



Central Purchase unit
National Institute of Technology Srinagar-190006

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No. NITS/CPU/2016/2392-97/CRFC

Dated.:- 17.10 .2016

M/S.....

Sub: Invitation of Bids for the supply of XRD for Central Research Facility Centre (CRFC)

Dear sir,

- 1... You are here by invited to submit your most competitive Bid for the lab equipment with detailed Specification of these goods as given in Annexure-A. The offer to be submitted in two bid System.
2. **(Envelope- A (Technical Bid) It should contain the following; (As per tender opening format)**
 - (a) Authorization /dealership/manufacturer certificate.
 - (b) Valid tax clearance certificate for bidders from J&K State.
 - (c) Technical specification/ literature for the goods/equipment
 - (d) Bid security @ 3% in the form of CDR in favor of Chairman, Central Purchase Unit NIT Sgr. and tender document fee Rs. 300/- in the form of DD, in favor of Director, NIT Srinagar
 - (e) Certificate of sale after sale service support wherever necessary.
 - (f) Proof of legal status.
3. **(Envelope-B (Price Bid) It should contain the following**
 - (a) Bid prices in International currency, however, Bid Price in Indian rupees is preferred.
 - (b) Bid price should be firm for the bid validity period.
 - (c) **All duties, taxes and levies (CST/GST/VAT or other taxes) payable, must be quoted separately.**
 - (d) **As per SRO 129 of Government of Jammu & Kashmir, the institute is Exempted for state entry tax for research quipment only. The Institute will provide Entry tax exemption certificate to successful bidder with supply order.**
 - (e) The rate quoted should be FOR NIT Srinagar /CIF (Sheikh ul Alam) International Airport Srinagar.
 - (f) Bid price should be without over-writing, however minor over writing should be clearly signed by the bidder. In case of any discrepancy between price quoted in figures and words, the price quoted in words shall be accepted.
 - (g) **The rates should be covered with transparent tape.**
 - (h) Bid form in the format given in Annexure-B
 - (i) Technical specification Schedule as per Annexure-C
 - (j) Price bid schedule in the format enclosed in Annexure-D
4. **Validity of Bids**

Bids shall remain valid at least for 90 days from the date of opening.
5. **Evaluation of Bids.**
 - (a) The purchaser shall evaluate and compare the bids which are found substantially Responsive. i.e which are
 - (i) Properly signed
 - (ii) Conform to terms and conditions and technical specifications.
 - (iii) Accompanied with Bid security and all other documents.
 - (b) Bids shall be evaluated separately for each item.
6. **Award of contract**
 - (a) Contract shall be awarded to the bidder whose bid is commercially, technically responsive and offered at lowest evaluated price.
 - (b) Successful bidder shall be notified about the award of the contract where in terms and conditions of

supply shall be incorporated.

7. Payment.

100 % Payment through LC. 90% of LC will be released after receiving system in good condition at NIT Srinagar. 10 % of LC will be released after installation and commissioning, and training

8. Warranty:

- (a) All items shall carry comprehensive standard warranty of two years.

9. Performance security.

- (a) Successful Bidders shall submit performance security promptly after award of contract.
(b) Performance security shall be in the form of Bank Guarantee for the amount as mentioned in the award of contract letter/supply order. However it shall not exceed 10% of the contract value.

10. Penalty for delay.

A penalty of 0.15% (fifteen paisa per hundred) per day shall be imposed if the supply is made beyond the prescribed period mentioned in supply order.

11. Settlement of disputes.

Settlement of any dispute will be made under the jurisdiction of Srinagar court.

12. Liquidated Damages.

If the bidder after accepting the purchase order of goods/equipments or services, fails to deliver any or all of the goods/equipments or to perform the services within the specified period, a penalty of 15 paisa per hundred per day shall be charged. The maximum penalty can be limited to 10% of the cost. Once maximum is reached NIT Srinagar may proceed on its own to consider the termination of

- (b) Bids should be properly sealed.

13. Submission of Bids.

- (a) **The last date for submission of bids is 30.11.2016 upto 2.30 P.M.**

- (b) Bids should be properly sealed.

- (c) The two envelopes A & B should be kept in separate one envelope. Enquiry No., due date of opening and **Quotation for supply of XRD for CRFC.** must be mentioned on this envelope.

- (d) Bids should be addressed to Chairman Central Purchase unit NIT Srinagar.

- (e) Bids shall be accepted up to one hour before opening.

- (f) Bidders not from Srinagar shall dispatch bids sufficiently well in advance so as to reach the destination one day prior to bid opening.

14. Bid opening

- (a) The Technical Bid (Envelope- A) will be opened first on 30-11-2016 at 3.00 PM and price Bid (Envelope-B) of the bidder will be opened after qualifying the Technical Bid (Envelope-A).

- (b) Interested bidders can attend the bid opening.

15. Notwithstanding above the purchaser reserves the right to reject any or all the bids.

16. We look forward for your quotation.

17. Bid conference will be held on 7th November, at 11 AM at NIT Srinagar. However, Bidders may contact NIT Srinagar for further clarifications.

Thanking you,

Chairman
Central Purchase unit, NIT Srinagar

Note:

1. Before preparing your valuable bid kindly go through the document fully and take care of all the requirements.
2. Bidders from outside Srinagar may please send their Bids much in advance so that they are received in time.

Annexure-A

Specifications of Item
(XRD)
"X-Ray Diffractometer"

S. No.	Multi-purpose, high resolution X-Ray Diffractometer (XRD) which can be used for analyzing for powder, solid samples and thin film (polycrystalline and single crystal). Applications required are: phase identification, quantitative phase analysis, Residual stresses, texture analysis and crystallite size /strain analysis. Particle size 1 nm to 100 nm
1.	Safety: Full Radiation protection chamber with fail safe open/close mechanism. Leakage of radiation as per international standard.
2.	X-Ray Generator
	(a) Maximum Power: 3kW continuous rated maximum output power.
	(b) Voltage: Upto 60 kV or better with step of 1kV
	(c) Current: Upto 60 mA or better with step of 1 mA
	(d) Stability: $\pm 0.01\%$ for $\pm 10\%$ fluctuation in the input power
3.	X-Ray Tube
	(a) Glass /Ceramic Insulated Cu Target with Ni $k\beta$ filter
	(b) x-Ray Tube Shield: Electromagnetic shutter interlocked with radiation enclosure
	(c) Safety Features: Abnormal cooling water flow, pressure and temperature detection, Abnormal generator overload detection, leak current barker, shutter malfunction detection.
4.	Goniometer /Asymmetrical type
	(a) Automated high-resolution theta-theta geometry
	(b) Two theta range: minimum -3 to160 deg. Or better
	(c) Scanning mode: Θ_s/Θ_d coupled, or Θ_s, Θ_d independent
	(d) Setting reproducibility: ± 0.001 deg. Or better
	(e) Step size: 0.0001 deg. Or better
	(f) Radius: 300mm or better
	(g) Maximum Scanning Speed:
	θ_D/θ_S coupled 0.02deg./min~100deg./min (2 θ equivalent)
	θ_D independent 0.01deg./min~50deg./min
	θ_S independent 0.01deg./min~50deg./min
5.	Sample Holders
	10 Nos. each for powder XRD and thin film analysis
6.	Detector
	Solid state, high speed detector should be capable of doing 0D and 1D mode application also there should be x-Ray fluorescence reduction mode
7.	Beam Optics
	(a) Automatic aligned and switching over from Bragg-Brentano to parallel beam optics by multi layer, multi graded mirror
	(b) Fully automatic alignment including source height and angle, incident beam optics, slit height, sample surface and detector
	(c) Diffracted beam monochromator

8.	Fully computer controlled, programmable automatic variable slit as below: Divergence Slit: computer controlled, automatic variable divergence slit Receiving Slit: computer controlled automatic receiving slit Scattering Slit: computer controlled automatic scattering slit
9.	Sample Stage Standard stage for powder diffraction and sample stage with rotation facility
10.	Multipurpose attachment and software for texture and residual stress analysis
11.	SAXS attachment with software for analysis of particle size from 1 nm to 100 nm, particle size distribution, pore size and pore size distribution
12.	Attachment with software for high resolution thin film characterization like reciprocal space mapping, pole figure and XRR should be quoted. 2 bounce Ge Monochromator and analyzer should be quoted for incident beam and receiving beam
11.	Chiller Unit Compact indoor chiller unit
12.	Calibration Standard The vendor must provide data quality guarantee on the angular position and intensity ratio carried out on NIST sample
13.	Software (Full automatic control) Data acquisition and processing <ul style="list-style-type: none"> - Fully automatic profile fitting - Integrated Intensity calculation - Crystallite size calculation (Scherrer method) - Background subtraction and smoothing - Kaplha2 elimination and Peak search - Multiple peak separation and Multiple plotting - Task macros and ICDD access - File history and thumbnails - Creation of various type of reports - 2θ correction, - Pattern simulation from d-I list. - 3D multiple pattern display, ICSD Access -Crystal structure data (CIF) input and output - 3D Crystal structure display - RIR quantitative analysis - Hybrid search / match algorithms which combines the features of peak based and profile based phase identification techniques. It offers improves qualitative analysis performance which makes identification of crystalline phase with preferred orientation or a complex lattice deformation.
14.	Rietveld Software
15.	Computer and printer Latest compatible PC Laser color Printer
16.	ICDD PDF-II data file should be supplied.
17.	ICSD Database
18.	Compatible UPS True online UPS of compatible. Minimum 30 min back up
19.	Installation & Commissioning Installation, Commissioning and On-site training by representative of manufacturer at site
20.	Spares Support: support of spares must be assure at least for 08 Years from the discontinuation of model

(Tender opening format)

Name of the firm:- _____

Tender for supply of _____

NIT No. & Date:- _____

Technical specification/ literature attached:- Yes/No

Valid tax clearance certificate attached:- Yes/ No

Registration/ Authorization Dealership/
manufacturer certificate attached:- Yes/ No

Revenue stamp affixed. Yes/ No

Rates covered with transparent tape:- Yes/ No

Bid document fee deposited:- Yes/ No

Call Deposit Receipt enclosed:- Yes/ No.

Bid price in Indian Rupees:- Yes/ No

FOR Srinagar:- Yes/ No

Bid without correction/overwriting:- Yes/ No

Seal & Signature of the Supplier

Annexure-B
BID FORM

From M/S.....

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To,

Chairman,
Central Purchase unit, NIT Srinagar.

Ref: NIT No.: NITS/CPU/ /2015-16 Dated:.....goods/Equipment for
.....Department

Sir,

With reference to above invitation for bids we would like to say that we have gone through your bid document thoroughly and hence offer our competitive Technical/Price Bid in sealed envelope for the supply of various goods/equipment listed in your document. The following documents constitute our Bid.

- (a) Bid form
- (b) Price Bid schedule in the requisite format
- (c) Authorization dealer ship certificate from the manufacturer
- (d) Valid sales tax certificate
- (e) Technical literature for the goods/equipment
- (f) Names of organization where this equipment has been supplied. (Applicable for equipment whose unit price exceeds Rs.2.00 lacks
- (g) Bid security as mentioned in the schedule of requirements in the form of CDR drawn in favour of the Chairman Central Purchase Unit NIT Srinagar.
- (h) Telephone No.....

Kindly feel free for any enquiries and clarifications.

Yours Sincerely

(.....)

From M/S.....

Place.....

Date.....

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Annexure-C

Technical specification.

Name of Equipment /Goods : e.g., Tribometer

Make /Model/ Country of origin: e.g., Marus Tribometers and Instruments/ TR20-2013/

S. No.	Technical Specifications (as per. NIT/CPU/13/ aaaa-aaaa Advertised)	Technical Specifications of the Make /Model	Complies	Higher/Better (with detail quantification)	
				Higher/Better	Quantification
1	e.g., Load 20 N	Load 20 N	Yes	----	20 N
2	e.g., Temperature 200 °C	Temperature 300 °C		Higher	300 °C
3					

(How to fill Technical Specifications in proper format & avoid ambiguity, an example of Tribometer is only given for illustration above).

Annexure-D

Price Schedule

S. No	Name of equipment/goods	Ex Factory/Ex show room cost	Custom Duty & Excise Duty	CST/VAT	Packing & forwarding transportation	Incidental services	Total unit price	Quantity	Total Price