

CENTRAL UNIVERSITY OF GUJARAT

Sector - 30, Gandhinagar 382 030

F.No.10-9/2009-Admn

04.03.2010

ADVERTISEMENT NO.11/2009-10

TENDER NOTICE

Sealed tenders are invited from original equipment manufacturers or their authorized Indian agents in two parts, **Part "A" (Technical Bid)** and **Part "B" Commercial/Financial Bid)** for the following equipments:

(1) Electronic Analytical Balance (2) UV-Vis Spectrophotometer with Software (3) FTIR (4) TGA/DSC/DTA/MTA equipment: Advanced version (5) Atomic absorption spectrophotometer (6) CHNS/O Analyzer advanced version (7) HPLC advanced version (8) GC-MS: Gas Chromatograph (9) Advanced version LC/MS (10) Rectangular hot plate (11) Heating Plate (12) Melting point equipment (13) Oven of standard dimension: digital model (14) Rotary Flask Shaker (15) Standard magnetic stirrer for routine use in lab (16) Electric Variac (17) Standard Electrophoresis Apparatus (18) Advanced density and sound velocitometer (19) Water purifier plant for ultra-purification (20) High performance 500 MHz FT-NMR Spectrometer (21) Refractive index equipment (22) Beckmann thermometer (23) Cryoscopy unit with spiral stirrer (24) Double distillation plant (25) Oven (26) Thermostat/water bathe (27) Vacuum desiccators (28) Bottle with cellulose acetate filter syringe filters with cellulose acetate filters (29) Electric Variac 0-220 volt (30) Standard vacuum drier with temperature, pressure and moisture control (31) Electric shaker (32) Standard Sonicator (33) Advanced Version Conductivity Meter (34) Advanced conductivity - TDS meter (35) Filter pump assembly (36) Advanced flame photometer version (37) Centrifuge machine of medium capacity (38) Advanced potentiometer (39) Advance Gel permeation chromatography machine (40) Advanced version Colorimeter (41) Glass wares, chemicals, plastic wares and other misc. Items (on rate contract) (42) Membranes, filtering papers, spraying equipments and chemicals (on rate contract).

Details of this tender-notice advertisement can be downloaded from the University website www.cug.ac.in The tender document and the detailed technical specifications can be obtained upto **25.03.2010 (up to 04:00 PM)** from the Officer on Special Duty(Administration), Central University of Gujarat, Sector-30, Gandhinagar- 382 030 on all working days on payment of Rs.500/- (Rupees five hundred only) for each tender document, payable in the form of Demand Draft drawn on any nationalized bank, in favour of the "Central University of Gujarat" payable at Gandhinagar/Ahmedabad. **Completed tenders will be received up to 26.03.2010 (up to 12:00 noon) only.**

OSD(Admn)

CENTRAL UNIVERSITY OF GUJARAT

Sector - 30, Gandhinagar - 382 030, Tel: 079 29289056,23260093 Tel fax: 079 23225742

Email: ankunjunny@cug.ac.in Website : www.cug.ac.in

TENDER NOTICE No.01/2010

Dated: 04.03.2010

Sealed tenders are invited from original equipment manufacturers or their authorized Indian agents in two parts, **Part "A" (Technical Bid)** and **Part "B" Commercial/Financial Bid** for the following equipments:

Sr. No. of Tender	Name of the Equipment	Quantity	EMD Amount (in Rs.)
1.	Electronic Analytical Balance	1	4400
2.	UV-Vis Spectrophotometer with Software	1	12,500
3.	FTIR	1	28,000
4.	TGA/DSC/DTA/MTA equipment: Advance version	1	38,000
5.	Atomic absorption spectrophotometer	1	1,50,000
6.	CHNS/O Analyzer advanced version	1	50000
7.	HPLC advanced version	1	36,000
8.	GC-MS: Gas Chromatograph	1	30,000
9.	Advanced version LC/MS	1	50,000
10.	Rectangular hot plate	1	Nil
11.	Heating Plate	2	Nil
12.	Melting point equipment	1	Nil
13.	Oven of standard dimension: digital model	2	1250
14.	Rotary Flask Shaker	1	1,500
15.	Standard magnetic stirrer for routine use in lab	1	Nil
16.	Electric Variac	5	Nil
17.	Standard Electrophoresis Apparatus	1	Nil
18.	Advanced density and sound velocity meter	1	25,000
19.	Water purifier plant for ultra-purification	1	65000
20.	High performance 500 MHz FT-NMR Spectrometer	1	1,25,000
21.	Refractive index equipment	2	Nil
22.	Beckmann thermometer	5	500
23.	Cryoscopy unit with spiral stirrer	1	Nil
24.	Double distillation plant	1	750
25.	Oven	2	750
26.	Thermostat/water bathe	2	2500
27.	Vacuum desiccators	2	Nil
28.	Bottle with cellulose acetate filter syringe filters with cellulose acetate filters	5 5	Nil
29.	Electric Variac 0-220 volt	10	Nil
30.	Standard vacuum drier with temperature, pressure and moisture control	2	Nil

31.	Electric Shaker	2	1,250
32.	Standard Sonicator	1	1,250
33.	Advanced Version Conductivity Meter	1	7,500
34.	Advanced Conductivity-TDS meter	1	5,000
35.	Filter pump assembly	2	Nil
36.	Advanced flame photometer version	1	7,500
37.	Centrifuge machine of medium capacity	1	3,750
38.	Advanced potentiometer	1	5,000
39.	Advance Gel permeation chromatography machine	1	12,500
40.	Advance version Colorimeter	1	3,750
41.	Category : Glass wares, chemicals, plastic wares and other misc. items	On rate contract	Nil
42.	Membranes, filtering papers, spraying equipments and chemicals	On rate contract	Nil

TIME SCHEDULE:

1. Issue of tender documents up to **25.03.2010 (up to 4:00 PM)**.
2. Receipt of duly completed tender documents: **26.03.2010 (up to 12:00 noon)**.
3. Opening of Technical Bid: 26.03.2010 at 04:00 PM.
4. Opening of Commercial/Financial Bid: 27.03.2010 at 12:00 noon.

Those interested may contact Officer on Special Duty(Admn.), Central University of Gujarat, Sector-30, Gandhinagar - 382 030, Gujarat with a written request between **10:00 AM to 01:00 PM and 02:00 PM to 4.00 p.m. on working days for tender documents as per the time schedule given above.** Tenders shall be submitted in 2 different parts (sealed envelopes): Part 'A' (Technical Bid) and Part 'B' (Commercial/Financial Bid). The two separately sealed and duly superscribed envelopes shall then be sealed together in another envelope which shall be duly superscribed with tender number, name of equipment and due date as mentioned above **separately for each equipment.** Thereafter, the same should be addressed to the OSD (Admn.), Central University of Gujarat, Sector-30 Gandhinagar - 382030, Gujarat, so as to reach by the due date, i.e. **26.03.2010 by 12:00 noon** positively. **ENVELOPES WHICH DO NOT CARRY THE ITEM DESCRIPTION, TENDER NUMBER, REFERENCE NUMBER AND THE DUE DATE SHALL BE SUMMARILY REJECTED.** Please note that the tender is subject to verification with the original tender documents, and if any discrepancy is found, the tender would be rejected. Tenders will be opened in the presence of the attending tenderers. The University reserves the right to reject any or all tenders, without assigning any reason thereof.

TENDER DOCUMENT

Note:

1. If submitting tender for more than one item, please do so in separate envelope.
2. Please fill all the details in original tender document and submit with technical and commercial bids.

FROM:

**Officer on Special Duty (Administration)
Central University of Gujarat,
Gandhinagar- 382 030, Gujarat, India**

To:

Sir/Madam,

Sealed tenders are invited for the supply of stores detailed in the schedule attached to this tender form. If you are interested to quote for supply in accordance with the requirements stated in the attached schedule, please submit your quotation to this University on the prescribed tender form enclosed in the sealed cover superscribed with the name of the equipment, tender number and if Technical or Commercial bid, clearly superscribed on the top cover of the envelope.

If you are in a position to quote for stores in accordance with the requirements stated in the attached schedule to tender, this should be filled-in, signed and returned to this office.

The successful bidder will have to enter into the contract (with standard terms and conditions of supply) on the receipt of supply order.

The tender shall be submitted in two parts viz, (a) Technical Bid and (b) Commercial/Financial Bid, and of users along with the compliance statement:

- a) Technical bid shall consist of technical details, and should be submitted in duplicate. Deviations (if any) from tender specifications, clause wise and commercial terms and conditions should be clearly mentioned. The tender form shall be submitted with this bid duly signed by the bidder. Compliance statement shall be part of technical bid.
- b) Commercial bid shall consist of price details item wise (CIF, upto CUG, Gandhinagar, Ahmedabad Airport). This also required to be submitted in duplicate, both Technical bid and Commercial bid.
- c) The technical bids and commercial bids should be submitted in separate sealed covers, marked "Technical Bid for" or "Commercial bid for". The two envelopes shall again be put in an envelope, duly sealed and superscribed "Technical/Commercial bids for (name of the equipment)".
- d) At the time and date indicated in the advertisement for opening of tender only technical bids shall be opened and read out in public.

- e) The time and date of opening of commercial/financial bids of tenderers who have been successful in the stage of commercial bid shall be as indicated in this tender document.
- f) Tenders not complying with the above conditions are liable to be rejected at the sole discretion of the University without any further reference.
- g) The tender should be submitted in duplicate. This tender is not transferable.
- h) Tender documents can be obtained from the Office of the University against submission of tender document fee of Rs. 500/- in the form of Banker's Cheque/DD in favour of the "**Central University of Gujarat**". The tender document can also be downloaded from our website www.cug.ac.in and fee for the tender document i.e. Rs.500/- should accompany the completed tender document vide Banker's Cheque / Demand Draft in favour of "**Central University of Gujarat**".
- i) The offers shall be entertained only from the manufacturers or their sole selling agents. In case the latter intends to submit their offer, a copy of their agreement with the principal company appointing them as sole selling agents, to be enclosed with the offer.
- j) **General:** The University reserves the right to choose, accept or reject any or all requests/offers, in full or part and also reserve the right at any stage to reduce or increase the quantity and split the order. The University will not be responsible for any postal losses or delays in receipt of documents. The tender documents are non-transferable.
- k) **EMD:** Rs. in the Table as given (Refundable) in the form (only) of Banker's Cheque/DD in favour of the "**Central University of Gujarat**".

The completed applications must be submitted at the Office of the University, **Central University of Gujarat, Sector-30, Gandhinagar- 382 030 Gujarat, India.**

The tender can be submitted for all or selected items as in the list in two parts viz,

- (a) **Technical Bid**
- (b) **The compliance statement of technical specifications and terms and conditions of the tender.**
- (c) **Commercial/Financial Bid**

The bidder must supply a List of users of their items in or near Gandhinagar/Ahmedabad, Gujarat, India (if any).

Technical bid

The Technical bid shall consist of technical details, and should be submitted in duplicate. Deviations (if any) from tender specifications, clause wise and commercial terms and conditions should be clearly mentioned. The tender form shall be submitted with this bid duly signed by the bidder.

Compliance statement of technical specifications shall be part of the technical bid.

Commercial Financial bid

Commercial/Financial bid shall consist of price details item wise (CIF upto CUG/ Ahmedabad Airport) including all terms and conditions related to payment of cost, warranty (24 months) and after sales service and AMC etc.

The technical bids and commercial/financial bids should be submitted individually in separate sealed covers, which shall again be put in an envelope duly sealed with the name of the equipment, tender reference number and whether Technical or Commercial/Financial bid, clearly superscribed on the top of cover as

“ Tender for (Equipment) ”, serial no. _____ Due on date_____ Technical Bid”

or

“Tender for (Equipment)”, serial no. _____ Due on date _____ Commercial/Financial Bid”,
as the case may be.

Tenders not complying with the above conditions are liable to be rejected without making any further reference.

Note: If submitting tenders for more than one item, please do so in separate envelopes for each equipment/ Instrument for Technical and Commercial/Financial Bids.

GENERAL TERMS AND CONDITIONS

General Instructions:

Last date for receipt of tender (Technical & Commercial/Financial Bids separately) by post/by hand/by putting it in the tender box located in Room no. 103 (Office) of the University is 26.03.2010 up to 12:00 noon as indicated in this Tender Notice.

Tender shall be opened on the specified date in this tender notice.

Tender shall remain open for acceptance for ninety days from the date of opening of tenders.

Tenders received without Earnest Money and not in proper form shall be liable to be summarily rejected.

Security Deposit at 10% of the cost of items in the form of Cash/Bank Guarantee in favour of **“Central University of Gujarat”** for the warranty period is liable to be deposited with the University.

Tenders are to be submitted in two bids separately:

- i) Technical Bid with Compliance Sheet strictly hand filled with details
- ii) Commercial/Financial Bid

- A) Last date for receipt of tender 26.03.2010 (upto 12:00 noon).
- B) Date of opening of the tender (Technical Bid): 26.03.2010 at 04:00 PM. Date of opening of Commercial/Financial Bid: 27.03.2010 at 12:00 noon.
- C) Earnest money (EMD) Rs. as per the Table in the form of Demand Draft in favour of the “Central University of Gujarat”, payable at Gandhinagar/Ahmedabad shall be submitted along with technical bid.

IMPORTANT: The University reserves the right to cancel any or all the tenders without assigning any reason. Earnest money deposited by the successful tender shall be converted into security deposit and is adjustable against the actual amount to be withheld as security deposit, which is 10% of the cost value but not later than the expiry of warranty period.

- 1) The supply shall be carried out strictly in accordance with the specifications or as directed by the University.
- 2) The time allowed for completion of work shall be 10 weeks, which shall be reckoned from the tenth day from the date of issue of letter of intent.
- 3) The offer shall remain open for at least 90 days.
- 4) Water and electricity required for the job shall be made available *free of cost* by the University.
- 5) The contractor may inspect the site before submitting their tenders after obtaining prior permission from the competent authority of the University.

- 6) Income tax and other statutory dues shall be deducted from the contractor's bill as per Govt. of India rules.
- 7) In case the contractor withdraws his offer within the validity of the tender, the earnest money will be forfeited. Similarly, if the contractor fails to commence the work after issue of award letter, the amount of earnest money will also be forfeited.
- 8) The contractor shall ensure compliance of all statutory laws and bylaws of the Central Govt./ State Govt./Municipal authorities related to the employment of their staff and all such obligation under Wage Act, Workmen Compensation Act, ES-II Act, Provident Fund and Miscellaneous Provisions Act, Bonus Act, and Contract Labour Act, 1970 etc. and the University will not be responsible for such purposes in any way.
- 9) Before commencement of work the contractor shall correlate all relevant structural, architectural and service drawings and satisfy himself that the information available from there is complete and unambiguous. The contractor shall be responsible for any error/difficulty in execution/damage incurred owing to any discrepancy in the drawings which has been overlooked by him and has not been brought to the notice of the competent authority of the University before execution.
- 10) No escalation in any form either of materials or labour shall be payable by the University.
- 11) All materials brought at site shall be as per contract specification and schedule of quantities and shall be got approved by the competent authority of the University before being used.
- 12) Time allowed for completion of work shall be strictly followed, otherwise the contractor shall be liable to pay compensation at the rate of 0.5 % of the contract value of the job undone per week of delay on the part of the contractor subject to a maximum of 5% of the total contract value.
- 13) No claim for any compensation during the extended period shall be entertained and the University decision in this regard shall be final.
- 14) Any claim, dispute or difference arising out of or in connection with this agreement and which cannot be settled by mutual consultations, shall be referred to an arbitrator to be appointed by mutual consultations between both parties. The award of the arbitrator shall be final and binding between the parties to this agreement. The arbitrator proceeding shall be governed by The Arbitration and Conciliation Act 1996 and shall be conducted in the University.

All or any Claim(s), dispute(s) or difference(s) arising out of or in with connection with this agreement shall be subject to the jurisdiction of the Courts at Gujarat only.

OSD(Admn)
Central University of Gujarat,
Gandhinagr-382 030
Gujarat, India

Vendor's Address.....

Telephone No.....

Code(if any).....

From

.....
.....
.....

To

OSD(Admn)
Central University of Gujarat,
Gandhinagar – 382 030
Gujarat, India

Ref: Tender Enquiry No.

Dated.....

Dear Sir,

1. I/We hereby offer to supply the stores detailed in the Schedule to Tender hereto or such portion thereof as you may specify in the Acceptance of Tender at the price given in this tender notice and agree to hold this offer open till..... The communication of acceptance shall conclude the contract and we shall be bound by it.
2. I/We have understood the general & special conditions of contract included in this tender notice and thoroughly examined the specifications, drawings, and/or patterns quoted in the Schedule hereto and am/are fully aware of the nature of the equipment required and my/our offer is to supply the equipment strictly in accordance with the requirements.
3. The following pages have been added to form part of this tender:
 - (A) Technical Bid and Commercial/Financial Bid
 - (B) The technical Brochures/literature of the model/s quoted
 - (C) The list of Users with addresses and contact nos.
4. The prescribed questionnaires (Annexures IV and V), duly completed, is (are) also enclosed.
5. I/We hereby declare that the equipments/articles sold to the buyer under this contract shall be of the best quality and workmanship and shall be strictly in accordance with the specifications thereof and I/We hereby guarantee that the said equipments/articles would continue to conform to the description and quality aforesaid for a period of..... months from the date of delivery, installation at site and commissioning of the said equipments/articles or months from the date of dispatch/shipment, whichever is earlier and that notwithstanding the fact that the purchaser (Inspector) may have inspected or approved the said equipments/articles, if during the aforesaid period the said equipments/articles are discovered not to conform to the description and

quality aforesaid or have deteriorated (and the decision of the purchaser in that behalf will be final and conclusive) the purchaser will be entitled to reject the said equipments/articles.

Yours faithfully,

Signature of Tenderer

Dated:.....

Name & Address

.....
.....
.....

Signature of witnesses

Dated:.....

Name & Address

.....
.....
.....

Annexure – I

Notes:

- 1) Tenderer will give the complete breakup of the cost indicating clearly the margin of profit etc., where asked for (separate sheets may be used, if necessary).
- 2) The prices should be indicated both in words and figures. If it is desired to ask for excise duty or any other charges as extra, the same must specifically be stated. In the absence of such stipulation it will be presumed that the prices are inclusive of all charges and no other claim for the same will be entertained.
- 3) If it is desired by the tenderer to ask for the sales tax to be paid extra, the same must specifically be stated. In the absence of any such stipulation in the tender, it will be presumed that prices quoted by the tenderers are inclusive of sales tax and no liability for payment of sales tax will involve upon the purchaser.
- 4) On tenderer quoting for sales tax / service tax extra, sales tax / service tax will be paid to him at the rate at which he is liable to be assessed, or has actually been assessed.
- 5) The tender is not transferable.
- 6) Tenders should be submitted in duplicate in separate envelopes along with a soft copy (CD) in MS Word/Excel, if possible.
- 7) All the tender documents attached to the invitation to tender are sacrosanct for considering any offer as complete offer. Therefore, it is important that all tender documents duly filled in and signed are returned with the contractor's offer, failing which the tender will be treated as incomplete and summarily rejected.
 - a) The contract as a result of this tender enquiry will be entered into only for the stores having ISI marking where specifically required as such. In case ISI marked article are not available, the stores strictly conforming to ISI specifications will be purchased. Firms offering the stores with ISI marks should indicate the details of ISI License held by them and its validity.
 - b) The tenderer shall furnish complete details for the stores offered along with literature/catalogue.
 - c) Deviations if any, from tender enquiry specification shall be clearly mentioned in a separate Annexure.
- 8) The contractor shall extend to the inspector or his authorized representative free of cost all reasonable facilities, inspection & testing equipments including inspection gauges for satisfying himself that the stores are manufactured in accordance with the specification.
- 9) Full details of the specifications referred to herein shall be supplied with the tender for proper scrutiny.
- 10) The prices should be firm and final and no foreign exchange or import license assistance will be given to contractor.

- 11) Tenderer should quote on destination/station of dispatch basis (strike off whichever is not applicable). However, where tenderer quotes ex- works Price, the breakup of different elements or processes for converting into FOR/station of dispatch basis should be indicated by the tenderer failing which the tender may be rejected.
- 12) Tenderer should answer the questions mentioned in the attached Questionnaire 1 & 2 (Annexures IV and IV) and should return the same along with tender and schedule to tender duly signed and filled in.

Purchaser : Central University of Gujarat

The stores required at : Sector-30, Gandhinagar-382 030, Gujarat, India.

Delivery period by inspection :

Inspection authority :

Inspecting Officer :

Packing marking :

Advance sample :

Tender sample :

- 13) The registration no. for the subject stores should be given if contractors are registered with Ministry of Science & Technology/DGS&D/ NSIC. Also furnish photocopy of registration certificate for verification and record. Failure to furnish this information will result in the tender being ignored.
- 14) The purchaser reserves the right to give a purchase/price preference to the Public sector units and/or small scale cottage industries units over other firms in accordance with the policies of the government from time to time.
- 15) Please furnish a copy of latest income tax clearance certificate.
- 16) Quotation on Letter Head, Tele-fax & Telegraph shall not be considered at all.
- 17) Tolerance clause: The purchaser reserves the right to place order on the successful tenderer for additional quantities to the contract at the contract rates during the currency of the contract.
- 18) **Guarantee/warranty:**
 - i) Unless some special warranty/guarantee clause has been stipulated elsewhere in the invitation to tender or other documents, the following warranty shall form part of the contract placed on successful tenderer:

“Except as otherwise provided in the invitation to the tender the contractor / seller hereby declares that the goods, stores, articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specifications and particulars obtained/mentioned in the contract. The contractor/seller hereby guarantees that the said goods/stores/articles would continue to conform to the description and quality aforesaid for a period of 24 months from the date of delivery and installation of the said goods/stores/articles to the purchaser or 27 months from the date of shipment/ dispatch from the contractor’s works, whichever is earlier and that notwithstanding the fact the purchaser (Inspector) may have inspected and or approved the said goods/stores/articles, if these discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated (and the decision of the purchaser in that behalf

shall be final) the purchaser shall be entitled to call upon the contractor/seller to rectify the goods/stores/articles or such portion thereof as is found to be defective by the purchaser within a reasonable period or such specified period as may be allowed to the contractor/seller and in such an event the above mentioned warranty period shall apply to the goods/stores/articles; otherwise the contractor/seller shall pay to the purchaser such compensation as may arise by reason of the breach of the warranty herein contained”.

- ii) Guarantee that contractor/supplier will supply spares if and when required on agreed basis for an agreed price.
 - iii) Warranty to the effect that before going out of production for the spare parts the contractor will give adequate advance notice to the purchaser so that purchaser may order his requirement of parts in one lot, if he so desires.
 - iv) Warranty to the effect that contractor/supplier will make available to purchaser the blue prints of drawings of the spares as and when required in connection with the main equipment.
- 19) Tendering firms should note the period for which their offer would remain open for acceptance. The offer from those firms who do not keep the validity open till the period stipulated in the tender enquiry, will be treated as un-responsive and will be ignored without making any back reference. Where any firms keep this offer valid till the required date, as stipulated in the tender enquiry but at the same time give discount clause with shorter validity, such discount will be summarily ignored and such offers will be considered only in respect of the price quoted by them for full validity. It may further be noted that if the date up to which offer is to remain open being on is declared as closed holiday for government offices, the offer shall remain open for acceptance till the next working day.

Signature of the tenderer _____
With date _____
Name (in block letter) _____
Capacity in which tender is signed.

(for supply of -----)

Annexure – II

SPECIAL CONDITIONS GOVERNING THE CONTRACT

Particulars and specifications : The imported equipment to be supplied shall comply with and conform to the specifications given in the schedule of quantities attached.

- 1) **Preparation of tender:** The tenderer should submit the tender documents including invitation to tender intact without detaching any page or pages, duly filled in and completed in all respect and signed on each page of the tender form including the schedule.
- 2) **Income Tax clearance certificate:** The latest Income Tax clearance certificate must also accompany the tender from the appropriate Income Tax authority. Tenders not accompanied with the requisite certificate are liable to be rejected.
- 3) **Earnest money:** The tender must be accompanied with earnest money enclosed with Technical bid in the form of demand draft drawn in favour of the “**Central University of Gujarat**”, payable at Gandhinagar/Ahmedabad. The tenders not accompanied by earnest money shall be summarily rejected.

In the event of a tender being accepted and the order is placed for supply of the requisite item mentioned at 1 of annexure and if the tenderer fails to supply the items ordered or commits a breach of any of the tender conditions, his earnest money is liable to be forfeited.

The earnest money is also liable to be forfeited in the event of the tenderer's failure, after acceptance of his tender, to furnish the requisite security deposit by the due date without prejudice to other rights and remedies of the University, under the contract law. Earnest money will be returned to all the unsuccessful tenderers as soon as practicable and after the decision taken on the tenders.

- 4) **Security deposit:** Earnest money deposited by the successful tenderer shall be treated as part of the security deposit. No interest shall be payable on the earnest money in any case. The successful tenderer shall be required to furnish a contract performance guarantee in any of the approved security bonds or a security deposit in cash approx. @ 10 % of the cost of the items to be purchased within ten days of the receipt of the order. The security deposit will be returned only after the successful installation of the equipment. If the tenderer fails to comply with the above requirements within the said period the earnest money already deposited by him/ them shall be applicable for forfeiture and the University shall purchase the items required at the risk and cost of the successful tenderer.
- 5) **Signing of Tender:** The tender is liable to be rejected if complete information is not given therein or if the particulars and date (if any) asked for in the schedule tender are not fully filled in. Particular attention must be paid to delivery date and also to the particulars referred to in the condition of the contract. The tenderer should sign every page and schedule.
- 6) **Period of delivery:** The supply ordered should be tendered for inspection within such time as may be specified in the order which shall not be ordinarily less than one month from the date of receipt of the order. Time specified herein is the essence of the contract.

- 7) **Latest hour for receipt of Tender:** The tender should be sent by post/by hand/by putting it in the tender box only.
- 8) **Validity of offer:** The offer/tender shall remain open for acceptance without any modification in the rates or terms and conditions of tender for a period of 60 days from the date of opening of the tender and in the event of a breach of this condition, without prejudice to any other rights or remedy of the Institute, the earnest money shall be liable to be forfeited. The rates quoted in the tender shall hold good at least up to 90 (ninety) days from the closing date of the tender.
- 9) **Opening of tender:** Intending tenderers or their authorized representatives will be at liberty to be present at the time of opening of tender on the specified date, if the date fixed for opening of tender is declared to be a holiday at a later date the tender will be opened at the same time on the next working day following the holiday or holidays.
- 10) **Rates:** The rates shall be quoted F.O.B./CIF, Gandhinagar/Ahmedabad (Freight and Insurance charges should be indicated separately). Cost of packing, forwarding and any other charges shall be clearly and specifically mentioned.
- 11) **Packing and marking:** The method of packing if any, required should be indicated.
- 12) **Miscellaneous.**
 - a) The University does not bind itself to purchase any/all the quantity and to accept the lowest tender and reserves to itself the right to increase or decrease the quantity and to accept or reject any or all tenders without assigning any reason, thereof. The quantity/numbers shown in the schedule is only indicative. It can be increased or decreased at the sole discretion of purchaser. The purchaser further reserves the right to split the order among more than one tenderer if considered necessary.
 - b) Acceptance of the tender by the University will be communicated to the successful tenderer. The contract for supply of the items specified in the schedule to tender referred to therein will come into force immediately after issue of the communication of acceptance.
 - c) The successful tenderer, however, will be required to enter into a formal contract agreement on non-judicial stamp paper of appropriate value if required, within fifteen days of the issue of acceptance letter by the University. The contract will be governed by the general rules and conditions of contract followed in Central Govt. Departments.
- 13) **Payments:** The stores and purchase division shall receive all bills for payment of supplies made. Before authorizing payment the bill shall be verified by that division with reference to the copies of the acceptance of tender, receipt vouchers and other relevant records including inspection notes. The bill with pay order and the usual certificate of receipt of stores in good condition, duly recovered thereon, will then be passed on to the Accounts section which will arrange payment within 10 days after receipt of the bill.
- 14) **Terms of payment:** The normal terms of payment are 100% payment within 30 days time after receipt and acceptance of the materials in good condition and its satisfactory installation and operation. Bank guarantee of suitable amount is required to be submitted towards 24 months warranty of the equipment before 100% payment is released.

- 15) **Acceptance of excess/short supplies:** Under no circumstances, the payment shall be released to the supplier, if the item ordered are in short supply or do not meet the quality. Wherever it is absolutely necessary to accept variations in supplies up to 5 % in quantity, this could be examined by the stores and purchase division and the supplies accepted by the Head of that division, in consultation with the indenter. Excess/short supplies to the extent of 5% in value, can be accepted without formal amendments to the acceptance of tender.
- 16) **Price variation:** Purchases should normally be made on firm prices. However, statutory variation on account of rate of exchange, custom duty, excise duty, steel price variation etc. could be allowed to contractors if so agreed by the parties and mentioned in the contract.
- 17) **Exchange variation:** (Clause to be incorporated in acceptance of tender). The prices are based on a rate of exchange of Re. 1/equal to _____ according to T.T. selling rate as quoted by any authorized exchange bankers

Approved by the Reserve Bank of India, ruling on _____ (date of firm's tender).

In the event of a variation in the above rate of exchange, price quoted are subject to adjustment (up or down) in accordance with the T.T. selling rate as quoted by any tenderer.

That exchange variation if any will apply only to the portion of F.O.R. price which is required to be remitted to contractor's principals in sterling/dollars/Swiss francs (as the case may be).

Any increase or decrease in the customs duty by reason of the variation in the rate of exchange will be to the buyers account. "No other charges will be affected by the change in the rate of exchange."

- 18) **Custom duty:** (Clause to be included in the invitation to tender) for imported stores offered against forward delivery, the tender shall quote prices thereof exclusive of custom duty. The quotation shall specify separately the F.O.B. price, C.I.F. price and the customs duty payable. They will also indicate correctly the rate of customs duty applicable along with Indian customs tariff number.
- 19) In case where all tenders have quoted only for imported stores against forwarded delivery, the tenders will be evaluated on prices exclusive of customs duty. In such case the amount of customs duty as legally liable calculated by reference to the tariff value of the stores declared by the tenderers.
- 20) **Excise duty:** (Clause to be included in the invitation to tender) "If it is desired to ask for excise duty or any other charges as extra, the same must be specifically stated. In the absence of any such statement, no claim for the same will be entertained".

Annexure-III

(TENDERERS SHOULD FURNISH SPECIFIC ANSWERS TO ALL THE QUESTIONS GIVEN BELOW. TENDERERS MAY PLEASE NOTE THAT IF THE ANSWERS SO FURNISHED ARE NOT CLEAR AND / OR ARE EVASIVE, THE TENDERS ARE LIABLE TO BE REJECTED).

- 1) Tender No. _____ due for opening _____
- 2) Offer is open for acceptance till _____
- 3) Whether the stores offered fully conform to the technical particulars and specifications / drawings, specified by the purchaser in the schedule to tender. If not, mention here details of deviation.
- 4) Brand of stores offered.
- 5) Name and address of manufacturer.
- 6) Station of manufacturer.
- 7) Please confirm that you have offered packing as per tender enquiry requirements. If not, indicate deviations.
- 8) Gross weight of consignment/net weight of each item.
- 9) What is your permanent income tax account number?
- 10) Confirm whether you have attached your latest/current ITCC or photo copy thereof.
- 11) Status.
 - a) Indicate whether you are large-scale unit or small-scale unit?
 - b) Are you registered with DGS&D/Ministry of Science & Technology for the item quoted? If so, indicate whether there is any monetary limit on registration. Also please attach a photo – copy of the certificate of registration.
 - c) If you are a small-scale unit registered with NSIC under single point registration scheme, whether there is any monetary limit.
 - d) In case you are registered with NSIC under single point registration scheme for the item quoted, confirm whether you have attached a photocopy of the registration certificate the items for which you are registered.
- 12)
 - a) If you are not registered either with NSIC or with DGS&D or with Ministry of Science and Technology, please state whether you are registered with Directorate of Industries of any State Government?
 - b) If so, confirm whether you have attached a photocopy of the certificate issued by office of Industries.
- 13) Please indicate name & full address of your Banker.
- 14) Please furnish details of equipment quality control.

- 15) Please furnish your performance statement.
- 16) Please state whether you have submitted the tender sample.
- 17) Please state whether you agree to submit advance sample, if called upon to do so within the specified period of 21 days.
- 18) Please indicate guaranteed date by which delivery can be completed. Also indicate monthly rate of supplies and time required for commencement of supplies from the date of receipt of formal order / approval of advance sample.
- 19) Business name and constitution of the firm. Is the firm registered under:
 - a) The Indian Companies Act. 1956.
 - b) The Indian Partnership Act. 1932 (Please also give names of the partners).
 - c) Any Act? If not who are the owners? (Please give full names and addresses).
- 20) Whether the tendering firm is/are:
 - a) Manufacturer
 - b) Manufacturer's authorized agents.
 - c) Holders in stock of the stores tendered for
- N.B.** If manufacturer's agents, please enclose with tender a copy of manufacturer's Authorization. Please indicate the parties involved in the tender for the sake of agency/consultants commission, if any.
- 21) If stores offered are manufactured in India, please state whether all the raw materials, components etc. used in their manufacture is also produced in India. If not give details of materials components etc. that are imported together with their value and the proportion it bears to the total value of the stores.
- 22) State whether raw materials are held in stock sufficient for the manufacture of the stores.
- 23) Please indicate the stocks in hand at present time:
 - a) Held by you against this tender enquiry_____.
 - b) Held by M/s. _____ over which you have secured an option.
- 24) Do you agree to sole arbitration by an Officer in the Ministry of Law to be appointed as arbitrator by the Ministry of Science & Technology as provided in clause 24 of the general conditions of contract applicable to contracts placed by the various departments of the Ministry of Science & Technology and attached / subordinate offices (Your acceptance or no acceptance of this clause will not influence the decision of the tender. It should however, be noted that an omission to answer the above question will be deemed as an acceptance of the clause).
- 25) Please state whether the transit insurance clause is acceptable to you.
- 26) Please state whether the inspection is acceptable to you.

- 27) For partnership firms, please state whether they are registered or not registered under Indian partnership Act, 1932. Should the answer to this question by a partnership firm be in the affirmative, please state further:
- a) Whether by the partnership agreement, authority to refer disputes concerning the business of the partnership to arbitration has been conferred on the partner who has signed the tender.
 - b) If the answer to (a) is in the negative, whether there is any general power of attorney executed by all the partners of the firm, authorizing the partner, who has signed the tender to refer disputes concerning business of the partnership to arbitration.
 - c) If the answer to either (a) or (b) is in the affirmative, have you already furnished a copy of either the partnership agreement at the general power of attorney, as the case may be, to the purchaser? Please quote the reference to the communication by which this was done.
- N.B.** If a copy of neither the partnership agreement nor the general power of attorney has previously been furnished to the purchaser, please attach to the tender a copy of either partners of the partner on which reliance is placed for authority of partners or the partner signing the tender to refer disputes to arbitration. A Public Notary should attest the copy or its execution should be admitted by an affidavit on a property stamped paper by all the partners.
- 28) Please state:
- i) Whether the price tendered by you is to the best of your knowledge and belief, not more than the price usually charged by you for stores of same nature, class or description to any private purchaser. If not, state the reason thereof and also indicates the margin of difference.
 - ii) In respect of indigenous items for which there is a controlled price fixed by law the price quoted shall not be higher than the controlled price and if the price quoted exceeds the controlled price, the reasons thereof should be stated.
- 29) Are you:
- i) Holding valid industrial license (s) Registration certificate under The Industrial Development and Regulation Act, 1981. If so, please give particulars of industrial income registration certificate.
 - ii) Exempted from the licensing provision of the Act, for the manufacture of items quoted against this tender. If so, please quote relevant orders and explain your position.
 - iii) Whether you possess the requisite license for manufacture of the stores and/or for the procurement of raw materials belonging to any controlled category required for the manufacturer of the stores. In the absence of any reply, it would be assumed that no license is required for the purpose of raw material and/or that you possess the required license.
- 30) State whether the department of supply or any department of the Ministry of Science & Technology or any other Government department has banned business dealings with you.
- 31) Please confirm that you have read all the instructions carefully and have complied with accordingly.

Signature of witness/Date
Full name & address of
Witness in block letters

Signature of Tenderer)/Date
1) Full name & address of the
person signing (In block letters)
2) Whether signing as proprietor
/Partner/constituted Attorney
/Duly authorized by the Company

Annexure-IV
Questionnaire - I

Additional questions for plant & machinery tender enquiries.

- 1) Please state that you have submitted your quotation in two parts as indicated below:
 - i) Technical bid in duplicate, consisting of technical details, bringing out clearly a separate sheet, the deviations, if any, in specifications from those indicated in the tender enquiry as well as soft copy CD in MS Word/Excel format.
 - ii) Commercial/Financial bid in duplicate showing item wise price in a separate sealed cover inside the main cover.
- 2) Please indicate complete breakup of prices indicating clearly the net CIF value, customs duty, freight charges and margin of profit etc. in a separate sheet, which should be signed by you.
- 3) Please confirm that you will forward in advance three copies of each of installation, operation and maintenance instructions and diagrams in English.
- 4) Please indicate in a separate sheet, duly signed by you, full information in respect of the output that you obtained from the machine you have offered; and also that you guarantee the performance of the machine under normal conditions.
- 5) Please attach lists duly signed by you, for such spare parts and tools as are absolutely essential for proper maintenance and operation of machine for a period of three years giving full particulars of the spare parts and tools with the price of each spare part and tool separately.
- 6) Please confirm that you undertake adequate servicing and spare parts facilities in India in respect of the equipment tendered for by you or that you shall arrange to provide such facilities simultaneously with the supply of the equipment.
- 7) Please confirm that you undertake that supplies of necessary maintenance equipment and spare parts will be made available for life of the machine on a continuous basis at a price not excess of the net FOB/FAS price after allowing maximum discount and without taking into account any commission payable to the Indian agents, if any, of the seller. If any such commission is payable the same shall be indicated and it shall be payable only in Indian currency.
- 8) Please indicate that you guarantee that before going out of production of the spare parts you will give adequate advance notice to the purchaser so that the latter may order his requirements of spares in lot, if he so desires.
- 9) Please indicate that you further guarantee that if you go out of production of spare parts, then you will make available blue – prints, drawings of the spare parts and specifications of materials at no cost to the purchaser if and when required in connection with the equipment to enable the purchaser to fabricate or procure spare parts from other sources.
- 10) Please confirm that you undertake to enter into a rate contract with the purchaser to supply spare parts on an agreed basis for an agreed period.

(Signature of Tenderer)
With date

Annexure-V
Questionnaire – II

Additional questions for imported stores

- 1) Please indicate here prices on the following basis:
 - i) F.O.B.
 - ii) F.A.S. port of shipment of your principals/manufacturere.
 - iii) C.I.F. Indian port.
 - iv) F.O.R. station of dispatch (also indicate the station of dispatch).

- 2) For F.O.R. / F.A.S. quotations, please indicate here separately.
 - i) Net Ex-factory price.
 - ii) Net F.O.R. / F.A.S. price exclusive of profit/commission.

- 3) Please indicate commission payable to you/Indian agent/associates in Rupees. Also attach a copy of agreement with your principals/manufacturers regarding quantum of commission payable to you/Indian agent/associates.

- 4) In case you are a foreign firm quoting directly please indicate:
 - i) The name & address of your Indian agents/associates/representatives for service in India.
 - ii) Net F.O.R. /F.A.S. price exclusive of the amount of remuneration or commission for the Indian agents/associates.
 - iii) Commission/remuneration payable to the Indian agents/associates in Rupees.

- 5) Please indicate the following particulars:
 - i) The precise relationship between the foreign manufacturer/principals and their agents/associates.
 - ii) The mutual interest which the manufacturer/principals and the Indian agents/associates have in the business of each other.
 - iii) Any payment which the agents associates receive in India or abroad from manufacturer/principals whether as a commission for the contract or as a general retainer fee.
 - iv) Indian agents permanent income tax account number.
 - v) The foreign supplier's permanent income tax number.

- 6) Please furnish the following certificates on separate sheets, duly signed by you:
 - i) Certify that net prices are exclusive of commission, profit etc. to be paid to your principals/manufacturers in foreign currency and indicate separately the amount of remuneration/commission/profit which Indian agent/ associates are entitled in terms of their agreement with the foreign principals.

- ii) Produce your principal's/manufacture's proforma invoice or certificate indicating remuneration/commission/discount etc. to be allowed in the particular transactions to their Indian agents/associates and the nature of the after sales service to be rendered by Indian agents/associates.

(Signature of Tenderer)
With date

PERFORMANCE GUARANTEE

The supplier shall test at manufacturers works the machines at rated capacity and at part load as per design conditions and be fully responsible for the performance of the equipment selected by him at required parameters and for the efficiency of the installation to deliver the required end results.

FEES AND PERMITS

The supplier shall obtain all permits / licenses and pay for any and all fees required for the inspection, approval and commissioning of their installations.

TECHNICAL DATA

Each tenderer must submit along with his tender the technical data for all items. Failure to furnish complete technical data with tenders may result in summary rejection of the tender.

SHOP DRAWINGS

- A) After the award of the contract, the contractor shall furnish shop drawings for the approval of the of the University. These shop drawings shall contain all information required to complete the work as per specifications and as required by the University. These drawings shall contain details of construction, size, arrangement, pipe connections, vibration isolators, foundation details, operating clearances, performance characteristics and capacity of all items of equipment, also the details of all related items of work required by other contractors.
- B) Manufacturers drawings, catalogues, pamphlets and other documents submitted for approval shall be in two sets. Each item in each set shall be properly labeled, indicating the specific services for which material or equipment is to be used, giving reference to the governing section and clause number and clearly identifying in ink the items and the operating characteristics. Data of general nature shall not be accepted.
- C) Schedule of supply, testing and commissioning.

MATERIALS AND EQUIPMENT

All materials and equipment shall conform to the relevant Indian International Standards and shall be of the approved make and design.

TESTING AND COMMISSIONING

- 1) **Test at works:** One complete machine will be tested for full capacity as well as part load operations at specified design parameters/guarantee parameters. No separate charges would be payable towards testing, the cost of to and fro travel, loading & boarding at appropriate hotel in the city of manufacturer plant, local travel and other incidental charges related to travel etc. The machines should be dispatched only after the test results are as per guaranteed parameters before dispatch. Supplier shall also provide copies of record of all safety and automatic control settings for the entire machine.
- 2) **Endurance test at site:** After the installation at site, interconnection with the system and commissioning, the complete machines are to be run for 72 hours continuously without any defects and the test data should be furnished.

OPERATING INSTRUCTION & MAINTENANCE MANUAL

The supplier shall submit a draft copy of comprehensive operating instructions, maintenance schedule and log sheets for all systems and equipment included in this contract. This shall be supplementary to manufacturers operating and maintenance manuals.

ON SITE TRAINING: Required/Not required

MAINTENANCE DURING DEFECTS LIABILITY PERIOD

- A) **Complaints:** The contractor shall receive calls for any and all problems experienced in the operation of the system under this contract, attend to those within 8 hours of receiving the complaints and shall take steps to immediately correct any deficiencies that may exist including replacement of compressor at no cost to owner.
- B) **Repairs:** All equipments that require repairing shall be immediately serviced and repaired. Since the period of mechanical maintenance runs for TWO YEARS concurrently with the defects liability period, all replacement parts and labor during this period shall be supplied promptly *free of charge* to the owners. (Spare compressors should be available to replace immediately if required).
- C) **Warranty replacement:** Replacement of parts, if required, during the warranty period shall be supplied *free of cost* by the Principal supplier or Indian agent. All charges shall be paid by the Indian agent or Principal supplier for release of spare parts from the customs. Kindly note that only custom papers & DSIR Certificate shall be supplied by the University.

UPTIME GUARANTEE

The contractor shall guarantee for the installed equipment an uptime of more than 99%. In case of shortfall in any month during the defects liability period, the defects shall be extended by a month for every month having shortfall. In case of shortfall beyond the defects liability period the contract for maintenance shall get extended by a month having the shortfall and no reimbursement shall be made for the extended period.

POWER REQUIREMENT: Please provide the details.

INSURANCE COVERAGE FOR

- 1) Third party
- 2) CIF value + custom duty paid by owners to cover mishaps.
- 3) Workers Insurance, Provident Fund etc.

GUARANTEE PROFORMA

We hereby guarantee the year round performance for equipment units which we have supplied and commissioned in the complex described below:

Building – Central University of Gujarat
Location – Sector-30, Gandhinagar-382 030, Gujarat

for a period of ONE YEAR/TWO YEARS/THREE YEARS/FOUR YEARS/FIVE YEARS from the date of acceptance of the total installation. WE AGREE TO repair or replace free of cost, within that period, ordinary wear and tear and unusual abuse or neglect excluded together with any other work which may be damaged or displaced in so doing. In the event of our failure to comply with the above mentioned conditions within a reasonable time, after being notified in writing, we collectively and separately, do hereby authorize the owner to proceed to have the defects repaired and made good at our expense and we shall pay the cost and charges thereof immediately upon demand and also authorize them to encash the bank guarantee (The guarantee will stand extended for further period of 2 years from the date of failure, if the duration of failure is more than 1 week).

Signature of Supplier

SCHEDULE OF FISCAL ASPECTS

- 1) Date of commencement : Immediately upon receipt of the equipment.
- 2) Period of completion : 10 weeks from the date of supply order.
- 3) Liquidated damages : 0.5 % of the contract value per week of delay to a maximum of 5.00% of value of contract.
- 4) Defects liability period : 24 months from the date of handing over.
- 5) Terms of payment : i) 100% payment by Irrevocable Letter of Credit and or by Sight Draft to be paid to the foreign supplier.

ii) The supplier will have to submit a bank guarantee @10% of the cost of the item(s) to be purchased within 30 days of the receipt of the supply order positively, which will be kept for the duration of the warranty period of the equipment(s), covering their comprehensive warranty.

Signature of the tenderer with date
Name (in block letter) _____

Capacity in which tender is signed.

Very Important - Please Read carefully before tendering

General Terms & Conditions

- 1) The manufacturer or and its authorized agents/ dealers representatives are requested to quote for all possible variants and models along with optional components and attachments. The sample preparation components as required for a specific model should also be quoted.
- 2) The manufacturer/supplier (or the Indian Agents) of all equipment shall erect & commission them in our laboratory and demonstrate the performance of the equipment as per their claims.
- 3) The equipment must be capable of operating on the standard AC supply in India i.e. 220 V \pm 10%, 50 Hz \pm 2% single phase supply or three phase as the case may be. The UPS or any other special requirements of the supply must be mentioned in the quotations and requisite equipment should also be supplied by the manufacturer.
- 4) The Indian Agents should have service facility at Gandhinagar/Ahmedabad or in the State of Gujarat. He should have factory trained & qualified engineers to service the equipment being offered. Details of their qualification, experience & place of posting are to be submitted.
- 5) The complete equipment & all accessories shall be guaranteed for satisfactory performance for a period of 24 months from the date of commissioning and handing over.
- 6) The supplier shall provide at least one hard copy of operation and maintenance manuals along with complete circuit diagram of the main equipment and all its accessories.
- 7) Along with the equipment the supplier shall give one set of original software and one back up copy for each system. The updates from time to time shall also be provided. The terms for software upgrade support for future may also be mentioned.
- 8) The manufacturer or and its authorized agents/ dealers representatives shall ensure the supply of spares and critical components for at least next 5 years.
- 9) If the university desires the supplier company directly or through its representatives, supplier should be ready to take up the AMC of the equipment.
- 10) The company may be required to setup the sample preparation lab for the respective equipment for its best or guaranteed performance.
- 11) The manufacturer or and its authorized agents/ dealers representatives may have to provide an onsite training of the operation of the said equipment to the suitably assigned person/persons by the competent authority of the university.
- 12) The manufacturer or and its authorized agents/ dealers representatives can also explore the possibility of running the installed equipment at the University on revenue sharing basis as per terms and conditions mutually agreed by both parties.
- 13) Specific requirements of samples, space and working environment desired for the best/optimum performance of the equipment should be mentioned. The installation space, temperature and other working conditions should also be mentioned.

COMMON REQUIREMENTS FOR ALL EQUIPMENTS

1. Multiple plans for Comprehensive warranty (parts and labor) should be quoted as optional. Such warranty should also cover all accessory instruments that work in conjunction with the main equipment and should be clearly specified. The following are plans envisaged:
 - a. Two-year warranty/Three-year warranty/Four-year warranty/Five year warranty
 - b. Any other warranty plan including insurance option.
2. Essential equipment spares for 5 years should be quoted as an option for all equipments and equipment downtime should not exceed 24 working days with component breakdown. Supporting documents to this effect should be attached.
3. Computer units supplied with each equipment should come with valid operating system CD, complete office suite programmes, and Antivirus Software valid for three years subscription for virus update.
4. Software update/revisions may be offered for 5 years.
5. Both application and equipment maintenance training at the time of installation and training for additional people onsite with in the first year in form of training workshops.
6. The principal company should have manufacturing and installation history for at least 5 years for respective equipments and their representative company/agency in India should have demonstrated installation and technical support base for at least 2 years for the respective equipments. All necessary supporting documents should be attached clearly indicating model, details of end-user and institution.
7. Qualified and strong service and application support base in Delhi is desirable.

NOTE:

- The decision on suitability of equipment for its use in the University by technical committee shall be final.
- In case change in technical situation, the technical committee reserves the right to redefine specifications.

SCHEDULE (Specifications)

Sr. No	Category I : Equipments	Quantity	
1	(a) Electronic Analytical Balance	Specifications	
	Maximum capacity	~ 230g	
	Readability	0.1 mg	
	Linearity	0.2 mg	
	Variation in internal weights	FACT	
	Variation in external weights	100 g	
	Sensitivity	~ 2.4ppm/ °C	
	Interfaces (optional)	RS 232	
	Pan size	70 to 90 mm	
	Height above weighing pan	~ 250 mm	
			01
		(b) Electronic Analytical Balance	Specifications
	Maximum capacity	~ 100g	
	Readability	0.01 mg	
	Linearity	0.2 mg	
	Variation in internal weights	FACT	
	Variation in external weights	100 g	
	Sensitivity	~ 2.4ppm/ °C	
	Interfaces	RS 232	
	Pan Size	70 to 90 mm	
height above weighing pan	~ 250 mm		
Desired Features: Automatic internal adjustment, Reading under desired light, metal casing, Shock/overload absorber			
2	UV-Vis Spectrophotometer with Software	1	
<ul style="list-style-type: none"> • Wavelength range 190-1100nm • Scan speed: 2500 – 3000 nm/min • Pre-aligned source and Quartz coated optics • Double beam with fixed 1.5 nm or less bandwidth • Integrated Scan, Time drive and wavelength program data with time spectral display • Quant and Scanning, applications, optimization, calibration • Rate application, automatic circulation of sample activity and substrate concentration, option of sample upto 1-5 microlitre • Accessory parameters, sample table, spectral processing, calculations and results checking • Analysis of sample data and graphics in multiple or single page format • Automation of results as per analyst • Accessories – with printing facility and quartz cuvettes (1 pair, each for 1 ml and 3 ml) 			

3	<p style="text-align: center;">FTIR</p> <ul style="list-style-type: none"> • FTIR equipment with standard features and accessories • Scan range: 8,300-350cm⁻¹ • peak noise: 25000:1 rms/5 sec scan or better • Scan interferometer, hot-spot stabilized source, desiccated Ge-coated KBr optics • TCP/TP for PC/LAN connection; Ethernet cable • Full size sample compartment • Automatic H₂O and CO₂ correction • Equations editor • Spectral Search function and search Starter Libraries • Suitable for 220V, 50/60 Hz <p>Accessories</p>	1
	<ul style="list-style-type: none"> • KBr Rectangular facility 	1
	<ul style="list-style-type: none"> • Rectangular KBr Cell facility 2 	1
	<ul style="list-style-type: none"> • Assorted Rectangular Teflon Spacers (Pack 10) 	1
	<ul style="list-style-type: none"> • KBr Circular Windows (Pack 2) 	1
	<ul style="list-style-type: none"> • Variable Adaptor 	1
	<ul style="list-style-type: none"> • Adjustable Demountable Cell 	1
	<ul style="list-style-type: none"> • Universal KBr Disk Holder 	1
	<ul style="list-style-type: none"> • Spectra reusable dessicant pack 	1
	<ul style="list-style-type: none"> • MIR Polystyrene Reference Card 	1
4	<p style="text-align: center;">TGA/DSC/DTA/MTAequipment: Advance version</p> <p>Balance features:</p> <ul style="list-style-type: none"> • Top Loading • Range at least up to 1500mg • Accuracy at least ± 0.02% • Precision at least ± 0.01% • Digital resolution at least ±0.2µg • Balance Sensitivity at least 1µg • Temperature range at least 15°C to 1000°C • Scanning rate at least 0.1 to 200°C/min • Temperature accuracy at least± 1°C • Temperature precision at least ±0.8°C • Sample to program temperature at least ±0.5°C at 300°C and ±1°C at 900°C • Sample temperature precision : ±0.3°C at 300°C and ±0.5°C at 900°C • Cooling times : 1000 to 100°C/ ~ 7-8 min and 1000 to 30°C/ ~15-16 min • Baseline Dynamic Drift : <50µg (50 to 1000°C at 20°C/min) • Mass Flow Controller : Sample Purge 0-200mL/min • Nitrogen, argon, helium, carbon dioxide, air, oxygen, inert or active gases over full temperature range • Sample pans : Alumina ~ 180-190 µL 	1

	<ul style="list-style-type: none"> • Auto sampler : at least 45 samples, sample change should be less than 2.5 min • IR or MS - Evolved Gas Analysis 	
	<p style="text-align: center;">Differential Scanning Calorimeter: Advanced version</p> <ul style="list-style-type: none"> • Standard furnace, alumina coated aluminum • DSC, 100-240V, 50/60 Hz • Temperature sensors: Thermocouple of Chromel alloy • MT-DSC: upgradeable • Advanced software controlled • Pyris player, kinetics, Scanning Kinetics, Specific Heat and Isothermal Purity software packages 	1
	Accessories:	
	<ul style="list-style-type: none"> • Power cord 	1
	<ul style="list-style-type: none"> • Standard Sample Pan Crimper Press 	1
	<ul style="list-style-type: none"> • Standard Aluminum Pans & Covers (~ 400/Pkg) 	1
5	<p style="text-align: center;">Atomic absorption spectrophotometer</p> <ul style="list-style-type: none"> • Control through PC • Software for lamp, flame control, parameter selection and sample analysis • Display at least 10.4" LCD touch screen, VGA, resolution at least (640 x 480 pixels) • Variable calibration standards, from 01 to 999 sec, D2 / Zeeman background correction • Double-beam echelle optical, reflecting optics with protective coating • Optical device: Standard, focal length ~300 mm, grating 36x185 mm area, ~75-80 Line/mm, blaze angle 76°, quartz prism: 95x40 mm, 60°, wavelength range ~190-900 nm, spectral band pass: ~ 0.15 nm at 200 nm • Detector: High efficiency • Light sources: Hollow cathode lamp (HCL) and electrode less discharge lamps (EDLs) • Flame gas: automated gas box with computer-controlled oxidant selection with gas sequencing • Control: Touch-screen actuated ignition- air/acetylene, with controlled flow • At least 0.1-0.5 Abs ± 0.05-0.5 % within 5ppm Cu standard <ul style="list-style-type: none"> • Ambient temperature: +15°C to +35°C/3°C/h • Relative humidity: 10-80% non-condensing EDL • CGA standard fittings for connection to gas cylinders 	1
	Accessories	

	Air filter	1
	Air hose Tubing	1
	Air Dryer/Filter with a spectrometer with microcomputer gas control	1
	Air Compressor: Delivering~18 cfm (50 L/min) at 60 psi (42 kg/cm ²) Mounted on a ~ 40 L tank built for 230 V, 50/60 Hz	1
	Single HCL (Extra one each HCL and EDLs to be quoted)	1
6	<p style="text-align: center;">CHNS/O Analyzer advanced version</p> <ul style="list-style-type: none"> • Risk free device • Standard Series with advanced analyzer • Standard auto-sampler • Up to 2400 sampler handling accessories 	1
	<p>Accessories:</p> <ul style="list-style-type: none"> • Acetanilide for calibration • Silver Gauge Strip • Diffusion Plug Copper • CHNS/O accessory for at least 1500 to 2500 runs 	1
	Helium, argon gas regulator for high precision & nondiffusibility CGA 580 Fitting for connection to cylinder	1
7	<p style="text-align: center;"><u>HPLC advanced version</u></p> <p>1 Binary Gradient solvent delivery with built-in > 2 channel degasser</p> <ul style="list-style-type: none"> • Dual reciprocating piston with serial mixing, precise linear, concave and convex gradients and pulse less flow • Flow precision ± 0.1% at 1ml/min with standard solvent The flow rate 0.01 – 10.00 mL/min with at least 0- 6,100 psi • Compositional accuracy at least 0.1 to 0.5% • Risk free pumps seal with aqueous buffer/organic/non-polar solvents • Vacuum degasser for removal of dissolved air in pumping device as well as for solution in Auto-sampler 	1
	2 Manual injector:Rheodyne type built in 20 µL loop with auto switch and gas tight 100µL syringe	1

	<p>3 UV-VIS Detector</p> <ul style="list-style-type: none"> • Dual beam optics with range : 190-700 nm • Bandwidth : 0.1 to 5 nm • Wavelength accuracy : ± 0.1 to 1nm • Drift at least $< 1 \times 10^{-4}$ AU/h, once warm up • Noise at least $< 75 \times 10^{-6}$ AU, 210-280 nm, 2 sec • Flow Cell: Standard 12μL, 10mm path length range : 00005 -3000 AUFS in 00001 increments from 00005to01 and 001incrementsabove01 AUFS <p>Standard necessary accessories:</p>	1
	NCI 901 120/240 V with relay	1
	Column C-18 of standard dimension	1
	Column C-8 of standard dimension	1
8	<p style="text-align: center;">GC-MS: Gas Chromatograph</p> <p>GC with standard pneumatic control of best screen display, 230V, 50/60 Hz</p>	1
	<p>Desired Features:</p> <ul style="list-style-type: none"> • At least four-level/three-ramp temperatureprogramming up to 500°C • At least two simultaneous analog output for integrator/recorder • Digital pressure readouts with capillary injectors • Standard solenoid valves for split vent and gas sampling valve control • External computer communication for full control plus two simultaneous channels of raw data • A dual-channel background correction • Battery RAM storage of at least five methods for configuration & automation • Stopwatch function with flow calculation and control of at least 12 PPC modules <p>Standard capillary column injector</p> <ul style="list-style-type: none"> • Split ratio movable to wide range of analysis • Fitted with contamination device valve and Laboratoryair • The choices of liner 2 mm and 4 mm internal diameters • At least 50°C to 450°C in 1°C increment • Automatic control of split vent solenoid valve 	
9	<p style="text-align: center;">Advanced version LC/MS</p> <ul style="list-style-type: none"> • Suitable for amino acids, proteins, organic mixtures, complex salts • At least 1 mm columns for LC-MS work • At least 300 μm capillary columns • At least 100 nL/min flow rate suitable for nanospray sources • interface suitability for electrospray ion source or variantnanospray source • at least fast atom bombardment, thermospray and atmospheric pressure chemical ionization interfacesdeposition and drying techniques with 	1

	moving belts/conveyer on a pattern of off-line MALDI	
10	<p style="text-align: center;">Rectangular hot plate</p> <ul style="list-style-type: none"> • For continuous heating from 30° to 400°C • With better temperature uniformity • Protected insulated elements for uniform heating • Microprocessor fitted with digital temperature control • Input supply:220/230 volts • All options to be quoted 	1
11	<p style="text-align: center;">Heating Plate</p> <ul style="list-style-type: none"> • 25 x 25 cm²dimension • Controlled temperature from 30 to 500⁰C • Nonrusting Body 	2
12	<p style="text-align: center;">Melting point equipment</p> <ul style="list-style-type: none"> • Melting points from 30 to 400°C • With excellent illumination for accurate reading • Proper mount for 3 to 5 capillary tubes and mercury thermometer • Excellent temperature control ±0.01 to 0.1⁰C by energy scale device 	1
13	<p style="text-align: center;">Oven of standard dimension: digital model</p> <ul style="list-style-type: none"> • Double walled unit with outer chamber of protective material • Inner chamber with 2 perforated shelves of standard material and height • Uniform heat distribution • Temperature range from 30 to 500⁰C @ 10⁰C • Synthetic door gasket of neoprene fitted • With proper moisture outlet • Input supply 220/230 volts 	2
14	<p style="text-align: center;">Rotary Flask Shaker</p> <p>Capacity :</p> <ul style="list-style-type: none"> • Platform size 450 x 450mm • 25 flasks of 100ml or 10 flasks of 200 ml • Shaking speed regulation, standard speed 	1
15	<p style="text-align: center;">Standard magnetic stirrer for routine use in lab</p> <ul style="list-style-type: none"> • Compact with rotating magnetic field • Magnetic field by permanent magnet with variable speed stirring • Stirring with Teflon rotor, for effective stirring • Hot plate with microprocessor for digital Temperature Controller 	1

	<ul style="list-style-type: none"> • Standard pilot lamp • Input supply 220 / 230 Volts Capacities : 500 mL and 1 litre 	
16	<p style="text-align: center;">Electric Variac</p> <ul style="list-style-type: none"> • For uniform voltage control • With low temperature coefficient • Voltage range from 0 to 220/230 volt • 5 of 3 Ampere capacity • 2 of 15 Ampere capacity • With least voltage fluctuation 	5
17	<p style="text-align: center;">Standard Electrophoresis Apparatus</p> <ul style="list-style-type: none"> • 6tooth comb and double 8/10 tooth comb • The 7x7cm gel casting tray embossing gel ruler rubber end caps • The electrophoresis chamber with UV transparent • Suitable for DNA, proteins, amino acids, organic mixtures, complex salts, macromolecules etc. 	1
18	<p style="text-align: center;">Advanced density and sound velocity meter</p> <ul style="list-style-type: none"> • Quartz oscillating/electroacoustic U-tube device • Density and sound velocity • Automatic filling and cleaning device • Reproducibility 0.001 to 0.01 % <p>Standard range :</p> <ul style="list-style-type: none"> • Density: 10^{-5}g/cm³ • Sound velocity: 1000 – 2000 m/s • Temperature: 0 - 100° C • Pressure range : 0 to 4 bar • Temperature: 0.01°C • Sound velocity: 800-2500 m/s <p>Accuracy:</p> <ul style="list-style-type: none"> • Density : ± 0.01 kg m⁻³ • Sound Velocity : 0.05 m/s • Temperature : 0.01 °C • Sample Volume: 1 to 3 mL <p>Desirables</p> <ul style="list-style-type: none"> • Ambient air pressure sensor 	1

	<ul style="list-style-type: none"> • Standard Dimensions • viscosity Correction • Reference oscillator • bubble detection • device for visual Check of density cell • Standard Interfacing accessories • displays of oscillating sensor and sample • Image storing with transparent measurement • Thermo Balance without drifts in temperature • Variable temperature required <p>Repeatability Density: $\pm 0.001 \text{ kg m}^{-3}$ Sound velocity: 0.1 m/s Temperature: 0.001°C</p> <p>Internal storage Up to 10 GB</p> <p>Power supply AC 100 to 240 V; 50 to 60 Hz; 50 to 80 VA</p>																							
19	<p style="text-align: center;">Water purifier plant for ultra-purification</p> <table border="1"> <tr> <td>Advanced system</td> <td>1</td> </tr> <tr> <td>Delivery point</td> <td>1</td> </tr> <tr> <td>Progard TS2 pre-treatment unit device</td> <td>2</td> </tr> <tr> <td>Quantum TEX polishing cartridge</td> <td>2</td> </tr> <tr> <td>Millipak filter, 0.22 μm</td> <td>2</td> </tr> <tr> <td>25 L to 40 L Reservoir</td> <td>1</td> </tr> <tr> <td colspan="2">Accessories:</td> </tr> <tr> <td>Surepro 2 vessel device</td> <td>1</td> </tr> <tr> <td>Progardcart 5 micron</td> <td>3</td> </tr> <tr> <td>Progard cart 1 micron</td> <td>3</td> </tr> <tr> <td>Purifying tablets, 5/pk</td> <td>1</td> </tr> </table>	Advanced system	1	Delivery point	1	Progard TS2 pre-treatment unit device	2	Quantum TEX polishing cartridge	2	Millipak filter, 0.22 μm	2	25 L to 40 L Reservoir	1	Accessories:		Surepro 2 vessel device	1	Progardcart 5 micron	3	Progard cart 1 micron	3	Purifying tablets, 5/pk	1	
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20	<p style="text-align: center;">High performance 500 MHz FT-NMR Spectrometer</p> <ul style="list-style-type: none"> • superconducting magnet system of standard size and Tesla • standard field frequencies for high resolution • High performance Second Harmonic Imaging Microscopy System with suitable gradients • Standard frequency generation and variation at required field • Standard digital quadrature receiver • Field variation as per sample and circuit • Standard amplifier for gradient shimming for ultra-stable high-precision, low-noise 	1																						

<ul style="list-style-type: none"> • Bi-directional connection to the host computer • Standard pulse generation for NMR experiment frequency synthesizer • Standard frequency range at least 6-640 MHz \pm 0.01 degree phase resolution and \pm0.005 Hz frequency resolution • NMR frequency range at specified field at least above 6 MHz • Standard NMR signal accumulation with at least digital quadrature detection <p>Transmitter:</p> <ul style="list-style-type: none"> • At Least 2 channel Amplifier System • Standard Amplifier for decoupling of at least 1H or 19 F, with 100 W pulse power 1H, max 35 W pulse in 6-365 MHz range • Broadband preamplifier with standard filters, microprocessor control with standard display system • Standard PC workstation with suitable Software with at least TFT/LED monitor, NMR data statistics, integration at least 1/2/3D spectra, topspin interactive 	
Helium hold magnet of standard specifications like AH0051-500, hold time Dewar, standard bore only, liquid helium hold time at least a year for ultra-shield	1
AH0070, helium transfer line for liquid helium refills of cry magnet system	1
Gradient Spectroscopy	1
AH0206, GRASP II, Z-Gradient electronics with GAB accelerated spectroscopy in standard configuration at least 50 Gauss/cm	1
Variable Temperature: AH0003- <ul style="list-style-type: none"> • digital temperature control with range at least -200°C to +400°C • With stability 0.01°C/°C with at least 0 to 50°C with BTO2000 and BCU05 0.1°C/°C with BTO 2000 accuracy • Ambient temperature from 18°C to 40°C with gas flow control from at least 150 to 200/h in 15 • Manual control standard interface • Thermocouple/compensated connector at least PT100/BTO 2000 • 	1
Broadband sensor with 19F, PH3722-500, BBFO sensor head BB(F)-H-D 5mmA to Z, nuclei range 15N to 31P plus 19F with 1H decoupling <ul style="list-style-type: none"> • 5 MM sample diameter variable temperature at least – 150°C to +150°C • Standard RF Filter with automatic tuning and matching 	1
Standard QNP Switching device for BLAXH/BLAXH2H Transmitter	1
Laser Jet Printer of at least 1200 dots/inch, 24 to 30 ppm black & white Advanced USB 2.0 compatible port	1

	Spectrography aids 5mm, standard sample tubes at least 5mm 50 pcs, cap 5 mm; 100 pcs, spinner standard 5 mm; 1 sec	1
	Liquid nitrogen refill set 3 m length corrugated, silicon tube 3 meters long with two small 5 cm pcs suitable to nitrogen inlet ports	1
	inner glass insert for probe, quartz tube for 5mm sensor at least 5.575/ 6.10/64	1

Sr. No	Category II : Equipments	Quantity
21	Refractive index equipment	2
22	Beckmann thermometer <ul style="list-style-type: none"> Advanced version at least -20 to 20°C + 0.01°C 	5
23	Cryoscopy unit with spiral stirrer <ul style="list-style-type: none"> Range: -100 to 100°C Resolution ±0.01°C 	1
24	Double distillation plant Specifications: 5L/h, with conductivity and pH, ions, TOC indicators.	1
25	Oven Specifications: <ul style="list-style-type: none"> Size: ~ 28" x 28" x 28" Memmert type; Chrome plated inside 20 to 200°C Heating @ 5°C/min Shelve no. 2 	2
26	Thermostat/water bath Specifications: <ul style="list-style-type: none"> 0 to 100°C ± 0.01° 20 to 25L Capacity Front window transparent to view mounted glass equipment With stand, clamp, clips etc. 	2
27	Vacuum desiccators <ul style="list-style-type: none"> 4L - (no. 2) 3L - (no. 3) Non Vacuum desiccator 3L - (no. 1) 	6
28	Small accessories <ul style="list-style-type: none"> Bottle with cellulose acetate filter syringe filters with cellulose acetate filters 	5+5

29	Electric Variac 0-220 volt		10
	3 Amp = 3, 5 15 Amp = 2		
30	Standard vacuum drier with temperature, pressure and moisture control		2
31	ELECTRIC SHAKER		2
	Microprocessor controlled Bench top platform Shaker. <ul style="list-style-type: none"> • Shaking range 50 – 400 rpm with 2.54 cm diameter orbit. • Shaking control: ± 2 rpm PL microprocessor control. • Brush less motors and permanently lubricated ball bearing 		
32	<u>Standard SONICATOR</u>		1
	Specifications: <ul style="list-style-type: none"> • Operating frequency at least 33+-3KHz, • Input voltage rang at least 170V/AC-270V/AC, 50/60 Hz • Micro Control timer Range at least 0 to 30/99 min • Thermostatic controlled Temperature device 		
33	Advanced Version Conductivity Meter		1
	Range	0.1µS to 100 mS	
	Accuracy	± 0.001 µS	
	Temperature control	± 0.01 ⁰ C	
	Cell Constant	0.01 to 0.1 µS/cm	
	Temperature compensation	0.0 to 9.9 % per °C	
34	Advance CONDUCTIVITY – TDS METER		1
	Conductivity range	0.1µS to 100mS	
	Accuracy	± 0.001 µS	
	TDS range	0.1 ppm to 100ppt	
	Accuracy	±1% of F.S. ±1digit	
	Temperature range	0°C to 100°C	
	Accuracy	0.01°C or 0.021°C	
	Cell constant	Acceptable from 0.1 to 5.0	
	Temperature co-efficient	0° C to 100° C with PT 100 sensor	
	TDS factor	0.00 to 9.99 selectable	

	Power input	230V/AC $\pm 10\%$, 50Hz	
	Standard Accessories	• Conductivity cell with constant at least 0.01 to 0.05	
	Optional	Parallel port printer interface	
	Dimensions	Standard	
35	Filter pump assembly		2
36	Advanced flame photometer version		1
	Sensitivity (FS)		
	• Sodium(Na)	2 ppm	
	• Potassium(K)	1 ppm	
	• Lithium(Li)	7 ppm	
	• Calcium (Ca)	2 ppm	
	• Magnesium(Mg)	0.5 ppm	
	• Strontium (Sr)	0.5 ppm	
	Accuracy	$\pm 2\%$ of FSD	
	Display	In 0.0001 digit/LED	
	Sample Volume	3.5 ml	
	Aspiration time	30 Sec	
	Air pressure control	0.2 to 0.6 kg/cm ²	
	Standard input	At least 230V $\pm 10\%$, 50/60 Hz, 10VA	
Dimension	Standard		
Accessories	Na, K, Li and Ca filters, gas and Air tube.		
37	<p style="text-align: center;">Centrifuge machine of medium capacity</p> <p>Specifications:</p> <ul style="list-style-type: none"> • Automatic Timer, Power supply : 230 V and 50/60 Hz • Refrigerated centrifuge 1.5 ml eppendorf tube • Rotor 16 to 24 tubes • Maintenance free drive, dials and digital display • Speed from 100 to 15000 rpm in 100 to 500 increments • Continues mode selectable 		1
38	Advanced potentiometer		1

	<p>Specifications:</p> <ul style="list-style-type: none"> • Auto titration device • graphical display for titration trends • standard burette size at least 1,5,10,20, 50 ml with auto recognition • Dosing accuracy in 10^{-4} to 10^{-6} stroke • Standard KF titration 100 ppm to 100 % moisture levels • Electrode usable for acid, base, non-aqueous, complexo-matric, redox and KF titration 	
39	<p>Advance Gel permeation chromatography machine</p> <p>Isocratic Pump</p> <ul style="list-style-type: none"> • Flow at least 0.005 to 0.1 mL/min, 0.001 to 9.999 • Max pressure: 40 Mpa • Standard dual design • Pulsation comprehension “on and off” • Standard control mode and PC Controlled 	1
	<p>UV-VIS variable wave detector</p> <ul style="list-style-type: none"> • Detector range at least from 190 to 600 nm/600-800 nm • Noise limit at least $\pm 0.1 \times 10^{-5}$ AU • Reference and sample signals • Auto wavelength Calibration 	1
	<p>Manual injector/Auto start</p> <p>7 Internal PCI, single Channel GPC Software, Windows 2000, XP, MS Vista 32bit Digital acquisition: selectable chromatographs Bipolar range: 156,1250, 10000 mV, Integration frequency: at least up to 400 Hz, 24-bit</p>	1
	<p>Optional:RI Detector</p> <p>Range:± 1.00 1.75 Noise at least 2.5 n RIU with auto zero range Drift resolution: 0.2 micro – RIU/h</p>	1

	Temperature: at least 5°C to 80°C Cell volume at least 3-25 µL Max flow rate at least 0.2 to 3.0 mL/min, 10 mL/min for solvent Max Pressure: 50 Kpa Solvent contact parts: 50 Kpa Input: 60 W Dimension: standard																							
40	<p style="text-align: center;">Advance version Colorimeter</p> <p>Specifications:</p> <table border="1"> <tr> <td>Wavelength range</td> <td>400-700 nm with at least 8 optical filters</td> </tr> <tr> <td>Wavelength filters</td> <td>420-700nm</td> </tr> <tr> <td>Display modes</td> <td>%Transmittance, Absorbance</td> </tr> <tr> <td>Photometric resolution</td> <td>0.05%T, 0.0005 Absupto 1.999</td> </tr> <tr> <td>K-Factor range display</td> <td>0 to 1999</td> </tr> <tr> <td>Concentration range</td> <td>0 to 2 times the Abs</td> </tr> <tr> <td>Sample volume</td> <td>1ml in 4ml cuvette</td> </tr> <tr> <td>Sample holder</td> <td>10 and 12 mm² cuvettes</td> </tr> <tr> <td>Source</td> <td>6V, 3W</td> </tr> <tr> <td>Detector</td> <td>Hermetically photodiode</td> </tr> <tr> <td>Input</td> <td>230V± 10%, 50/60 Hz</td> </tr> </table>	Wavelength range	400-700 nm with at least 8 optical filters	Wavelength filters	420-700nm	Display modes	%Transmittance, Absorbance	Photometric resolution	0.05%T, 0.0005 Absupto 1.999	K-Factor range display	0 to 1999	Concentration range	0 to 2 times the Abs	Sample volume	1ml in 4ml cuvette	Sample holder	10 and 12 mm ² cuvettes	Source	6V, 3W	Detector	Hermetically photodiode	Input	230V± 10%, 50/60 Hz	1
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Sr. No	Category III : Minor Equipments/Glasswares/Chemicals	Quantity	
41	Category : Glass wares, chemicals, plastic wares and other misc. items	On rate contract	
42	Membranes, filtering papers, spraying equipments	On rate contract	