of order/procurement.

30. Rejection of the Bid

The Bid document shall be out-rightly rejected under following stipulation and no correspondence will be entertained whatsoever.

- If the Bidders has not furnished the required **Tender paper cost** and **EMD** or EMD exemption certificate from competent authority.
- If the Bidders has not submitted the Price as per the prescribed format **Annexure-III (a)**.
- If the bid is not supplemented with breakup of standard accessories / Optional accessories & cost of AMC separately for three years after completion of warranty period **(In case of major machinery only)**.
- Photo copy of the up-to-date valid manufacturing license/ import license (if it is imported) /dealership certificate/Distributor certificate of the product along with Tax Registration Certificate of Manufacturer issued from competent authority.
- If the bidders, whether manufacturer or authorized distributor/ dealer have not supplied the required quantity for qualification as per the eligibility criteria and not submitted the performance statement at **Annexure-VIII with supporting documents**.

- If the quoted product of the bidders not confirms to technical specification with complete accessories for functional Equipment/Machinery and standard of workmanship required by the Purchaser.
- If the bidder has not furnished technical details of the equipments and machinery with **one make & model** as per **Annexure-IX**.
- **If bidder will quote items of more than one make/model.**
- If the bidder has not submitted the detailed **catalogue**, Foundation drawings & schedule of supply of items, if required.
- If the bidders have not agreed to give **bid validity**.

31. Purchaser's Right to accept any Bid and to Reject any Bid

The Purchaser reserves the right to accept or reject any bid and to annul the bidding process and reject all the bids without assigning any reason thereof at any time prior to award of Contract, without thereby incurring any liability to the affected Bidders or Bidders on the grounds of such action of the purchaser. In case no bidder qualifies as per qualifying criteria and standards, purchaser may at his discretion relax qualification criteria for award of contract.

32. Evaluation and Comparison of Bids

The comparison shall be of FOR destination price basis including the price of all costs wherever applicable as well as duties and taxes paid or payable on Machineries, instruments & equipment incorporated or to be incorporated in the items including the warrantee/guarantee period from the date of installation.

- The Purchaser's evaluation of a bid will take into account, in addition to the bid price and the price of incidental services.
- The purpose of bid evaluation is to determine substantially responsive bid with the lowest evaluated cost, but not necessarily the lowest submitted price, which should be recommended for award.
- Evaluation of bids should be made strictly in terms of the provisions in the bid document to ensure compliance with the commercial and technical aspects.
- The past performance of the suppliers will be taken into account while evaluating the bids.
- Cost of the inland transportation, insurance and other costs within the Purchaser's Country incidental to delivery of the goods to their final destination;
- Alternative options of offer shall not be allowed.
- Each Bidder shall submit only one quotation with one make & model.
- The quotation would be evaluated separately for each item
- Sales Tax in connection with sale of goods shall not be taken into account in evaluation.

33. Supply Conditions

- **Delivery of Goods:** The delivery of goods shall be made by the supplier to the Consignee in accordance to the order placed as shall be detailed in the Schedule of requirements & technical specifications.
- **Warrantee Period (comprehensive):** The Bidders must quote for a minimum period of Three (03) years of comprehensive warranty from the date of completion of the satisfactory commissioning as per (Annexure-VI). This also includes all accessories related to instruments & equipment quoted for.




- Payment Terms
 - No advance payment will be made by the Purchaser to the supplier for performance of the contract. 100% of the contract price shall be paid within 30 (thirty) days after satisfactory supply, installation, demonstration, Commissioning & training and stock entry of bills of the goods within due date of delivery.
 - Transportation
 - The Supplier shall be required to meet all transport and storage expenses until commissioning of the instrument(s) / equipment covered in the contract.
 - Taxes and Duties
 - The Supplier shall be entirely responsible for payment of all Taxes, Duties etc. incurred until delivery of the contract goods to the Consignee subject to recovery afterwards in the bill as claimed in the Bid offer
34. In case of non-supply of Stores within the due date i.e. within the date of delivery the EMD deposited by the bidder shall be forfeited.
35. The Cost of Annual maintenance contract for next 3 years after warranty period shall be submitted as per the **Annexure III(b)**. The after sales service during and after the warranty / guarantee period should be available from companies own engineers
36. All communications are to be addressed to the Registrar, BPUT, Chhend, Rourkela only. Any kind of canvassing visit to the Institute Premises for enquiry of the status of the tender without prior permission may lead to rejection of the bid.
37. BPUT reserves the right to accept or reject or cancel any or all enquiries or quotations at any stage without assigning any reason thereof.
38. The Purchaser and the Supplier shall agree that the competent Court at Rourkela shall have the jurisdiction to try and decide anything between the parties and they may approach the Competent Court at Rourkela if required at any time.

Sd/-
Registrar



TECHNICAL SPECIFICATIONS**Schedule-A:**

Sl. No.	Workshop Equipments/Model	Specifications	Quantity
01	Steam Power Plant	Steam power plant prototype for laboratory demonstration Steam turbine- 1-3kW AC, 3000-5000RPM water tube steam boiler with maximum pressure- 20 bar With features: RPM controller, RPM sensor, Temperature indicator, Temperature sensor.	01
02a	Single cylinder two-stroke petrol Engine cut section model	Two-stroke petrol engine cut section model with carburettor, ignition, suction-exhaust-transfer channels. The cut model is professionally painted with different colours to better differentiate various parts, cross section lubricating circuits, fuel system, cooling system.	01
02b	Four stroke Diesel engine cut section model	Four-stroke petrol engine cut section model with carburettor, Fuel injector, suction-exhaust-transfer channels. The cut model is professionally painted with different colours to better differentiate various parts, cross section lubricating circuits, fuel system, cooling system.	01
03a	Refrigeration test rig	Control Panel- Stand Alone Metallic powder coated panel with Caster Wheels Compressor- Hermetically Sealed, Reciprocating type, 1/3 Ton Condenser- An air cooled condenser of suitable Capacity with Fan Expansion System- Capillary Expansion, Thermostatic Expansion system with solenoid valve Evaporator- Ceramic wool insulated stainless steel evaporator	01

		<p>Energy meter 5- 20 Amps, Temperature Indicator -Digital -50 to 150°C Flow measurement- 6.2 to 62 LPH, Gauges - Pressure and Compound gauges for LP and HP with LP-HP cut-out</p>	
03b	Air conditioning test rig	<p>Air duct with transparent front Air duct with fan, air cooler, humidifier, flaps, air heater and sensors Chamber with wet (latent) and dry (sensitive) heat source as cooling load Air-cooled condensing unit Power consumption: 140W at - 10°C Refrigeration capacity: 320W at +5/40°C Humidifier Heating power: 400W Air heater Heating power: 360W Filling volume: 1,2kg CO2-equivalent: 0,8t Measuring ranges Temperature: 0...50°C Rel. humidity: 10...90% Power consumption: 0...600W (condensing unit) Power: 2x 0...300W (cooling load) Pressure: -1...9bar / -1...24bar (refrigerant) Flow rate: 1,5...23,5L/h (refrigerant) Air velocity: 0...2,5 m/s</p>	01
04	Venturimeter test rig	<p>Stainless Steel tanks 304 grade Sump tank: size 1200 x 400 x 400mm, piping system: 2G pipe line of size 20 & 25mm each line fitted with the respective size venture meter & gate valve (ISI mark) needed to be provided with a set of distribution chambers with isolated cocks to facilitate individual experiment in individual venture meter (1) inlet dia. 20mm & throat dia. 12</p>	01

		<p>mm</p> <p>(2) inlet dia. 25mm & throat dia. 15 mm. differential mercury manometer with Hg. measuring tank size. 400x400x500mm with an overflow arrangement & provided with PVC control valve (ISI mark) & an elbow.</p> <p>Digital stop watch, standard pump of 0.5 hp.</p>	
05	Gear and Gear train set up	<p>RPM measurement: Digital</p> <p>Electric supply: 220V AC, Single phase 0.5kW</p> <p>Motor: variable speed 1HP</p> <p>Type- Epicyclic, compound gear train</p>	01
06	Pressure measurement apparatus	<p>The module is mounted on an aluminum/MS structure and painted steel Panels.</p> <p>Vertical tank Diameter: 100 mm and height: 575 mm).</p> <p>Vertical manometer tubes (460 mm length).</p> <p>One "U" shape vertical tube.</p> <p>Two parallel vertical tubes.</p> <p>One vertical tube with variable section.</p> <p>One vertical tube with a pivot that allows it to incline from 0 To 90°.</p> <p>These tubes can be used individually or in combination for the Different demonstrations.</p> <p>Vernier hook and point gauge.</p> <p>Piezometric tube.</p> <p>Manual air pump.</p> <p>Purge valve</p>	01





Schedule-B:

Sl. No.	Welding Setup Items	Specifications	Quantity
01	Arc welding set up	Main Voltage- 400V±10% Phase-1-3, 50Hz Current Range- 20 to 400 A Open Circuit Voltage 65 ~70 V Output at 60% duty cycle 400 A Output at 100% duty cycle ~310 A Dimension mm (approx.)- 550 x 300 x 500	01
02	Gas welding set up	Oxy / Acetylene Welding Setup Gas Cylinder- Two Separate Acetylene and Oxygen cylinder. Gas valves- Stainless steel spindle, taper ended. Control Knob- Red for Acetylene, Blue for Oxygen. Blow pipe should be supplied with hose connections. 10 Meter hose on Blue and Red, 8- 10 mm dia Double stage regulator for Oxygen & Acetylene. Welding goggles.	01
03	Filler rod	Filler rod: Carbon steel gas welding rod (dia. = 3-5mm, length= 300-500mm) Mild steel arc welding rod (dia. = 3- 5mm, length= 300-500mm)	10kg
04	Welding helmet	Helmet with hard plastic material with auto darkening lens to demonstrate for laboratory testing	05

Schedule-C:

Sl. No.	Machine Setup Items	Specifications	Quantity
01	Lathe	Type- All geared precision lathe with universal gearbox Layout-horizontal Drive type-geared Power- 2.2kW to 5.5kW Motor- 2 HP to 5 HP Bed Width -240 to 375 mm Chuck Diameter- 200 mm to 300 mm Admin between Center- 750 to 2500 mm Height of center- 215 mm to 400 mm	02

		Width of bed- 250 mm to 500 mm Maximum Spindle speed- 1000 to 2000 RMP Number of spindle speed- 8 to 12	
02	Shaping	Length of Stroke-350 mm to 550 mm Length of Ram Without Foot Slide- 660 mm to 1000 mm Length of Cross Slide - 558 mm to 1000 mm Width of Cross Slide- 200 mm to 400 mm Horizontal Travel of the Table- 400 mm to 800 mm Vertical Travel of the Table-200 mm to 400 mm Maximum Distance from Table to RAM- 300 mm to 500 mm Minimum Distance from Table to RAM- 100 mm to 175 mm Number of Speed- 3 to 4 Electric Motors- 1HP to 3HP	01
03	Milling	Automation Automatic Grade Spindle Taper ISO 50 Distance From Spindle Axis To Column 320 mm Distance from spindle nose to table 45-445 mm Range of Spindle speed 58-1710 RPM Table Dimension 1320 x 320 mm Table travel Horizontal 800 mm Table travel Vertical 400 mm Angle of milling head +/- 30 Degree Motor Power 4 KW	01

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Schedule-D:

Sl. No.	Fitting Shop Items	Specifications	Quantity
01	Bench vice	Material: Cast iron Size= 10-30 cm	20
02	Table to fit bench vice (200cmx100cm)	Size: 200 cm × 100 cm	05
03	File set	Flat file, Hand file, Knife-edge, Half-round file, Triangular file, Square file	30
04	Measuring Instrument in fitting shop price (Fillet and radius gauge, screw pitch gauge, surface plate, try square, dial gauge, feeler gauge, plate gauge and wire gauge)	Fillet and radius gauge, screw pitch gauge, surface plate, try square, dial gauge, feeler gauge, plate gauge and wire gauge.	05

Schedule-E: (Engineering Graphics & Design Lab Items)

Sl. No.	Device	Specifications	Quantity
01	Auto CAD Software for windows, Academic Version (03years Licence)	Latest academic version (03 years License)	50 user

ANNEXURE – II

Tender Notice No. BPUT/XII/CAPGS/MECH LAB/81/2022/5864 Dated: 29.09.2022

**TENDER DOCUMENT FOR SUPPLY OF EQUIPMENTS & INSTRUMENTS FOR BASIC MECHANICAL
ENGINEERING LABORATORY****TECHNICAL BID****(A) General Information:**

Sl. No	Item	Description
1	Name of the Proprietary/Partnership firm/Limited Company/Agency/Society	
2	Address of the Firm / Company (i) Head Office (ii) Branch in Odisha (if any) (iii) Factory Location.	
3	Year of establishment.	
4	E-mail address.	
5	Telephone Number(s)	
6	Fax No:	
7	EMD DD no. Date & Bank (Total Amount as per the respective items)	
8	Bid Processing Fee DD no. Date & Bank	
9	Is your firm registered under a) The Indian Companies Act, b) The Indian Partnership Act (Enclose documentary proof)	
10	If your firm is a sole proprietorship firm (give details with documentary proof).	
11	If your firm comes under any other categories (give details with documentary proof).	
12	Whether insured against fire, theft, and burglary. If so, please state the amount for which insured, the name of the insurance firm and policy no.	
13	GST Regn. No.(give details with documentary proof).	
14	Permanent Account No (PAN). (Copy to be enclosed)	

(B) Experience of the Firm:

Please enclose Work Orders of supply similar items

Sl. No.	Name of Government Organisation	Item	Quantity
1			
2			

(C) Annual Turnover of last three years. (Enclose documentary proof):

Year	Annual Turnover (in Rupees)

Authorized Signature of the Bidder
with Seal & Date

ANNEXURE – III (a)**FINANCIAL BID**

Tender Notice No.: BPUT/XII/CAPGS/MECH LAB/81/2022/5864

Date: 29.09.2022

Sl. No.	Equipment/Model	Specifications	Quantity	Unit Price	Discount %	G S T %	Custom Duty % (if any)	Installation & Commissioning Charges	Charges for Training	Any Other Charges	Total Price
01	Steam Power Plant	Steam power plant prototype for laboratory demonstration Steam turbine- 1-3kW AC, 3000-5000RPM water tube steam boiler with maximum pressure- 20 bar With features: RPM controller, RPM sensor, Temperature indicator, Temperature sensor.	01								
02a	Single cylinder two-stroke petrol Engine cut section model	Two-stroke petrol engine cut section model with carburettor, ignition, suction-exhaust-transfer channels. The cut model is professionally painted with different colours to better differentiate various parts, cross section lubricating circuits, fuel system, cooling system.	01								
02b	Four stroke Diesel engine cut section model	Four-stroke petrol engine cut section model with carburettor, Fuel injector, suction-exhaust-transfer channels. The cut model is professionally painted with different colours to better differentiate various parts, cross section lubricating circuits, fuel system, cooling system.	01								

03a	Refrigeration test rig	<p>Control Panel- Stand Alone Metallic powder coated panel with Caster Wheels Compressor- Hermetically Sealed, Reciprocating type, 1/3 Ton Condenser- An air cooled condenser of suitable Capacity with Fan Expansion System- Capillary Expansion, Thermostatic Expansion system with solenoid valve Evaporator- Ceramic wool insulated stainless steel evaporator Energy meter 5- 20 Amps, Temperature Indicator - Digital -50 to 150°C Flow measurement- 6.2 to 62 LPH, Gauges - Pressure and Compound gauges for LP and HP with LP-HP cut-out</p>	01								
03b	Air conditioning test rig	<p>Air duct with transparent front Air duct with fan, air cooler, humidifier, flaps, air heater and sensors Chamber with wet (latent) and dry (sensitive) heat source as cooling load Air-cooled condensing unit Power consumption: 140W at -10°C Refrigeration capacity: 320W at +5/40°C Humidifier Heating power: 400W Air heater Heating power: 360W Filling volume: 1,2kg CO2-equivalent: 0,8t Measuring ranges Temperature: 0...50°C Rel. humidity: 10...90% Power consumption: 0...600W (condensing unit) Power: 2x 0...300W (cooling load) Pressure: -1...9bar / -1...24bar (refrigerant) Flow rate: 1,5...23,5L/h (refrigerant) Air velocity: 0...2,5 m/s</p>	01								

04	Venturimeter test rig	Stainless Steel tanks 304 grade Sump tank: size 1200 x 400 x 400mm, piping system: 2G pipe line of size 20 & 25mm each line fitted with the respective size venture meter & gate valve (ISI mark) needed to be provided with a set of distribution chambers with isolated cocks to facilitate individual experiment in individual venture meter (1) inlet dia. 20mm & throat dia. 12 mm (2) inlet dia. 25mm & throat dia. 15 mm. differential mercury manometer with Hg. measuring tank size. 400x400x500mm with an overflow arrangement & provided with PVC control valve (ISI mark) & an elbow. Digital stop watch, standard pump of 0.5 hp.	01							
05	Gear and Gear train set up	RPM measurement: Digital Electric supply: 220V AC, Single phase 0.5kW Motor: variable speed 1HP Type- Epicyclic, compound gear train	01							
06	Pressure measurement apparatus	The module is mounted on an aluminum/MS structure and painted steel Panels. Vertical tank Diameter: 100 mm and height: 575 mm). Vertical manometer tubes (460 mm length). One "U" shape vertical tube. Two parallel vertical tubes. One vertical tube with variable section. One vertical tube with a pivot that allows it to incline from 0 To 90°. These tubes can be used individually or in combination for the Different demonstrations. Vernier hook and point gauge. Piezometric tube. Manual air pump. Purge valve	01							
07	Arc welding set up	Main Voltage- 400V±10% Phase-1-3, 50Hz Current Range- 20 to 400 A Open Circuit Voltage 65 ~70 V Output at 60% duty cycle 400 A Output at 100% duty cycle ~310 A Dimension mm (approx.)- 550 x 300 x 500	01							

08	Gas welding set up	Oxy / Acetylene Welding Setup Gas Cylinder- Two Separate Acetylene and Oxygen cylinder. Gas valves- Stainless steel spindle, taper ended. Control Knob- Red for Acetylene, Blue for Oxygen. Blow pipe should be supplied with hose connections. 10 Meter hose on Blue and Red, 8-10 mm dia Double stage regulator for Oxygen & Acetylene. Welding goggles.	01							
09	Filler rod	Filler rod: Carbon steel gas welding rod (dia. = 3-5mm, length= 300-500mm) Mild steel arc welding rod (dia. = 3-5mm, length= 300-500mm)	10kg							
10	Welding helmet	Helmet with hard plastic material with auto darkening lens to demonstrate for laboratory testing	05							
11	Lathe	Type- All geared precision lathe with universal gearbox Layout-horizontal Drive type-geared Power- 2.2kW to 5.5kW Motor- 2 HP to 5 HP Bed Width -240 to 375 mm Chuck Diameter- 200 mm to 300 mm Admin between Center- 750 to 2500 mm Height of center- 215 mm to 400 mm Width of bed- 250 mm to 500 mm Maximum Spindle speed- 1000 to 2000 RMP Number of spindle speed- 8 to 12	02							
12	Shaping	Length of Stroke-350 mm to 550 mm Length of Ram Without Foot Slide-660 mm1000 mm Length of Cross Slide - 558 mm to 1000 mm Width of Cross Slide- 200 mm to 400 mm Horizontal Travel of the Table- 400 mm to 800 mm Vertical Travel of the Table- 200 mm to 400 mm Maximum Distance from Table to RAM- 300 mm to 500 mm Minimum Distance from Table to RAM- 100 mm to 175 mm Number of Speed- 3 to 4 Electric Motors- 1HP to 3HP	01							

13	Milling	Automation Grade Automatic Spindle Taper ISO 50 Distance From Spindle Axis To Column 320 mm Distance from spindle nose to table 45-445 mm Range of Spindle speed 58-1710 RPM Table Dimension 1320 x 320 mm Table travel Horizontal 800 mm Table travel Vertical 400 mm Angle of milling head +/- 30 Degree Motor Power 4 KW								
14	Bench vice	Material: Cast iron Size= 10-30 cm	20							
15	Table to fit bench vice (200cmx100cm)	Size: 200 cm × 100 cm	05							
16	File set	Flat file, Hand file, Knife-edge, Half-round file, Triangular file, Square file	30							
17	Measuring Instrument in fitting shop price (Fillet and radius gauge, screw pitch gauge, surface plate, try square, dial gauge, feeler gauge, plate gauge and wire gauge)	Fillet and radius gauge, screw pitch gauge, surface plate, try square, dial gauge, feeler gauge, plate gauge and wire gauge.	05							
18	Auto CAD Software for windows, Academic Version (03years Licence)	Latest academic version (03 years License)	50 user							

1	Make & Model	
2	Delivery Mode	FREE DELIVERY AT BPUT, ROURKELA
3	Total Bid price per unit should be inclusive of all taxes and levies, transportation, loading, unloading, etc. The selection of bidder shall be considered item wise L ₁ value.	
4	Delivery Period	Days
5	Validity Date	Maximum _____ days from the date of opening of Technical Bid
6	Payment Term	Payment term within 30 days from the date submission of bill Acceptance Certificate to concerned Dept. subject to submission of 10 % PBG.

PAN No.:
GST Registration No.:
Signature:
Authorized Signature:
Name:
Bank Address:
Affix Rubber Stamp:

Place:
Date:

PRICE SCHEDULE (ITEM WISE) - B**PRICE SCHEDULE FOR ANNUAL MAINTANCE CONTRACT AFTER COMPLETION OF WARRANTY PERIOD.**

Sl. No	Brief description of Goods Total annual	Quantity in nos.				Annual Maintenance Contract cost 3 years i.e. $3 \times (4a+4b+4c)$
			1st yr.	2nd yr.	3rd yr.	
1	2	3	4			5
			(a)	(b)	(c)	

Note: -

1. In case of discrepancy between unit price and total prices, THE UNIT PRICE shall prevail.
2. The cost of Annual Maintenance Contract (AMC) which includes preventive maintenance including testing & calibration as per technical/ service/ operational manual, labour and spares, after satisfactory completion of warranty period may be quoted for next 3 years on yearly basis for complete equipment and turnkey (if any).
3. The cost of AMC may be quoted along with taxes applicable on the date of bid opening. The taxes to be paid extra should be specifically stated. In absence of any such stipulation the price will be taken inclusive of all taxes and no claim for the same will be entertained later.
4. Cost of AMC will not be added for Ranking/Evaluation purpose. However, the cost of AMC for lowest evaluated bidder is subject to negotiation.
5. The payment of AMC will be made as per payment terms of the bid document.
6. The uptime warranty and down time penalty shall be as per the bid document.
7. All software update should be provided free of cost during AMC period.
8. The stipulations in Technical Specification will supersede above provisions.
9. The supplier shall keep sufficient stock of spares require during Annual Comprehensive Maintenance Contract period. In case the spares are required to be imported, it would be the responsibility of the supplier to import and get them custom cleared and pay all necessary duties.

Place:

Date:

Signature of Bidder
Business Address
Seal of the Bidder

Mandate Form for Electronic Fund Transfer/RTGS
Transfer

To

The Registrar,
Biju Patnaik University of
Technology
Chhend, Rourkela-769015, Odisha

Sub: Authorization for release of payment / dues from BPUT, Rourkela through Electronic Fund Transfer/RTGS Transfer.

1. Name of the Party/Firm/Company/Institute:
2. Address of the Party:

City: _____ Pin Code: _____
E-Mail ID: _____ Mob No: _____
Permanent Account Number: _____

3. Particulars of Bank:

Bank Name:		Branch Name:	
Branch Place:		Branch City:	
PIN Code:		Branch Code:	
MICR No.:			
(9 Digit number appearing on the MICR Bank of the Cheque supplied by the Bank, Please attach a Xerox copy of a cheque of your bank for ensuring accuracy of the bank name , branch name and code number)			
IFS Code:(11 digit alpha numeric code)			
Account Type	Savings	Current	Cash Credit
Account Number:			

DECLARATION

I hereby declare that the particulars given above are correct and complete. If any transaction delayed and not effected for reasons of incomplete or incorrect information I shall not hold Registrar, BPUT, Rourekla responsible. I also undertake to advise any change in the particulars of my account to facilitate updating of records for purpose of credit of amount through NEFT/RTGS Transfer.

Place:

Date:

Signature & Seal of the Authorized Signatory of the Party

Certified that particulars furnished above are correct as per our records. Bankers Stamp:

Date:

Signature of the Authorized Official from the Bank

FORMAT FOR PERFORMANCE BANK GUARANTEE

(To be typed on Non-judicial stamp paper of the value of Indian Rupees of One Hundred) (TO BE ESTABLISHED THROUGH ANY OF THE NATIONAL BANKS (WHETHER SITUATED AT ODISHA OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT ROURKELA OR ANY SCHEDULED BANK (OTHER THAN NATIONALISED BANK) SITUATED AT ROURKELA. BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.)

To
The Registrar,
Biju Patnaik University of Technology
Chhend, Rourkela-769015, Odisha

LETTER OF GUARANTEE

WHEREAS Biju Patnaik University of Technology, Rourkela (Buyer) have invited Tenders vide Tender No..... Dt.for purchase of AND WHEREAS the said tender document requires that any eligible successful tenderer (seller) wishing to supply the equipment & instruments etc. in response thereto shall establish an irrevocable Performance Guarantee Bond in favour of "**Registrar, Biju Patnaik University of Technology, Rourkela**" in the form of Bank Guarantee for Rs and valid till 38 months from the date of issue of Performance Bank Guarantee may be submitted within 30 (Thirty) days from the date of acceptance as a successful bidder.

NOW THIS BANK HEREBY GUARANTEES that in the event of the said tenderer (seller) failing to abide by any of the conditions referred in tender document / purchase order / performance of the equipment / machinery, etc. this bank shall pay to BPUT, Rourkela on demand and without protest or demur Rs (Rupees.....).

This bank further agrees that the decision of BPUT, Rourkela (Buyer) as to whether the said Tenderer (Seller) has committed a breach of any of the conditions referred in tender document / purchase order shall be final and binding.

We, (name of the bank & branch) hereby further agree that the guarantee herein contained shall not be affected by any change in the constitution of the Tenderer (Seller) and/ or BPUT, Rourkela (Buyer).

Notwithstanding anything contained herein:

1. Our liability under this Bank Guarantee shall not exceed Rs. (Indian Rupees..... only).
2. This Bank Guarantee shall be valid up to(date) and
3. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if Institute serve upon us a written claim or demand on or before(date).

This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at situated at (Address of local branch).

Yours truly,

Signature and seal of the guarantor:
Name of Bank:
Address:
Date:

Instruction to Bank: Bank should note that on expiry of Guarantee Period, the Original Guarantee will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond period.

WARRANTY MAINTENANCE CONTRACT AGREEMENT.

THIS AGREEMENT made the.....day of, 20__ between the “**The Registrar, Biju Patnaik University of Technology (BPUT), ODISHA Rourkela**” (hereinafter “the Purchaser”) of the one part and M/s..... (here in after called “the Supplier”) of the other part:

WHEREAS the Purchaser invited bids for certain Goods & ancillary services viz, supply and commissioning of the instruments & equipment at Bhubaneswar including Comprehensive Warranty Maintenance Services and has accepted a bid by the Supplier for the instruments & equipment specified below at the Consignee site including Comprehensive Warranty maintenance Services for a period of 3 (Three) year from the date of installation & commissioning of the instruments & equipment as per award of Contract No..... dated

Name of the Equipment & machineries **Qty**

(To be filled in as per details of goods in the award of Contract)

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. Maintenance Services shall consist of Preventive and Corrective maintenance of equipment specified above & will include repair and replacement of parts free of cost.
2. Preventive maintenance, monthly once, which includes:
 - 2.1 Check-up to ensure that device connection is proper, cabling is at proper condition etc.
 - 2.2 Cleaning of the above instruments & equipments and checking the System Performance.
3. The Supplier is to furnish the tentative schedule of the preventive maintenance of Warranty Maintenance Contract (WMC) to be carried out.
4. The parts replaced must be new parts or equivalent in performance to new parts.
5. The Supplier will also provide the same maintenance service in case of the movement of equipment from the place of original installation to a different place or location, if the equipment is shifted by the Purchaser to another place or location at the cost and risk of the purchaser.
6. Any complaint informed through telephone must be acknowledged with a Complaint No. by the Supplier which will be noted by Consignee. All further contact with the Supplier on such complaint will be initiated through that Complaint No. Once rectification is done, that No. will be cancelled by both parties. A register is to be maintained by the Supplier where complaints are to be noted along with Complaint No.
7. The maintenance shall normally be done at the earliest.

8. The Service Engineer of the Supplier will be allowed to handle the respective plant & machineries only in presence of the officer in charge at the Consignee site.
9. The Supplier should ensure that maintenance job is not hampered/delayed due to paucity of spares/inadequate manpower etc.
10. The Supplier should submit the services call report, to the Consignee for each and every service call without fail.
11. The Supplier evaluation data format for the WMC of Consignee systems may be filled up for necessary action.
12. All formats after filled up should be signed at the end of each page by the Supplier.
13. After completion of the work/repair/maintenance, the Purchaser shall issue a certificate of completion to the supplier to that effect.

Signature

Signature

For the Purchaser

For the Supplier

Name:

Name:

Designation:

Designation:

Address:

Address:

Telephone No:

Telephone No:



MANUFACTURES' AUTHORISATION FORM

No. _____ / Date _____ /

To

The Registrar,
BPUT Odisha
Rourkela,

Dear Sir, Bid No. _____

We _____ who are established and reputable manufacturers of _____ having factories at _____ (Address of Factory) do thereby authorize M/s. _____ (Name and address of Agent) to submit a bid and sign the contract with you against the above bid.

* No company or firm or individual other than M/s. _____ are authorized to bid and conclude the contract in regard to this business against this specific invitation for bid.

We hereby extend our full guaranty and warranty as per general conditions of contract for the goods and services offered by the above firm against this bid.

Yours faithfully,
(Signature for and on behalf of Manufacturers)

Note: This letter of authority should be on the letterhead of the manufacturer and should be signed by a person, competent and having the power of attorney to bind the manufacturer. It should be included original by the Bidders in its bid.

- This para should be deleted for simple items where manufacturers sell the product through different stockiest.



DETAILS OF THE BIDDERS

Bid Reference No.

Name and address of the Bidder:

01 Name of the bidder

- a) Full postal address
- b) Full address of the premises
- c) Telegraphic address
- d) Telephone number
- e) Fax number
- f) E mail:
- g) PAN No
- h) TIN No

02 Total annual turn-over (value in Rupees)

03 Quality control arrangement details

04 Test certificate held

- a) Type test
- b) BIS/ISO certification
- c) Any other

05 Details of staff

- a) Technical
- b) Skilled
- c) Unskilled

06 Branch Offices/ Contact Person/ Liaising Office in Odisha.

- a) Address
- b) Telephone No.
- c) e-mail,
- d) Fax

Signature and seal of the Bidder



ANNEXURE-IX

Technical details of the Machineries & Equipments to be supplied by the bidder

Bid SI No. of the item	Tender specification	Bidders Specification with make and model no (Enclose manufactures catalogue / brochure for each item)	Deviation if any With university specification

Signature and seal of the Bidder



CHECK LIST OF MANDATORY DOCUMENTS TO BE ENCLOSED

Sl	Details of Documents	Page No.
1.	Bid Processing fee of Rs. 1,000/- in form of DD in favour of BPUT payable at Rourkela	
2.	EMD DD of Rs. 1,00,000.00 in form of DD in favour of BPUT payable at Rourkela	
3.	Bid submitted along with sample for no. of items and list duly signed	
4.	Bid should be serially numbered, signed, seal and indexed	
5.	Copy of PAN Card	
6.	Copy of GST Registration Certificate	
7.	Income Tax Return copies for last 3 years	
8.	Cancelled Cheque for A/C no and IFSC code	
9.	Certified copy of authorized Dealer/ Manufacturer	
10.	Copy of Company/ Partnership/ Proprietorship/ Society registration certificate	
11.	Copy of experience certificate for last five years or more	
12.	Copy of Turnover of more than Rs. 1.0 crore during last 3 years (duly certified by the Chattered Accountant from 2018-19 to 2021-22)	
13.	Copy of challan or other documents showing supply of IIT/ NIT/ Govt. Institutions	
14.	Customer Satisfactory Performance Report (CSPR) to be signed by supplied organization on or after 29.10.2022	
15.	Power of Attorney from MD/CMD/ Proprietor/ Owner in case of submission of bid other than MD/CMD/ Proprietor/Owner	
16.	Full details of ownership and other members/ partners	
17.	Undertaking for supply of items within stipulated period	
18.	Bank Mandate as per format at Annexure –IV of Tender Document	
19.	Non-Blacklist/ Non Criminal background certificate	

Note: All the documents to be signed and sealed