CENTRAL UNIVERSITY OF JAMMU CENTRAL UNIVERSITY OF JAMMU CENTRAL UNIVERSITY OF JAMMU

जम्मू केंद्रीय विश्वविद्यालय
CENTRAL UNIVERSITY OF JAMMU

रायां–सूचानी (बागला) जिला सांबा–181143, जम्मू (जम्मू एवं कश्मीर)
Rahya-Suchani (Bagla), Distt Samba, Jammu-181143 (J&K)

Notice Inviting Tender : Open Tenders

Sealed Tenders in two bid system are invited from OEMs/Reputed firms /authorised dealers having valid registration, to supply and install/print the following items for Central University of Jammu. The detailed tender form(s) can be obtained from the University through demand draft of Rs. 1000/- drawn in favour of ***Finance Officer, Central University of Jammu*** payable at Jammu or log on to University website www.cujammu.ac.in

1.	**Scientific/Lab Equipments for Dept of Nano Science & Materials**
2.	**Scientific/Lab Equipments for Dept of Chemistry & Chemical Sciences**
3.	**Printing of Mark Certificates & Degrees**

Last date for receipt of Tender(s): 11-04-2017 by 3.00 pm
Date of opening of Technical Bid(s): 11-04-2017 at 3.30 pm

No. CUJ//Proc/F.No65/2017/ 01
Dated: 16-03-2017

Sd/-Registrar

CENTRAL UNIVERSITY OF JAMMU CENTRAL UNIVERSITY OF JAMMU CENTRAL UNIVERSITY OF JAMMU

जम्मू केंद्रीय विश्वविद्यालय
Central University of Jammu

Rahya-Suchani **(Bagla)**, District **Samba**–181143, **Jammu** (J&K)
Ph: 01923–249 657 & Website: www.cujammu.ac.in

No: CUJ/Proc/F.No 65/2017/01 Date:16-03-2017

Cost of tender documents: Rs. 1,000/-

Issued to: **M/s.**

TENDER DOCUMENTS CUM RATE CONTRACT AND REGISTRATION OF FIRMS TO SUPPLY AND INSTALLATION OF EQUIPMENTS / INSTRUMENTS FOR THE DEPARTMENT OF NANO SCIENCES & MATERIALS

Last date and time to submit the bids	:	**11.04.2017 by 03.00 p.m.**
Date and time of opening of bids at **University Campus,** Rahya-Suchani **(Bagla)**, District **Samba**-181143, **Jammu** (J&K), Tel: 01923 – 249657 ext 206	:	**11.04.2017 by 03.30 p.m.**

Chapter-I: Instructions to the bidders

1. **Preface:** The Central University of Jammu is presently functioning from two campuses, Administrative Block at Rahya-Suchani (Bagla), District Samba, Jammu and Temporary Academic Block & Hostels at Sainik Colony, Jammu. The University intends to purchase equipments / instruments for the Department of Nano Science & Materials from OEM / authorized dealers for the University, likely to be installed at both the campuses.

2. **Submission of tender:** The sealed tenders are invited for supply and installation of equipments for the Department of Nano Sciences & Materials under **two bid system** viz. **Technical bid:** consisting of all technical details along with commercial terms and conditions *[filled in Annexure-I duly signed and stamp, EMD, relevant technical documents & D.D. of Rs.1,000/- (if downloaded tender form is used)]* and **Financial bid** [*indicating item wise price for the items mentioned in the technical bid (Annexure-II)],* in two separate sealed envelopes and should be super scribed as technical and financial bids accordingly. Both the sealed envelopes should be kept in a third envelope on which it should be super scribed **'Tender for equipments of Dept. of Nano Science & Materials'**.

3. **Quotation of equipments / instruments:** The Bidder may quote for all equipments/ instruments or part of it as mentioned at Annexure-I and should agree to accept the part supply order as per the criteria of lowest quoted bid for each item. Unit prices are to be quoted both in figures and in words. In case of a discrepancy, that quoted in words / least will be taken as valid.

4. **Opening of bids:** Initially the technical bids will be opened and scrutinized. The firm, who meets the basic requirement as per documents furnished, may be invited for full fledged display / demonstration / to present the samples before opening of financial bid. The University will not bear any cost for presentation of samples. The committee of the University will inspect the samples, may visit the show room / items supplied at other organizations to ascertain the quality. The University may shortlist three to four best quality firms. The financial bid will be opened for those firms who qualify technically and whose sample has been agreed to the satisfaction level of the University. The decision of the University will be final in this regard.

5. **Selection of firm:** The firm will be selected amongst the shortlisted firm only and the equipments / instruments will be considered on lowest quoted basis item wise. Further, if the committee found that the quality of lowest quoted firm is not satisfactory, the committee may recommend and consider next lowest quoted firm. The decision of the committee will be final in this regard. The short listed tender along with the documents will be submitted to the competent authority and upon approval; the successful bidders will be issued purchase order.

6. **Alteration in the bid:** The bidder will not be permitted to alter or modify their bids after receipt by the University; however, the firm can withdraw the bid before the closing last date and time of the tender.

7. **Availability and submission of tender form:** The tender documents can be obtained in person from Procurement Branch, Rahya-Suchani (Bagla), District Samba–181143, Jammu (J&K) (Tel: 01923–249657) on payment of **Rs. 1,000/-** through DD favouring "*Finance Officer, Central University of Jammu*" payable at Jammu during working hours (10:00 to 17:00 hrs). The tender form can be downloaded from University website (www.cujammu.ac.in) and must be submitted along with the cost of tender form of Rs. 1,000/- and EMD. The downloaded tender form without cost of tender form will not be accepted. Last date to submit the tender is

11.04.2017 by **3:00 p.m.** The filled in tender form can be dropped in tender box at the above address or can be sent through post. The bids will be opened on the same day in presence of the bidders at **3:30 p.m.** or any other date convenient to the University authorities, which shall be intimated separately. Hence, the firm should write their phone numbers and email ID on outside the sealed envelope to pass the information, if required.

8. **Registration:** The firm should be registered with the competent authority to manufacture and supply of equipments / instruments, sales tax and service tax and also furnish self attested copies of the following documents:

(a) Certificate of registration with competent authorities to manufacture and supply of equipments / instruments

(b) Valid registration with sale tax and service tax authority

(c) TIN / PAN

(d) Valid quality certificate from competent authority (i.e. ISO, ISI etc).

(e) Service tax clearance certificate for the period ending 31.03.2016

(f) Experience certificate & User List

(g) Annual turnover with CA audited balance sheet for last three financial years (2013-14, 2014-15 & 2015-16)

9. All the columns in financial bid are to be filled in words and figures. The variation in words and figures, if any, the lowest shall be taken into account.

10. In case the successful bidder declines the offer of contract, for whatsoever reason(s), his EMD will be forfeited.

11. The University reserves the right to reject all or any tender in whole, or in part, without assigning any reason thereof.

12. **Cost:** The rates quoted should be inclusive of all taxes, levies, freight, insurance, transportation, installation including accessories etc at the destination. Rates and make of the equipments are to be quoted in the financial bid as per tender document (Annexure-II), else it may not be considered. All the above stated elements of taxes and others are required to be shown separately and distinctly. The University will provide ***Custom duty*** and ***Central Excise duty exemption certificate*** in terms of Government notification No 51/96-Customs dated 23-07-1996 and 10/97-Central Excise dated 1-03-1997 respectively. Further, the University will also provide Certificate under SRO 129 of 2012, if applicable, for exemption of ***State Entry tax*** on scientific instruments.

13. **Office:** The firm should have its office / authorized dealer / workshop / representative within Municipal limit of Jammu / Samba to provide service after sale and to furnish the addresses of service centre with telephone number along with technical bid. The firm not having authorized office / service centre at Jammu will be required to arrange the service / repair after sale and furnish the certificate to this effect.

14. **Supply:** The firm selected will be required to supply the equipments within the six weeks from the date of issue of purchase order.

15. **Validity of quotation:** All entries in the tender form should be legible and filled clearly. Any overwriting or cutting which is unavoidable shall be signed by the authorized signatory. The bid shall be valid for 90 (ninety) days from the date of opening.

16. Taxes deduction at source as per provision will be made by the University.

Chapter–II: Terms and conditions

17. In case the firm fails to supply the desired specification of equipments as per terms and conditions, the University reserves the right to place the order to the next higher bidder or outside agency and the difference of price will be recovered from the defaulter agency who has been awarded the initial order and this will be binding on the bidder.

18. The University does not pledge himself to accept the lowest quoted or any tender and reserve the right to accept the whole or any part of the tender or portion of the quantity offered and bidders shall supply the same / execute the order at the rate quoted by them.

19. **Rejection of tender:** The conditional tender, incomplete in any form, unfilled / unsigned bids, without required documents, EMD and cost of tender form (if downloaded form is used) shall not be accepted and on such bids any query / intimation will not be entertained. The tender documents are not transferable.

20. The committee may consider any bid, if feels that inadvertently certain required documents are not enclosed by the firm and the firm promises that the required documents obtained before the closing date of the tender will be furnished within stipulated time. The decision of the committee will be final in this regard.

21. **Specification:** The desired specifications and allied technical details are placed at Annexure-I, if required the same may be amended / up graded at the time of placing purchase order without increase in the quoted price. These are basic specifications; the firm may quote the same or higher specification as per enclosed annexure format only, without changing the specification and serial number. The committee may amend the specification and their decision will be final in this regard.

22. **Bid security / EMD:** The filled in tender form without requisite security bid / EMD and cost of tender form Rs. 1,000/- (*if the downloaded tender form is used*) will not be considered. ***Both the DD (cost of Tender Form)/FDR (for EMDs) are to be drawn separately*** favouring "Finance Officer, Central University of Jammu" payable at Jammu. The EMD of bidders will be returned without interest after finalization of the tender. EMD of Successful Bidder(s) will be returned after receipt of Performance Security. 10% of the cost of Purchase order will be Performance Security and will be either submitted by the L-1 Firm in the form of Bank Guarantee or deducted by the University from the payment of Bill, in case bank guarantee is not supplied. The security bid / EMD amount is as follows:

SNo	Equipment / Instruments	Quantity	EMD amount of each item
01	**Spin Coater**	01	2,500
02	**Box Furnace**	01	2,500
03	**Refrigerated Centrifuge**	01	10,000
04	**Electronic Micro balance**	01	7,500
05	**Hot Air Oven**	01	5,000
06	**Magnetic stirrer with hot plate**	01	2,500

07	**pH/Ion/Conductivity measurement**	01	2,500
08	**Ultrasonic Bath**	01	2,500
09	**Current/Voltage Source Meter**	01	5,000
10	**Fluorescence Spectrophotometer**	01	1,00,000
11	**Fourier Transmission Infra Red Spectrometer**	01	90,000
12	**Table top AFM (Nano AFM)**	01	1,75,000
13	**Electrochemical Workstation**	01	90,000
14	**Thermal evaporation system with electron gun**	01	75,000
15	**Deionized water system**	01	25,000
16	**UV Vis NIR Spectrophotometer**	01	1,50,000
17	**Refrigerator cum Freezer**	01	7,500

Note: EMD for each equipment mentioned above is to be paid collectively (in case a bidder desires to bid for all items) or separately (in case a bidder desires to bid for few or any of the items).

23. **Company profile:** The bidders must submit their company profile and must mention their make/model of the equipments which are offered to be supplied. A list of organizations / agencies to which furniture has been supplied may be furnished along with copies of supply order, with the technical bid.

24. **Experience:** Bidder should be original manufacturer / authorized dealer and should have minimum Five years of experience in supply of similar equipments to Govt. / semi Govt. / PSU / reputed organisation. A certified copy of the same should be attached with the technical bid.

25. **Warranty:** All the equipments should be with onsite comprehensive warranty for minimum period of one years (or as per OEM warranty period, whichever is later) after satisfactory installation and agreed by the University. The firm should repair / replace the faulty items free of cost during the warranty period.

26. **Payment terms:** No advance payment will be considered. The payment will be release in Indian rupees in the following orders:

(i) **90% payment of purchase order:** After 100% supply & installation of equipments, subject to certification by the University.

(ii) **10% payment of purchase order / security deposit:** After availing the warranty period plus one month or on receipt of Bank Guarantee of any nationalized bank of equal amount for a period of warranty plus one month.

(iii) The purchase order may be placed in phase manner and the payment may be considered phase wise.

27. **Quantity:** The quantity mentioned in the tender document can increase or decrease without changing the quoted price at the discretion of the University and the decision of the University shall be final in all respect. This is a tender cum rate contract and registration of suppliers initially for a period of one year and the item offered in the tender can be re-ordered at the same rate, terms & conditions within a period of twelve (12) months extendable by next year mutually agreed by both the parties.

28. **Management services:** The firm would be required to provide the management / consultation services etc. in respect of the equipments to establish any labs / hall, free of cost as and when required. The firm would provide consultancy to CUJ on Products & technologies that

would provide more efficiency in working. The firm should also share best practices adopted in the industry free of cost.

29. **Rights of the University:** The University reserves all the rights to reject or accept any tender without assigning any reason or cancel or withdraw the tender notice in part of full. The University reserves the right to accept or reject any bid, and to annual the bidding process and reject all bids at any time, without thereby incurring any liability to the affected bidder or bidders of the ground for such action.

30. Late submission of tenders shall not be accepted. If the tenders are sent by post / courier, it should be ensured that cover should be intact at the time of reaching destination without any damage or loss. The University is not responsible for any delay on account of postal / courier services.

31. **Acceptance of terms and conditions:** The bidder shall sign and stamp each page of this tender document and all other enclosures appended to it as a token of having read and understood the terms and conditions contained therein and submit the same along with the bid. The bidder would fill up the information in the Annexure enclosed at the end of this document at Chapter–III in clear and legible terms. Annexure shall also have to be signed and stamped by the bidder or its authorized signatory.

32. **Termination of contract:** If supply of equipments / instruments is not found satisfactory, the purchase order will be cancelled by the University at any stage. The University reserves the right to decrease or increase the quantity at the time of placing the work order; the firm will undertake the same at the quoted rates.

33. The firm should attend all the calls in respects of the fault, efforts should be made to rectify the major fault within 48 hours. The firm is to provide one single point of contact for effective communication to book the fault for users to seek timely support.

34. The University may procure certain equipments offered under DGS&D rate contract, the firm may quote for both DGS&D and Non DGS&D rates, if available. The University will procure the equipments on lowest quoted (L-1) basis from the shortlisted firms on item wise and the firm can quote for any items or all the items, the University decision will be final in this regard. If the University procures certain items under DGS&D rate contract, the firm will be required to set / configure the supplied equipments technically on other equipments.

35. **Penalty clause:** The supply and installation of equipments / instruments has to be completed within stipulated time period, in case of delay and the University is not satisfied with the stated reason, the University reserves the right to impose the penalty equivalent to 0.5% per week of the value of undelivered goods or unperformed services limited to a maximum of 10% value of the purchase order / left over cost. Once the maximum is reached, the University may consider termination of the contract / order without any notice and further serious action may be initiated.

36. **Settlement of dispute:** In case of any dispute, University Headquarter (Samba) will be the jurisdiction and the Registrar, Central University of Jammu, shall decide the issue and his decision will be final and shall be the binding on both the parties.

37. In case of any disagreement or dispute between the first party (i.e. Central University of Jammu) and the second party (i.e. agency) arising out of or due to the terms and conditions of

contact agreement, the Central University of Jammu shall have the discretion for settlement of such disputes by appointing a sole arbitrator and the award so made by the arbitrator shall be final and binding on both the parties. Jurisdiction shall be Jammu courts only, for any dispute.

Assistant Registrar
(Procurement)
Central University of Jammu,

Place: Samba (J&K)
Date: 16th March, 2017

Encl: i) Annexure-I : Technical bid (10 pages)
ii) Annexure-II : Financial bid (9 pages)

Annexure–I

TECHNICAL BID

(To be filled by the firm and to be submitted to CUJ in Technical Bid)

Sl. No.	Particulars of the Company/Firm	**Details** (if yes, furnish certificate No.)	**Appendix No.** (attached in bid)
1	**Name of the OEM/Firm / Agency:**	M/s.	
2	**Status of the Firm / Agency: (Proprietorship / Partnership / Joint Stock Co. etc)**		
3	**Name of the Proprietor / Partner / Director**		
4	**Address:**	--	--
	a) Head Office		
	b) Office at Jammu:		
5	**Phone, Mobile No., E-mail & website**		
6	**Documentary proofs of:**	--	--
	a) Valid Registration with competent authority, certificate No.	Yes / No	
	b) Proof of incorporation	Yes / No	
	c) TIN / PAN No.	Yes / No	
	d) Income Tax Clearance Certificate	Yes / No	
	e) Valid Registration no.	Yes / No	
	f) Registration with Sale Tax and Service tax no	Yes / No	
	g) Number of Years Experience		
	h) Experience certificate, where the agency has supplied, installed, tested and commissioned similar Scientific/Lab equipments to other govt /reputed organizations.	Yes / No	
7	**Earnest Money deposit details:**	--	--
	a) Amount	Rs.	
	b) Name of the drawer and issuing bank		
	c) No. and date of bank draft/FDR/etc		
9	**Details of demand draft/ FDR etc &**	Rs.	
10	**Any other Information**		

TECHNICAL BID

Chapter–III: Technical bid (Items with specification): To be filled by the firm and to submit to CUJ along with the technical bid.

Sl. No	Specification	Qty. Req. (Approx)	Make & model	Agreed by firm (Yes/ No), If yes, Sl. No. of technical broacher/details enclosed)	EMD (DD No. & date)
1	**Spin Coater** Speed: 100-6000 rpm Plate: Stainless steel (Thickness>20mm) Sample Holder: Detachable Sample Holder Size: 2, 4 and 6 inch dia Sample Holder hole seize: 2mm dia Microprocessor, Speed controller: Digital Display Time controller: Digital Display Frame: Epoxy coated MS and Aluminum Gas Purging Operated : AC 100-300V, 50 Hz	01			2,500
2.	**Box Furnace** Temperature range: RT °C - 3000 °C Accuracy at least: ±1-5 °C Accuracy over time at most: ±1-2 °C Ramp rate: 5-20 °C Interior Box dimensions (W x H x D): 20 cmx 20 cmx 30 cm Low power consumption Full programmable and Adjustable (particular temperature can be maintained for particular time and then subsequent temperature for another time) Digital display Maximum temperature gradient throughout the box: ±5 °C Good thermal stability	01			2,500
3.	**Refrigerated Centrifuge** Sample Holder: Detachable Capacity: 6-8 x 15-50 mL (fixed angle) Additional Sample Holder: For 1.5-2.0 ml Speed range: 300-15000 (or more) rpm, Adjustable in increments: 100 rpm Temperature range: -40C to RT Time Setting: 1-60 minutes ±1 minute; Display: Digital Noise Level:<40dBA Stability during operation: High	01			10,000
4.	**Electronic Micro balance** Measurable limit: upto 1 microgram i.e 0.001mg Accuracy at least: 0.5 microgram Display: Digital Programme for: Self calibration Good isolation from air	01			7,500
5.	**Hot Air Oven** Temperature range: RT - 300 °C Accuracy at least:±1 oC	01			5,000

	Accuracy over time at least: ±1 °C Controller Type: Microprocessor Display: Digital Interior chamber dimensions (W x H x D): 5 ft x 4ft x 4ft Number of shelves supplied : 3 / 10 Shelf: Detachable Shelf load (kg /lb): > 25 / 55 Low power consumption				
6.	**Magnetic stirrer with hot plate** Temperature controller: Microprocessor Accuracy: ±1 °C Display: Digital Hot Plate: Ceramic Set safety temperature limit displayed digitally Hot Top indicator Hot surface warning to prevent burns Digital error code display Max. Stirring quantity: 3-4 lit. Speed range: 50 - 1500 rpm Temperature range: RT - 350 °C Low power consumption	01			25,00
7.	**pH/Ion/Conductivity measurement** Measurable pH range: 1-14 Accuracy pH : 0.001 Conductivity Measurable range: 0-2000 mS/cm Large Digital Display Method memory for recurring applications Integrated quality assurance including GLP-compliant electrode test Connections for dosing devices for automatic standard additions, stirrer control, and more	01			2,500
8.	**Ultrasonic Bath** Capacity: 4 lit. Bath: Stainless steel Controller: Microprocessor, Vibration controller Display: Digital Time controller Display: Digital Display Mesh Size: 5mm, 10mm, 20mm Operated: AC 100-300V, 50 Hz	01			2,500
9.	**Current/Voltage Source Meter** System should be capable of sourcing/ measuring voltage/current and have 2 independent channels in the same unit Voltage capability: 200 Volts, Source resolution of 5uV and measure resolution of 100nv or better Current capability: 1.5A DC and 10 A pulses with source resolution of 3pA and measure resolution of 110fA or better Per channel capability: 30W or more simultaneously on both the channels Provide 10A@5V in pulse mode and pulse width of 1ms or more Pulsing ability: 10A current simultaneously on both channels Communication: GPIB, Ethernet, RS 232 communication Internal memory: 16 MB or better for stand-alone operation Software: Functions like voltage/current sweep/ steps, should	01			5,000

	able to store the data and graphs and more System should have capability to upgrade to more than 7 SMU units in one system for future expansion.				
10.	**Fluorescence Spectrophotometer** Modes: Multiple data collection modes including fluorescence, phosphorescence, chemi-luminescence and bio-luminescence. Wavelength range: 1.5 nm to 18 nm or better Detector Spectral Range: 190 to 900 (both excitation and emission) Scan speed: 20000 nm /min or better. Detector: PMT both excitation and emission. Kinetic Mode: Kinetic mode and 3 D plotting with option to collect continuously for minimum 7 Days. Source: Xenon flash lamp, flash at 80 Hz to allow fast data collection. Holders for sample: 500 µl. Signal-to-noise ratio >750:1 for the Raman Band of Water Data collection time: Microsecond time intervals for phosphorescence applications. Cuvettes: 500µl, 1ml, 3ml OPTIONAL Accessories: solid sample holder with necessary accessories for powder, film Additional holders for crystal, Gel sample. Local items: Suitable PC, Printer, Suitable Online UPS with at least 30 min backup.	01			1,00,000
11.	**Fourier Transmission Infra Red Spectrometer** Wavelength Range: 5100–100 cm^{-1} or better Wavenumber Accuracy: 0.09cm^{-1} or better Wavenumber reproducibility: 0.05 cm^{-1} or better Spectral Resolution: 2 cm-1 or better Peak to peak noise: 30,000 : 1 for 1 minute, at 4 cm^{-1} Source: Mid IR source, user friendly with 3 years free replacement warranty Reference Laser: Solid state laser with 5 year warranty Interferometer: Permanently aligned with minimum five years warranty. Detector: Must be DTGS/DLaTGS Detector Optics: Completely sealed and desiccated optics with life indicator Software: Suitable software for Spectral collection, Quantitative analysis, baseline correction, smoothening, derivitazation, spectral deconvulation, library search etc. Accessories: 1. Diamond ATR accessory should be quoted for analysis of corrosive and reactive solids, liquids, resins, powders, gels etc 2. Genuine & OEM Spectral Libraries of 8,000 compounds including common compounds, pharma, polymer, minerals ,Paints, drugs etc. 3. Suitable branded computer, printer & UPS. Installation and training: Installation and training to users should be given at our laboratory by a trained Application engineer. Optional Items: DRA& Specular reflectance accessories.	01			90000
12.	**Table top AFM (Nano AFM)** Minimum XY-range (resolution): 70µm (1.0nm)	01			175000

	Minimum Z-range (resolution): 14µm (0.2nm) Static/Dynamic RMS Z-noise: 0.6nm (max.0.8nm)/0.5 nm (max.0.8nm) Minimum sample size/height : 12mm/3.5mm Top view camera (at Least): 3×3 mm FOV, 4×digital zoom, 2µm Optical resolution, 1600×1200 pixels, in-axis LED illumination Side view observation (at Least): 5×5 mm FOV, variable LED Illumination (optional camera: 2×2 mm FOV, 1200×1024 pixels) Approach: 4 mm linear motor, continuous or step-by-step approach Imaging modes: Static Force, Dynamic Force, Phase Contrast, MFM, EFM Advanced imaging modes: Spreading Resistance, Force Modulation Spectroscopy modes: Force–Distance, Amplitude Distance, Voltage–Distance Advanced spectroscopy modes: Current–Voltage, Stop By end value, Fwd & Bwd pause Lithography modes: Static Force, Dynamic Force, Oxidation Advanced lithography modes: Draw and load CAD vector graphics, Bitmap images Operating system/PC requirements: Windows 7 or above (32/64-bit), Size/Weight/Power: small/ low/low Software's: For measurements & interfacing				
13	**Electrochemical Workstation** Multichannel System for up to 11 potentiostat galvanostat in single chassis or more. It should be possible to control all the channels through one PC or upto two PCs and field upgradeable with accessories like RRDE , EQCM etc. Each channel should have following specifications. Price for each should be quoted separately. No of Channels: 2 No. Electrochemical Workstation Specifications: Compliance voltage: ± 18 V or better at ± 390 mA or more Maximum Output Current: ± 390 mA or better at ± 18 V or more Output Voltage Range: ± 10 V or more Current Ranges: smallest current range: ± 10 nA to current range 100 mA in multiple ranges or more Potentiostat Rise/fall Time: 300 ns or lower Interface: USB interface for connection with PC Input bias current: < 1 pA Input Impedance of electrometer: >90GΩ // 10 Pf	01			90000

	Hardware for EIS measurements: Hardware and software for EIS measurements in potentiostatic and galvanostatic control, over frequency range of 10 μHz to 1 MHz. It should be possible to perform EIS measurements over entire frequency range from 10 μHz to 1 MHz upto 390 mA currents. Frequency range in 10 μHz - 1 MHz combination with potentiostat galvanostat. Frequency resolution 0.003%, Input range ± 10 V. Data presentation: Nyquist, Bode, Admittance, Dielectric, Mott-Schottky, Data analysis: Fit and Simulation, Find circle, Element subtraction. **Electrochemistry Cell:** It should consist of the following: 10 mL to 80 ml Glass cell 2 no, 20 mL to 80 ml Glass cell 2 no, Disc working electrodes with active area diameter 3 mm of GC, Pt & Au each 2no, Pt wire Counter electrode 2 no, Ag/AgCl reference electrode double junction type for use in Aqueous and Non-Aqueous media 2 no, Suitable Lid for the cell and purge tube with valve 2 no, screen printed adapter, carbon, gold, and graphene 25 each Low volume (1-5ml) cell **Electrochemical Software:** Software should have facility to record additional signal viz EQCM, bi-potentiostat etc. Import/export ASCII. Ready-to-use Vis & Generic interface for .Net applications should be included. It should have facility to display up to 4, plots simultaneously. The software should support following basic electrochemical measurements: Cyclic Voltammetry, Sampled DC Voltammetry. Taffel Plots, Differential Pulse Voltammetry, Square Wave Voltammetry. Electrochemical methods like Chrono-Amperometry, Chrono-Coulometry & Chrono-Potentiometry. Computer & Printer: Compatible branded PC with i5 configuration, Printer, 2 KVA Online UPS with one hour back up should be quoted				
14.	**Thermal evaporation system with electron gun** **Vacuum Chamber:** Chamber Type: Box type Chamber Size: >380mm (W) x 380mm (H) x 420mm (D)) Chamber Material: Stainless still Chamber Feature:Extremely non magnetic quality Chamber Opening: Front Substrate Holder: Rotating View Ports: For Substrate Assembly, Additional Port: For additional accessories. **Power Supply:** LT Evaporation and Power Supply: LT Evaporation Feed through and Evaporation Source Holder: 2 Holder type: Filaments / Baskets/Boats LT Power Supply: 200 Amp at 10V/ 100 Amp at 20V, Microprocessor controller HT Power Supply: 5000 volts DC Open circuit/3500 volts at 50 mA L.T/H.T Controller: Microprocessor in the input/output circuit **Vacuum System** **Turbo Molecular Pump:**	01			75000

	Rotation Speed: 25,000/min. Pumping Speed for N2: >3000 l/s Run up time: <8min. Gas throughput at full rotational speed for N2: 83.3 hPa l/s / 5,000 sccm Noise Level: <45dB (A) Interfaces: Remote Weight: Low Cooling Method: Air Power consumption at ultimate pressure: < 160 W (590 W) Ultimate pressure according to PNEUROP: < 6*10-9 hPa **Rotary Vacuum Pump:** Rotation Speed: >1,500/min. Pumping Speed: >100 m3/h Pump Type: Two Stage Noise Level: <60dB (A) Operating Fluid Filling: 2 L Weight: Low Cooling Method: Air Rated Power: <1KW Ultimate Pressure with Gas ballast: 1.5 hPa **Vacuum Measuring Gauges:** Stabilized Digital Pirani gauge model: Two Pirani gauge heads for dependently monitor the roughing (chamber) and backing pressure. **SAFETY DEVICES** Cabinet doors: Safety panel switches to cut off RF/DC Power supply Vacuum switch: For RF/DC Power supply Over load protection: For Rotary pump, Motor through preset current starter.				
15	**Deionized water system** **STAGE-1** Pretreatment system: Three stage pretreatment system with 10, 5 & 1 micron spun filters with 10" long housing for removal of suspended particles and to take care of Fouling Index (FI) and Chlorine in feed water. **ANALYTICAL GRADE WATER SYSTEM:** The system should respond favourably to feed water having FI approx 10, total Free Chlorine <0.5 ppm and Feed Water Conductivity upto 2000 µs/cm; maximum silica 30 ppm. **STAGE-2** Second stage system should have purification process; primary purification by a pre-treatment, secondary purification through RO membrane, final purification step should involve a self-regenerating Electro-deionization module to avoid cartridge replacement. System should be microprocessor controlled with continuous water purity monitoring. System should have photo-oxidation technology (with UV lamp) ensuring that bacteria counts are low. System should have unique integral recirculation ensures optimum water quality at point of dispense. **Product Water Quality** : Resistivity : 5 to >15 mΩ at 25 deg. C (MegaOhm C). TOC :<30 ppb	01			25000

	Bacteria :<1 cfu/ml Production Rate: 10 liters / Hr at 25 deg. C. pH : Effectively neutral System should have 60 to 75 liters HDPE reservoir with level sensors and switches from Original Manufacturer. *The water purification system should display the water level in %age and graphical manner to know the water level in the reservoir.* **STAGE -3** **Third Stage system should have facility to remove Ionic and organic impurities by the polishing purification pack. Product water resistivity and temperature are measured before dispense and indicate when the purification pack needs to be replaced.** **System should have auto volume dispense for drop by drop facility like a pipette (50ml to 7500ml).** **System should have on-line monitoring for Resistivity or Conductivity and TOC.** **System should have height adjustable dispenses point which glides easily up and down to accommodate any size of container.** **System should have one time sanitization for 1 year.** The water within the unit should be recirculated through the purification technologies to maintain purity. The system should have the safety feature includes –Low feed Shut-Off, Audio-Visual Alarms, PIN coded system settings, Dispense shut-off during disinfection Auto-restart. The system should meet ASTM Type I, ISO 3696, NCCLS Type I and USP & EP specification. The system should be European CE and UL certified as well as ISO 9001 for quality products. The system should have recirculation of the purified water to maintain consistent peak quality. Cartridge identification technology provides full traceability and history of each cartridge for full validation and other GLP requirements. The system to be supplied with validation documents like IQ, OQ and PQ for system validation **Output Details**: ♦ **Inorganic : 18.2M Ω -cm @ 25°C** ♦ **TOC : <5 ppb** ♦ **Bacteria : < 0.1 CFU/ml** ♦ **Bacteria endotoxin: :<0.001EU/ml** ♦ **DNase : <4pg/µL** ♦ **RNase : <0.01 ng/ml** ♦ **Flow Rate : 2 Ltr./min.** ♦ **Particles : Ultrafilteration** **Note:** Vendor should quote 3 years consumables with AMC charges for 3 years also and 3 years warranty on R.O. with 2 KVA online UPS with 1 hour backup.				
16.	**UV Vis NIR SPECTROPHOTOMETER** **Wavelength Range**: 175–3200 nm or better **Monochromator**: Double beam, Suitable double monochromator with required gratings to provide desired resolution. UV-VIS-NIR Spectrophotometer must be capable of	01			150000

	analyzing in following modes and all the desired accessories needed for the same to be included in the offer. **Spectral Bandwidth/ Band pass(nm):** 0.05 to 5.00 nm or better (UV-Vis) with 0.01nm steps 0.20 to 20 nm or better (NIR) **Photometric Range**: 8 Abs or better **Photometric Accuracy**: 0.002 Abs or better **Resolution**: ≤ 0.05 nm (UV-Vis), and ≤ 0.2 nm (NIR) or better **Wavelength Accuracy**: ± 0.08 nm or better (UV-Vis range) ± 0.4 nm or better (NIR range) **Stray Light**: ≤ 0.00007% or better (at 220 and 370 nm) **Source**: Pre-aligned Tungsten Halogen source (visible) Deuterium source (UV) **Detectors**: Full range (UV-Vis-NIR) compatible (Please specify the detectors). **Baseline Flatness**: Better than or equal to ± 0.0008A from 200-3000 nm,0.2 Sec SAT, no smoothing applied (2nm slit/SBW for UV/VIS) **Noise Level UV/VIS (Abs/RMS):** Better than or equal to 0.00005, 0A and 500 nm (2nm slit/SBW) **Noise Level NIR**: Better than or equal to 0.00004, 0A and 1500 nm (2nm slit/SBW) **Power Requirement**: As per Indian Standard **Software**: Compatible user friendly software For operating the basic equipment, upgradable free on net in future. **Sample Compartment**: Suitable for utilizing all necessary accessories such as solid, liquid, thin films, paper, cloths etc. **Solid sample Holder**:02 Nos Solid sample transmission holder for thin Film/solid samples etc **Quartz Cuvettes**: Pair of Quartz Cells of 3 ml capacity and 10 mm path-length for UV VIS & NIR Range **Desktop PC and Printer**: Suitable Branded factor supplied PC OR i7 **OPTIONAL: Online UPS**: Suitable capacity UPS with at least 30 minutes back up & laser Printer **Additional /optional accessories to be quoted itemized price.**: • 100 mm DRA accessories with powder holder, film holder • polarizer and depolarizer				
17.	**Refrigerator cum Freezer** • Finish: interior and exterior: hips & pre painted steel • Insulation: HCFC and CFC free • Capacity (L): 250- 300 Lit • Door: double solid door each for refrigerator & freezer • Storing configuration : refrigerator: 3 wire + 2 solid baskets (½ width), 4 solid door baskets (2 full width, 2 ½ width) / freezer: 2 solid drawers, 1 solid flap • Defrost: auto defrost in refrigerator • Door gasket type: Magnetic • Control: single electronic controller on refrigerator compartment • Set point: +5C • Settable range: 4 to 6 deg C (Refrigerator)	01			7500

	• Alarm: high temp alarm (11 deg C), low temp alarm (1 deg C) – Refrigerator • Settable range freezer: -19 to -21 • Refrigerant : R600A • Compressor hp : 1/6 • Access port (16mm) : yes • Pre-wired cord and plug type : European/Asian • Full load amperes : 0.8 • Voltage : 220-230v 50HZ • CE mark : yes				
	Total amount of EMD	--	--	--	

1. I have carefully read and understood all the terms and conditions of the tender and here by convey my acceptance of the same.
2. The information / documents furnished along with the above application are true and authentic to the best of my knowledge and belief. I / We, am / are well aware of the fact that furnishing of any false information / fabricated document would lead to rejection of my tender at any stage besides liabilities towards prosecution under appropriate law.
3. **Declaration:** I hereby certify that the information furnished above is true and correct to the best of my / our knowledge. I understand that in case any deviation is found in the above statement at any stage, I / we will be blacklisted and will not have any dealing with the University in future.
4. The firm is not a black listed firm, if found at later date, my tender can be rejected, even after awarded.

Signature with date & Seal of the agency : .....
Name of the applicant : .....
Designation : .....

Annexure–II

FINANCIAL BID

Chapter–IV: Financial bid: To be utilized by the bidders for quoting their prices of equipment/ instruments items wise along with specification and to submit to Central University Jammu along in separate sealed envelope.

Sl. No	Specification	Qty. Req. (Approx)	Make & model	Basic Cost* (In rupees)	Total Cost* (In rupees)
1	**Spin Coater** Speed: 100-6000 rpm Plate: Stainless steel (Thickness>20mm) Sample Holder: Detachable Sample Holder Size: 2, 4 and 6 inch dia Sample Holder hole seize: 2mm dia Microprocessor, Speed controller: Digital Display Time controller: Digital Display Frame: Epoxy coated MS and Aluminum Gas Purging Operated : AC 100-300V, 50 Hz	01			
2.	**Box Furnace** Temperature range: RT °C - 3000 °C Accuracy at least: ±1-5 °C Accuracy over time at most: ±1-2 °C Ramp rate: 5-20 °C Interior Box dimensions (W x H x D): 20 cmx 20 cmx 30 cm Low power consumption Full programmable and Adjustable (particular temperature can be maintained for particular time and then subsequent temperature for another time) Digital display Maximum temperature gradient throughout the box: ±5 °C Good thermal stability	01			
3.	**Refrigerated Centrifuge** Sample Holder: Detachable Capacity: 6-8 x 15-50 mL (fixed angle) Additional Sample Holder: For 1.5-2.0 ml Speed range: 300-15000 (or more) rpm, Adjustable in increments: 100 rpm Temperature range: -40C to RT Time Setting: 1-60 minutes ±1 minute; Display: Digital Noise Level:<40dBA Stability during operation: High	01			
4.	**Electronic Micro balance** Measurable limit: upto 1 microgram i.e 0.001mg Accuracy at least: 0.5 microgram Display: Digital Programme for: Self calibration Good isolation from air	01			
5.	**Hot Air Oven** Temperature range: RT - 300 °C	01			

	Accuracy at least:±1 oC Accuracy over time at least: ±1 °C Controller Type: Microprocessor Display: Digital Interior chamber dimensions (W x H x D): 5 ft x 4ft x 4ft Number of shelves supplied : 3 / 10 Shelf: Detachable Shelf load (kg /lb): > 25 / 55 Low power consumption				
6.	**Magnetic stirrer with hot plate** Temperature controller: Microprocessor Accuracy: ±1 °C Display: Digital Hot Plate: Ceramic Set safety temperature limit displayed digitally Hot Top indicator Hot surface warning to prevent burns Digital error code display Max. Stirring quantity: 3-4 lit. Speed range: 50 - 1500 rpm Temperature range: RT - 350 °C Low power consumption	01			
7.	**pH/Ion/Conductivity measurement** Measurable pH range: 1-14 Accuracy pH : 0.001 Conductivity Measurable range: 0-2000 mS/cm Large Digital Display Method memory for recurring applications Integrated quality assurance including GLP-compliant electrode test Connections for dosing devices for automatic standard additions, stirrer control, and more	01			
8.	**Ultrasonic Bath** Capacity: 4 lit. Bath: Stainless steel Controller: Microprocessor, Vibration controller Display: Digital Time controller Display: Digital Display Mesh Size: 5mm, 10mm, 20mm Operated: AC 100-300V, 50 Hz	01			
9.	**Current/Voltage Source Meter** System should be capable of sourcing/ measuring voltage/current and have 2 independent channels in the same unit Voltage capability: 200 Volts, Source resolution of 5uV and measure resolution of 100nv or better Current capability: 1.5A DC and 10 A pulses with source resolution of 3pA and measure resolution of 110fA or better Per channel capability: 30W or more simultaneously on both the channels Provide 10A@5V in pulse mode and pulse width of 1ms or more Pulsing ability: 10A current simultaneously on both channels Communication: GPIB, Ethernet, RS 232 communication Internal memory: 16 MB or better for stand-alone operation	01			

	Software: Functions like voltage/current sweep/ steps, should able to store the data and graphs and more System should have capability to upgrade to more than 7 SMU units in one system for future expansion.				
10.	**Fluorescence Spectrophotometer** Modes: Multiple data collection modes including fluorescence, phosphorescence, chemi-luminescence and bio-luminescence. Wavelength range: 1.5 nm to 18 nm or better Detector Spectral Range: 190 to 900 (both excitation and emission) Scan speed: 20000 nm /min or better. Detector: PMT both excitation and emission. Kinetic Mode: Kinetic mode and 3 D plotting with option to collect continuously for minimum 7 Days. Source: Xenon flash lamp, flash at 80 Hz to allow fast data collection. Holders for sample: 500 µl. Signal-to-noise ratio >750:1 for the Raman Band of Water Data collection time: Microsecond time intervals for phosphorescence applications. Cuvettes: 500µl, 1ml, 3ml OPTIONAL Accessories: solid sample holder with necessary accessories for powder, film Additional holders for crystal, Gel sample. Local items: Suitable PC, Printer, Suitable Online UPS with at least 30 min backup.	01			
11.	**Fourier Transmission Infra Red Spectrometer** Wavelength Range: 5100–100 cm^{-1} or better Wavenumber Accuracy: 0.09cm^{-1} or better Wavenumber reproducibility: 0.05 cm-1 or better Spectral Resolution: 2 cm-1 or better Peak to peak noise: 30,000 : 1 for 1 minute, at 4 cm-1 Source: Mid IR source, user friendly with 3 years free replacement warranty Reference Laser: Solid state laser with 5 year warranty Interferometer: Permanently aligned with minimum five years warranty. Detector: Must be DTGS/DLaTGS Detector Optics: Completely sealed and desiccated optics with life indicator Software: Suitable software for Spectral collection, Quantitative analysis, baseline correction, smoothening, derivitazation, spectral deconvulation, library search etc. Accessories: 4. Diamond ATR accessory should be quoted for analysis of corrosive and reactive solids, liquids, resins, powders, gels etc 5. Genuine & OEM Spectral Libraries of 8,000 compounds including common compounds, pharma, polymer, minerals ,Paints, drugs etc. 6. Suitable branded computer, printer & UPS. Installation and training: Installation and training to users should be given at our laboratory by a trained Application engineer. Optional Items: DRA& Specular reflectance accessories.	01			
12.	**Table top AFM (Nano AFM)** Minimum XY-range (resolution): 70µm (1.0nm)	01			

	Minimum Z-range (resolution): 14µm (0.2nm) Static/Dynamic RMS Z-noise: 0.6nm (max.0.8nm)/0.5 nm (max.0.8nm) Minimum sample size/height : 12mm/3.5mm Top view camera (at Least): 3×3 mm FOV, 4×digital zoom, 2µm Optical resolution, 1600×1200 pixels, in-axis LED illumination Side view observation (at Least): 5×5 mm FOV, variable LED Illumination (optional camera: 2×2 mm FOV, 1200×1024 pixels) Approach: 4 mm linear motor, continuous or step-by-step approach Imaging modes: Static Force, Dynamic Force, Phase Contrast, MFM, EFM Advanced imaging modes: Spreading Resistance, Force Modulation Spectroscopy modes: Force–Distance, Amplitude Distance, Voltage–Distance Advanced spectroscopy modes: Current–Voltage, Stop By end value, Fwd & Bwd pause Lithography modes: Static Force, Dynamic Force, Oxidation Advanced lithography modes: Draw and load CAD vector graphics, Bitmap images Operating system/PC requirements: Windows 7 or above (32/64-bit), Size/Weight/Power: small/ low/low Software's: For measurements & interfacing				
13	**Electrochemical Workstation** Multichannel System for up to 11 potentiostat galvanostat in single chassis or more. It should be possible to control all the channels through one PC or upto two PCs and field upgradeable with accessories like RRDE , EQCM etc. Each channel should have following specifications. Price for each should be quoted separately. No of Channels: 2 No. Electrochemical Workstation Specifications: Compliance voltage: ± 18 V or better at ± 390 mA or more Maximum Output Current: ± 390 mA or better at ± 18 V or more Output Voltage Range: ± 10 V or more Current Ranges: smallest current range: ± 10 nA to current range 100 mA in multiple ranges or more Potentiostat Rise/fall Time: 300 ns or lower Interface: USB interface for connection with PC Input bias current: < 1 pA Input Impedance of electrometer: >90GΩ // 10 Pf	01			

	Hardware for EIS measurements: Hardware and software for EIS measurements in potentiostatic and galvanostatic control, over frequency range of 10 μHz to 1 MHz. It should be possible to perform EIS measurements over entire frequency range from 10 μHz to 1 MHz upto 390 mA currents. Frequency range in 10 μHz - 1 MHz combination with potentiostat galvanostat. Frequency resolution 0.003%, Input range ± 10 V. Data presentation: Nyquist, Bode, Admittance, Dielectric, Mott-Schottky, Data analysis: Fit and Simulation, Find circle, Element subtraction. Electrochemistry Cell: It should consist of the following: 10 mL to 80 ml Glass cell 2 no, 20 mL to 80 ml Glass cell 2 no, Disc working electrodes with active area diameter 3 mm of GC, Pt & Au each 2no, Pt wire Counter electrode 2 no, Ag/AgCl reference electrode double junction type for use in Aqueous and Non-Aqueous media 2 no, Suitable Lid for the cell and purge tube with valve 2 no, screen printed adapter, carbon, gold, and graphene 25 each Low volume (1-5ml) cell Electrochemical Software: Software should have facility to record additional signal viz EQCM, bi-potentiostat etc. Import/export ASCII. Ready-to-use Vis & Generic interface for .Net applications should be included. It should have facility to display up to 4 plots simultaneously. The software should support following basic electrochemical measurements: Cyclic Voltammetry, Sampled DC Voltammetry. Taffel Plots, Differential Pulse Voltammetry, Square Wave Voltammetry. Electrochemical methods like Chrono-Amperometry, Chrono-Coulometry & Chrono-Potentiometry. Computer & Printer: Compatible branded PC with i5 configuration, Printer, 2 KVA Online UPS with one hour back up should be quoted	01				
14.	**Thermal evaporation system with electron gun** **Vacuum Chamber:** Chamber Type: Box type Chamber Size: >380mm (W) x 380mm (H) x 420mm (D)) Chamber Material: Stainless still Chamber Feature:Extremely non magnetic quality Chamber Opening: Front Substrate Holder: Rotating View Ports: For Substrate Assembly, Additional Port: For additional accessories.. **Power Supply:** LT Evaporation and Power Supply: LT Evaporation Feed through and Evaporation Source Holder: 2 Holder type: Filaments / Baskets/Boats LT Power Supply: 200 Amp at 10V/ 100 Amp at 20V, Microprocessor controller HT Power Supply: 5000 volts DC Open circuit/3500 volts at 50 mA L.T/H.T Controller: Microprocessor in the input/output circuit **Vacuum System** **Turbo Molecular Pump:**	01				

	Rotation Speed: 25,000/min. Pumping Speed for N2: >3000 l/s Run up time: <8min. Gas throughput at full rotational speed for N2: 83.3 hPa l/s / 5,000 sccm Noise Level: <45dB (A) Interfaces: Remote Weight: Low Cooling Method: Air Power consumption at ultimate pressure: < 160 W (590 W) Ultimate pressure according to PNEUROP: < 6*10-9 hPa **Rotary Vacuum Pump:** Rotation Speed: >1,500/min. Pumping Speed: >100 m3/h Pump Type: Two Stage Noise Level: <60dB (A) Operating Fluid Filling: 2 L Weight: Low Cooling Method: Air Rated Power: <1KW Ultimate Pressure with Gas ballast: 1.5 hPa **Vacuum Measuring Gauges:** Stabilized Digital Pirani gauge model: Two Pirani gauge heads for dependently monitor the roughing (chamber) and backing pressure. **SAFETY DEVICES** Cabinet doors: Safety panel switches to cut off RF/DC Power supply Vacuum switch: For RF/DC Power supply Over load protection: For Rotary pump, Motor through preset current starter.				
15	**Deionized water system** **STAGE-1** Pretreatment system: Three stage pretreatment system with 10, 5 & 1 micron spun filters with 10" long housing for removal of suspended particles and to take care of Fouling Index (FI) and Chlorine in feed water. **ANALYTICAL GRADE WATER SYSTEM:** The system should respond favourably to feed water having FI approx 10, total Free Chlorine <0.5 ppm and Feed Water Conductivity upto 2000 µs/cm; maximum silica 30 ppm. **STAGE-2** Second stage system should have purification process; primary purification by a pre-treatment, secondary purification through RO membrane, final purification step should involve a self-regenerating Electro-deionization module to avoid cartridge replacement. System should be microprocessor controlled with continuous water purity monitoring. System should have photo-oxidation technology (with UV lamp) ensuring that bacteria counts are low. System should have unique integral recirculation ensures optimum water quality at point of dispense. **Product Water Quality** : Resistivity : 5 to >15 mΩ at 25 deg. C (MegaOhm C). TOC :<30 ppb	01			

	Bacteria :<1 cfu/ml Production Rate: 10 liters / Hr at 25 deg. C. pH : Effectively neutral System should have 60 to 75 liters HDPE reservoir with level sensors and switches from Original Manufacturer. *The water purification system should display the water level in %age and graphical manner to know the water level in the reservoir.* **STAGE -3** **Third Stage system should have facility to remove Ionic and organic impurities by the polishing purification pack. Product water resistivity and temperature are measured before dispense and indicate when the purification pack needs to be replaced.** **System should have auto volume dispense for drop by drop facility like a pipette (50ml to 7500ml).** **System should have on-line monitoring for Resistivity or Conductivity and TOC.** **System should have height adjustable dispenses point which glides easily up and down to accommodate any size of container.** **System should have one time sanitization for 1 year.** The water within the unit should be recirculated through the purification technologies to maintain purity. The system should have the safety feature includes –Low feed Shut-Off, Audio-Visual Alarms, PIN coded system settings, Dispense shut-off during disinfection Auto-restart. The system should meet ASTM Type I, ISO 3696, NCCLS Type I and USP & EP specification. The system should be European CE and UL certified as well as ISO 9001 for quality products. The system should have recirculation of the purified water to maintain consistent peak quality. Cartridge identification technology provides full traceability and history of each cartridge for full validation and other GLP requirements. The system to be supplied with validation documents like IQ, OQ and PQ for system validation **Output Details**: ♦ **Inorganic : 18.2M Ω -cm @ 25°C** ♦ **TOC : <5 ppb** ♦ **Bacteria : < 0.1 CFU/ml** ♦ **Bacteria endotoxin: :<0.001EU/ml** ♦ **DNase : <4pg/µL** ♦ **RNase : <0.01 ng/ml** ♦ **Flow Rate : 2 Ltr./min.** ♦ **Particles : Ultrafilteration** Note: Vendor should quote 3 years consumables with AMC charges for 3 years also and 3 years warranty on R.O. with 2 KVA online UPS with 1 hour backup.				
16.	**UV Vis NIR SPECTROPHOTOMETER** **Wavelength Range**: 175–3200 nm or better **Monochromator**: Double beam, Suitable double monochromator with required gratings to provide desired resolution. UV-VIS-NIR Spectrophotometer must be capable of	01			

	analyzing in following modes and all the desired accessories needed for the same to be included in the offer. **Spectral Bandwidth/ Band pass(nm):** 0.05 to 5.00 nm or better (UV-Vis) with 0.01nm steps 0.20 to 20 nm or better (NIR) **Photometric Range**: 8 Abs or better **Photometric Accuracy**: 0.002 Abs or better **Resolution**: ≤ 0.05 nm (UV-Vis), and ≤ 0.2 nm (NIR) or better **Wavelength Accuracy**: ± 0.08 nm or better (UV-Vis range) ± 0.4 nm or better (NIR range) **Stray Light**: ≤ 0.00007% or better (at 220 and 370 nm) **Source**: Pre-aligned Tungsten Halogen source (visible) Deuterium source (UV) **Detectors**: Full range (UV-Vis-NIR) compatible (Please specify the detectors). **Baseline Flatness**: Better than or equal to ± 0.0008A from 200-3000 nm,0.2 Sec SAT, no smoothing applied (2nm slit/SBW for UV/VIS) **Noise Level UV/VIS (Abs/RMS):** Better than or equal to 0.00005, 0A and 500 nm (2nm slit/SBW) **Noise Level NIR**: Better than or equal to 0.00004, 0A and 1500 nm (2nm slit/SBW) **Power Requirement**: As per Indian Standard **Software**: Compatible user friendly software For operating the basic equipment, upgradable free on net in future. **Sample Compartment**: Suitable for utilizing all necessary accessories such as solid, liquid, thin films, paper, cloths etc. **Solid sample Holder**:02 Nos Solid sample transmission holder for thin Film/solid samples etc **Quartz Cuvettes**: Pair of Quartz Cells of 3 ml capacity and 10 mm path-length for UV VIS & NIR Range **Desktop PC and Printer**: Suitable Branded factor supplied PC OR i7 **OPTIONAL: Online UPS**: Suitable capacity UPS with at least 30 minutes back up & laser Printer **Warranty**: two-year standard warranty from the date of installation. **Additional /optional accessories to be quoted itemized price.**: • 100 mm DRA accessories with powder holder, film holder • polarizer and depolarizer				
17.	**Refrigerator cum Freezer** • Finish: interior and exterior: hips & pre painted steel • Insulation: HCFC and CFC free • Capacity (L): 250- 300 Lit • Door: double solid door each for refrigerator & freezer • Storing configuration : refrigerator: 3 wire + 2 solid baskets (½ width), 4 solid door baskets (2 full width, 2 ½ width) / freezer: 2 solid drawers, 1 solid flap • Defrost: auto defrost in refrigerator • Door gasket type: Magnetic • Control: single electronic controller on refrigerator compartment • Set point: +5C	01			

	• Settable range: 4 to 6 deg C (Refrigerator) • Alarm: high temp alarm (11 deg C), low temp alarm (1 deg C) – Refrigerator • Settable range freezer: -19 to -21 • Refrigerant : R600A • Compressor hp : 1/6 • Access port (16mm) : yes • Pre-wired cord and plug type : European/Asian • Full load amperes : 0.8 • Voltage : 220-230v 50HZ • CE mark : yes					
18	**Add: Tax(es)**	**VAT @.....**				
		Service Tax@.....				
		Any other Tax (please specify)@....				
	Total amount		--	--	--	

* *The University will provide* ***Custom duty*** *and* ***Central Excise duty exemption certificate*** *in terms of Government notification No 51/96-Customs dated 23-07-1996 and 10/97-Central Excise dated 1-03-1997 respectively. Further, the University will also provide Certificate under SRO 129 of 2012, if applicable, for exemption of* ***State Entry tax*** *on scientific instruments.*

1. I have carefully read and understood all the terms and conditions of the tender and hereby convey my acceptance of the same.

2. The information / documents furnished along with the above application are true and authentic to the best of my knowledge and belief. I / We, am / are well aware of the fact that furnishing of any false information / fabricated document would lead to rejection of my tender at any stage besides liabilities towards prosecution under appropriate law.

3. **Declaration:** I hereby certify that the information furnished above is true and correct to the best of my / our knowledge. I understand that in case any deviation is found in the above statement at any stage, I / we will be blacklisted and will not have any dealing with the University in future.

4. The firm is not a black listed firm, if found at later date, my tender can be rejected, even after awarded.

Signature with date & Seal of the agency : .....

Name of the applicant : .....

Designation : .....