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**TENDER DOCUMENT FOR “High Performance Quadrupole Inductively Coupled
Plasma Mass Spectrometer (ICPMS) with Collision and Reaction Cell”**

Ref. No. TIFR/PD/IC19-15/PUB

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TENDER NOTICE

BID DOCUMENT
[Two bid system]

21st August, 2019

On behalf of the Director, TIFR, Mumbai, INDIA, bids are invited under two bid system from reputed manufacturers or their authorized agents for the supply / installation/ commissioning of the following item(s) :-

SI No	Item Description	Enquiry Ref. No.	Estimate cost of Tender	Tender Fees	EMD
01	High Performance Quadrupole Inductively Coupled Plasma Mass Spectrometer (ICPMS) with Collision and Reaction Cell (Specifications Attached)	TIFR/PD/IC19-15/PUB	126 Lakhs	Rs. 700/- \$ 100/-	Rs. 2,52,000/- \$ 3550/-

Last date & Time for submission of bids : 25.09.2019 17.30 hours
Date/Time for opening of Technical bid : 26.09.2019 15.00 hours

The cost of tender documents and EMD to be submitted as stated in General Conditions of Contract (GCC) at clause No. 6.1 and 6.2.

Director, TIFR reserves the right to accept/ reject any or all tenders either in part or in full without assigning any reasons there for.

Purchase Officer (TIFR, Mumbai)

Note:

- All the bidders are requested to please note that all future amendments/corrigendum will be published on TIFR website and no separate advertisement will be released for the same. Bidders are therefore requested to regularly visit our website for any such updates.

INSTRUCTION TO BIDDERS (ITB)

INTRODUCTION

1. Eligibility Criteria:

- 1.1 This invitation for bids is open to Original Manufactures (OEM) /Authorized Dealers/Authorized Distributors/Subsidiary Indian Company of the OEM /Indian Agent on behalf of the Foreign Manufacturer or Principals of the tendered equipment. The bidder must be legal entity having a Permanent Account Number (PAN), Certificate of Incorporation, and Valid GST Registration Certificate is to be submitted.
- 1.2 When a firm sends quotation for an item manufactured by some different company, the firm is also required to attach in its quotation, the manufacturer's authorization certificate.
- 1.3 Indian Agent cannot represent two different foreign principals for the same item in one tender.
- 1.4 Such equipment's must be of the most recent series/models incorporating the latest improvements in design.
- 1.5 That the Bidder will assume total responsibility for the fault-free operation of equipment, application software, if any, and maintenance during the warranty period and provide necessary maintenance services for one years after end of warranty period if required.
- 1.6 Bidders who meet the criteria given above are subject to be disqualified, if they have made untrue or false representation in the forms, statements and attachments submitted in proof of the qualification requirements or have a record of poor performance, not properly completing the contract, inordinate delays in completion or financial failure, etc.
- 1.7 Any additional bid participation criteria / eligibility conditions etc. mentioned in the Technical Specifications sheet will also form part of the Qualification Requirements along with those mentioned in this chapter.
- 1.8 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids.

2. Cost of Bidding

- 2.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

THE BIDDING DOCUMENTS

3. Cost of Bid Document

- 3.1 As mentioned on NIT.

4. Contents of Bid Document

- 4.1 The Bidder is expected to examine all instructions, forms, terms (ITB/GCC/SCC etc.), and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive shall result in rejection of the bid.

5. Amendment to Bid Document

- 5.1 The prospective bidders are **required** to keep a watch on the CPPP/TIFR website

w.r.t. any amendment to the tender document or to clarification to the queries raised by the bidders up to seven days prior to the opening of the tender. The Purchaser reserves the right to reject the bids if the bids are submitted without taking into account these amendments/clarifications. In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the Purchaser, at its discretion, may extend the deadline for the submission of bids.

PREPARATION OF BIDS

6. Documents Comprising the Bid

- 6.1 Part "A" (Technical Bid) consisting of Technical Bid with Commercial Terms and Part "B" (Financial Bid) consisting of only Price shall be submitted in separate sealed envelopes duly superscribed with the tender enquiry number, and the due date in Bold letters, addressed to the purchase Officer, Tata Institute of Fundamental Research, Homi Bhabha Road, Colaba, Mumbai – 400 005. The envelopes should be clearly marked on top as either Part "A" or Part "B"

The two sealed covers should be further put in a master cover superscribed with the Tender Enquiry No., Duet date in bold letters, addressed to the Purchase Officer, Tata Institute of Fundamental Research, Homi Bhabha Road, Colaba, Mumbai – 400 005. The sealed master envelop has to be delivered by hand/Courier at the security Gate Officer of TIFR on or before due date.

- 6.2 In case the PART 'A' and Part 'B' bids are not sealed in separate envelopes the tender will be rejected.
- 6.3 The Techno-Commercial Unpriced Bid prepared by the bidder shall include the following without indicating the price in the Bid form.
- (i) Submit Proof of online EMD/Tender fees transfer to accounts as specified in the invitation to bids.
 - (ii) Service Support Details Form.
 - (iii) T & C Deviation Statement Form.
 - (iv) Technical Specification Compliance Form.
 - (v) Performance Statement Form
 - (vi) Manufacture's Authorization Form.
 - (vii) Documentary evidence establishing that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted as per qualification requirements/criteria.
 - (viii) Bid Form
 - (ix) The Comprehensive Annual Maintenance Contract (CAMC) terms & conditions detailing the exclusions, if any and the estimated life of the equipment offered.
 - (x) If the demonstration of the goods/equipment is deemed essential as per the technical requirements then confirmation reflecting willingness to arrange demonstration of the equipment offered free of charge at TIFR or any other location on a mutually agreeable date, prior to opening of priced bid to ascertain conformity with the tendered specifications.
- 6.4 The Financial/Price Bid shall comprise of the Techno Commercial Bid with price indicated in the bid form. Also, Price must be quoted strictly as per the attached Price Bid Format.

7. Bid Prices

- 7.1 The Bidder shall indicate the unit prices and total bid prices of the goods it proposes to supply under the order and enclose it with the priced bid.
- 7.2 Prices indicated shall be entered separately in the following manner (**For Indigenous Items**):
- (i) The price of the goods, quoted (ex-works, ex-factory, ex-showroom, ex-warehouse, or off-the-shelf, as applicable), including all duties and sales and other taxes already paid or payable

- (ii) **Taxes:** TIFR is exempted from paying of Custom Duty under the notification No. 51/96 dated 23.07.1996, for all procurement/supply meant exclusively for Educational, Scientific and research purpose, Whenever the exemption certificate not honored by the authorities, the applicable duty will have to be paid. Hence Custom duties, if any, should be shown separately.
TIFR is public funded research institute and entitled to concessional rate of GST @ 5% for certain items supplied for research purpose vide notification no. 47/2017 and 45/2017 dated 14th Nov, 2017. The offer should be submitted after fully considering the above notification. **No other charges except those mentioned clearly in the bid will be admissible.**
- (iii) Rates should be quoted F.O.R. at site at TIFR, Mumbai inclusive of packing, forwarding, loading & unloading, shifting up to the site of installation at TIFR, installation and commissioning charges etc. If ex-works prices are quoted then packing, forwarding, documentation, freight and insurance charges must be clearly mentioned separately and clearly. Vague terms like packing, forwarding, transportation etc. without mentioning the specific amount/ percentage of these charges will not be accepted. Such offers shall be treated as incomplete and rejected. Where there is no mention of packing, forwarding, freight, insurance charges, such offers shall be assumed as all-inclusive of above charges.

7.3 Prices indicated shall be entered separately in the following manner (For Imported Items, quote the DDP price all-inclusive of all charges as given below):

- (i) Preferably the price of the goods quoted shall be inclusive of export packing, forwarding, inland freight, airfreight, Insurance, custom clearance charges, customs duty, loading & unloading, delivery, shifting if required up to the site/laboratory at TIFR, installation and commissioning, training and insurance from warehouse to warehouse (up to site of installation of TIFR). And other local costs incidental to delivery of the goods up to the site of installation at TIFR. However, the Institute will provide Original Duty Exemption Certificate, copy of DSIR Registration certificate etc. if required by the vendor.

7.4 Prices quoted by the bidder shall remain fixed during the entire period of contract and shall not be subject to variation on any account. A bid submitted with an adjustable price the bid will be treated as non - responsive and rejected.

8. Bid Currencies

8.1 Prices shall be quoted in Indian Rupees or in freely convertible foreign currency preferably in **USD (\$), Euro (€), Yen (¥), GBP (£), SGD & AUS (\$)** wherever possible for correct evaluation during comparison.

9. Documents Establishing Bidder's Eligibility and Qualifications

- 9.1 Pursuant to TIFR, the bidder shall furnish, as part of the bid, documents establishing the bidder's eligibility to bid and qualification to perform the contract if the bid is accepted.
- 9.2 That the bidder meets the qualification criteria listed in Bid Document.

10. Documents Establishing Goods 'Eligibility and Conformity to Bid Document

The documentary evidence of the goods and services eligibility shall consist of a statement on the country of origin of the goods and services offered which shall be confirmed by a certificate of origin at the time of shipment.

10.1 Specifications are basic essence of the product. It must be ensured that the offers are strictly as per specifications. At the same time, it must also be kept in mind that

merely copying our specifications in the bid shall not make firms eligible for consideration. The documentary evidence of conformity of the goods and services to the Bid Document may be in the form of literature, drawings, data, and shall consist of:

- (i) A detailed description of the essential technical and performance characteristics of the goods as per specifications;
- (ii) A list giving full particulars, including available sources and current prices, of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods for a period of two years, following commencement of the use of the goods by the Purchaser; and
- (iii) An item-by-item commentary on the Purchaser's technical specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the technical specifications.

11. Period of Validity of Bids

Bids shall remain valid for 180 days from the date of opening the bid prescribed by the Purchaser. A bid valid for a shorter period may be rejected by the Purchaser as non-responsive.

GENERAL CONDITIONS OF CONTRACT (GCC)

1. Definitions

- (i) In this Contract, the following terms shall be interpreted as indicated:
- (i) "The Order" means the Purchase Order placed by the Purchaser including all the attachments and appendices thereto and all documents incorporated by reference therein;
 - (ii) "The Contract Price" means the price payable to the Supplier under the Order for the full and proper performance of its contractual obligations;
 - (iii) "The Goods" means all the equipment, machinery, and/or other materials, which the Supplier is required to supply to the Purchaser under the Contract;
 - (iv) "Services" means services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other obligations of the Supplier covered under the Contract
 - (v) "GCC" mean the General Conditions of Contract contained in this section.
 - (vi) "SCC" means the Special Conditions of Contract.**
 - (vii) "The Purchaser" as specified in Special Conditions of Contract.
 - (viii) "The Purchaser's country" is "India".
 - (ix) "The Supplier" means the individual or firm supplying the Goods and Services under this Contract.
 - (x) "Day" means calendar day.
 - (xi) TIFR/Director/Purchaser represents same entity.

2. Application

- 2.1 These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

3. Standards

- 3.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications. When no applicable standard is mentioned, the authoritative standard appropriate to the Goods' country of origin shall apply. Such standards shall be the latest issued, by the concerned institution.

4. Use of Contract Documents and Information

- 4.1 The bidder shall not, without the Purchaser's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far, as may be necessary for purposes of such performance.

5. Patent Rights

- 5.1 The bidder shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof in India.

6. Submission of the bids, EMD & Tender Fees:

- 6.1 A Money (**EMD**) for **Rs. 2,52,000/- (for Indian Supplier)** and **USD 3550/- (for Foreign Supplier)** has to be deposited in the form of Demand Draft, Fixed Deposit Receipt, Bankers cheque or through online transfer through bank (Bank details to be provided on demand) in favour of Registrar, Tata Institute of Fundamental Research, Mumbai to be enclosed along with the Technical Bid (Part – A).
Also, in lieu of above, the bidder can submit the EMD in the form of "**Bid Securing Declaration**" as per the attached format. The declaration also should be submitted on the company letter head duly signed by officer authorized to submit the bid.

EMD shall be interest free and it will be refunded to the unsuccessful bidder without any interest. EMD will be forfeited if the bidder withdraws or amend impairs or derogates from the tender in any respect.

6.2 **A Tender fee of Rs. 700/- (for Indian Supplier) and USD 100 (For foreign supplier)** (Nonrefundable) has to be deposited in the form of Demand Draft, Bankers cheque or through online transfer through bank (Bank details to be provided on demand) in Favour of Registrar, Tata Institute of Fundamental Research, Mumbai to be enclosed along with the Technical Bid (Part – A).

6.3 **Micro and Small Enterprises (MSEs):**

6.3.1 Micro and Small Enterprises (MSE) must, along with their offer, provide proof of their being registered as MSE (indicating the terminal validity date of their registration) for the item tendered, with any agency mentioned in the notification of the Ministry of Micro, Small and Medium Enterprises (Ministry of MSME)

6.3.2 The MSEs are exempted from payment of earnest money and tender fees subject to furnishing of relevant valid certificate for claiming exemption as per privilege rules of Government of India.

6.3.3 The bidder submits registration of Udyog Adhar Memorandum (UAM) by Ministry of Micro Small and Medium Enterprises (MSME) vendors on Central Public Procurement Portal (CPPP). The bidders who fail to submit UAM number shall not be able to avail the benefits available to MSEs as contained in Public Procurement Policy for MSEs Order 2012 issued by MSME.

7. **Inspections and Tests**

7.1 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser.

8. **Packing**

8.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

8.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the Purchaser.

8.3 Packing Instructions: Each package will be marked on three sides with proper paint/indelible ink, the following:

- (i) Item Nomenclature
- (ii) Order/Contract No.
- (iii) Country of Origin of Goods
- (iv) Supplier's Name and
- (v) Packing list reference number

9. **Delivery and Documents**

9.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified by the Purchaser in the order within the period as indicated in the **9.2**. The details of shipping and / or other documents to be furnished by the supplier are specified in **9.2**.

9.2 Standard Delivery is **THREE MONTHS**. The delivery is to be strictly made as per the delivery schedule stated in the Purchase Order. Within 24 hours of shipment, the supplier shall notify the purchaser and the insurance company by cable/telex/fax/e

mail the full details of the shipment including contract number, railway receipt number/ AWB etc. and date, description of goods, quantity, name of the consignee, invoice etc. The supplier shall mail the following documents to the purchaser with a copy to the insurance company:

- (i) Three copies of the Supplier invoice showing contract number, goods' description, quantity, unit price, total amount;
 - (ii) Acknowledgment of receipt of goods from the consignee(s) by the transporter;
 - (iii) Insurance Certificate if applicable;
 - (iv) Manufacturer's/Supplier's warranty certificate;
 - (v) Inspection Certificate issued by the nominated inspection agency, if any, and the Supplier's factory inspection report; and
 - (vi) Certificate of Origin.
 - (vii) Two copies of the packing list identifying the contents of each package.
- 9.3 The above documents should be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.

10. Insurance

10.1 The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery.

10.2 For delivery of goods at the purchaser's premises, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from "warehouse to warehouse"(final destinations) on "All Risks" The insurance shall be valid for a period of not less than three months after installation and commissioning. ***However, in case of orders placed on EX-WORKS/FOB/FCA basis, the purchaser shall arrange Insurance.***

11. Transportation

11.1 Where the bidder is required under the Contract to transport the Goods to a specified place of destination within India defined as Project site, transport to such destination in India including insurance, as shall be specified in the Contract, shall be arranged by the Supplier, and the related cost shall be included in the Contract Price.

12. Spare Parts

12.1 As specified in the SCC, the Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

- (i) Such spare parts as the Purchaser may elect to purchase from the Supplier, provided this selection shall not relieve the Supplier of any warranty obligations under the Contract;

12.2 Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods, such as gaskets, plugs, washers, belts etc. Other spare parts and components shall be supplied as promptly as possible but in any case within six months of placement of order.

12.3 Furnishing of one set of detailed operations & maintenance manual.

13. Warranty

13.1 The Supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and those they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect arising from manufacturing, design, materials or workmanship (except when the design and/or material is required by the Purchaser's Specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied

Goods in the conditions prevailing in the country of final destination. **The warranty should be comprehensive and on site.**

- 13.2 **This warranty shall remain valid for 05 years after the Goods or any portion thereof as the case may be, have been delivered, installed & commissioned and accepted at the final destination indicated in the Contract.**
- 13.3 **Warranty period shall be 05 years from date of successful installation of equipment.** The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier's discretion shall apply making such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at supplier own cost and expense and to carry out further performance tests. **The warranty should be comprehensive on site.**
- 13.4 **If during the period of warranty any component or spare part is needed to be imported, all associated cost for replacement shall be borne by the supplier including the cost of customs duty, customs clearance charges etc.**

14. **Payment**

- 14.1 **In case of Importer**, 80% payment shall be made through irrevocable L/C on presentation of complete and clear shipping documents and balance 20% of the amount shall be released after the receipt, installation, commissioning and acceptance of the equipment and on submission of "**Performance Bank Guarantee**" or "**Standby Letter of Credit**" for an amount equivalent to 10% of the Purchase Order Value. The PBG or "Standby Letter of Credit" shall be valid for a period of **60 days** beyond the date of warranty period.
Bank Guarantee (BG) will not be accepted directly from Supplier, it should be received through the banker of supplier.
In exception case, BG will be accepted directly from the party/supplier provided a covering letter with Xerox copy of BG is received directly from banker of supplier. Without the receipt of BG along with the letter from Bank, the payment will not be released.
- 14.2 Agency commission, if any shall be paid after satisfactory installation & commissioning of the goods.
- 14.3 **In case of Local Supply**, the Payment Term Will be net 30 days.

15. **Prices**

- 15.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in the bid.
- 15.2 The Price quoted for Import item must be on following basis:
- a) Ex-Work/Factory duly packed airworthy /Seaworthy and of international standard.
 - b) FOB/FCA
 - c) CIF Indian Port (all-inclusive i.e. Cost of Goods, Packing, Insurance, Inland transportation, freight etc.)
 - d) DDP TIFR (All-inclusive price)

For local item/supply, offer should be on FOR basis (i.e. total landed cost for delivery at TIFR, Mumbai)

The dimension of the item (viz. H, W, L, Weight etc.) shall be specifically stated and also

mention whether the mode of shipping the item is Airworthiness/Seaworthiness or both. Accordingly, the mode of shipment will be decided by TIFR.

Price must be quoted strictly as per the Price Bid Format attached herewith.

16. Subcontracts

- 16.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in his original bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.
- 16.2 Sub-contract shall be only for bought-out items and sub-assemblies.

17. Delays in the Supplier's Performance

- 17.1 Since time is the essence of the contract, delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser in the Contract.

18. Penalty

- 18.1 If the Supplier fails to deliver any or all of the Goods or to perform services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to 0.5% per week and the maximum deduction is 10% of the contract price.

19. Termination for Default

- 19.1 The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part:
 - (i) If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the order, or within any extension thereof granted by the Purchaser.
 - (ii) If the Supplier fails to perform any other obligation(s) under the Contract.
 - (ii) If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- 19.2 For the purpose of this Clause:
 - (i) "Corrupt practice" means the offering, giving, receiving or soliciting of gratification to influence the action of a public official(s) in the procurement process or in contract execution.
 - (ii) "Fraudulent practice" means a misrepresentation off acts in order to influence a procurement process or the execution of a contract to the detriment of the purchaser, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the purchaser of the benefits of free and open competition;"

20. Force Majeure

- 20.1 The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 20.2 For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, act of God and freight embargoes.

21. Resolution of Disputes

- 21.1 The Purchaser and the supplier shall make every effort to resolve amicably by direct

informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

21.2 If, after thirty (30) days from the commencement of such informal negotiations, the Purchaser and the Supplier have been unable to resolve amicably a contractual dispute, either party may require that the dispute be referred for resolution to the formal mechanisms. These mechanisms may include, but are not limited to, conciliation mediated by a third party, adjudication in an agreed national or international forum, and national or international arbitration.

21.3 In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Director TIFR and if he is unable or unwilling to act, to the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.

(i) In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause

(a) Above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.

22. Taxes and Duties

22.1 Suppliers shall be entirely responsible for all taxes, duties, license fees, road permits, etc., incurred until delivery of the contracted Goods to the Purchaser. However, GST in respect of the transaction between the Purchaser and the Supplier shall be payable as agreed, if so stipulated in the order.

23. Inspection and Tests: Inspection and tests prior to shipment of Goods and at final acceptance are as follows:

23.1 After the goods are manufactured and assembled, inspection and testing of the goods shall be carried out at the supplier's plant by the supplier, prior to shipment to check whether the goods are in conformity with the technical specifications attached to the purchase order. Manufacturer's test certificate with data sheet shall be issued to this effect and submitted along with the delivery documents. The purchaser shall be present at the supplier's premises during such inspection and testing by purchaser. The location where the inspection is required to be conducted should be clearly indicated. The supplier shall inform the purchaser about the site preparation, if any, needed for installation of the goods at the purchaser's site at the time of submission of order acceptance.

23.2 The acceptance test will be conducted by the Purchaser, their consultant or other such person nominated by the Purchaser at its option after the equipment is installed at purchaser's site in the presence of supplier's representatives. The acceptance will involve trouble free operation and ascertaining conformity with the ordered specifications and quality. There shall not be any additional charges for carrying out acceptance test. No malfunction, partial or complete failure of any part of the equipment is expected to occur. The Supplier shall maintain necessary log in respect of the result of the test to establish to the entire satisfaction of the Purchaser, the successful completion of the test specified.

23.3 In the event of the ordered item failing to pass the acceptance test, a period not exceeding one week will be given to rectify the defects and clear the acceptance test, failing which the Purchaser reserve the right to get the equipment replaced by the Supplier at no extra cost to the Purchaser.

23.4 Successful conduct and conclusion of the acceptance test for the installed goods and equipment(s) shall also be the responsibility and at the cost of the Supplier.

24. Manuals and Drawings

- 24.1 Before the goods are taken over by the Purchaser, the Supplier shall supply operation and maintenance manuals. These shall be in such details as will enable the Purchaser to operate, maintain, adjust and repair all parts of the equipment as stated in the specifications.
- 24.2 The Manuals shall be in English in such form and numbers as stated in the contract.
- 24.3 Unless and otherwise agreed, the goods/ equipment shall not be considered to be completed for the purposes of taking over until such manuals and drawing have been supplied to the Purchaser.

25. Applicable Law: The place of jurisdiction would be Mumbai, INDIA.

26. Notices: For the purpose of all notices, the following shall be the address of the Purchaser and Supplier.

OPENING AND EVALUATION OF BIDS

27. Opening of Bids by the Purchaser

- 27.1 The Purchaser will open all Techno Commercial Un-Priced Bids, as per the schedule given in invitation to bids.
- 27.2 In the event of the specified date of Bid opening being declared a holiday for the Purchaser, the Bids shall be opened on the next working day.
- 27.3 The Financial/price bid of technically qualified bidders only will be opened at the date and time to be informed to the qualified bidders.

28. Clarification of Bids

- 28.1 To assist in the examination, evaluation and comparison of bids, the Purchaser may, at its discretion ask the bidder for any clarification(s) of its bid. The request for clarification and the response shall be in writing and no change in the price substance of the bid shall be sought, offered or permitted. However, no post Bid clarifications at the initiative of the Bidder shall be entertained.

29. Preliminary Examination

- 29.1 The Purchaser will examine the bids to determine whether they are complete, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order. Bid from suppliers, without proper Authorization from the manufacturers and from Indian agents without DGS&D Registration Certificate in case the items fall under the restricted list of the current EXIM/Foreign.
- 29.2 The Purchaser may waive any minor informality, non-conformity, or irregularity in a bid, which does not constitute a material deviation, provided such a waiver, does not prejudice or affect the relative ranking of any Bidder.
- 29.3 Prior to the detailed evaluation, the Purchaser will determine the substantial responsiveness of each bid to the Bid Document. For purposes of these Clauses, a substantially responsive bid is one, which conforms to all the terms and conditions of the Bid Document without material deviations.
- 29.4 On downloading from the website, the language of standard clauses etc. mentioned in this 'Bid Document' should not be tampered with/ changed/modified in any manner whatsoever. If any such modification etc. is noticed the purchaser at any stage, the bid shall be rejected immediately and EMD shall stand forfeited.

30. Conversion to Single Currency

- 30.1 To facilitate evaluation and comparison, the Purchaser will convert all bid prices expressed in the amounts in various currencies in which the bid prices are payable to Indian Rupees at the selling exchange rate established by any bank in India as

notified in the Newspapers/banks' website on the date of Price/Financial Bid opening.

31. Evaluation & Comparison of Bids

31.1 For the bids qualifying for the technical evaluation which have been found to be responsive the evaluation & comparison shall be made as under:

(i) Indigenous Offers

The final landed cost of purchase after all discounts, freight, forwarding, insurance (warehouse to warehouse), custom clearing charges taxes etc. shall be the basis of evaluation.

(ii) Imported Offers

The CIP price shall be the basis of evaluation (warehouse to warehouse basis)

(iii) Imported Vs. Indigenous Offers

The final landed cost (warehouse to warehouse) of purchase taking into account, freight, forwarding, insurance, taxes etc. (CIF/CIP with customs duty, customs clearance charges, Bank/LC charges, transportation, delivery upto the site of installation at TIFR, Mumbai as per available records with TIFR for imported goods) shall be the basis of evaluation.

31.2 Conditional tenders/discounts etc. shall not be accepted. Rates quoted without attached conditions (viz. Discount shaving linkages to quantity, payment terms etc.) will only be considered for evaluation purpose. Thus conditional discounted rates linked to quantities and prompt/advance payment etc., will be ignored for determining *inter-se* position. The Purchaser however reserves the right to use the discounted rate/rates considered workable and appropriate for counter offer to the successful tenderers.

32. Contacting the Purchaser

32.1 Any attempt by any Bidder to influence the Purchaser in its decisions on bid evaluation, bid comparison or contract award may result in rejection of the bid.

33. Purchaser's Right to Vary Quantities at Time of Award

33.1 The Purchaser reserves the right at the time of Contract award to increase or decrease the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions.

34. Purchaser's Right to Accept Any Bid and to Reject Any or All Bids

34.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract without there by incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Purchaser's action.

34.2 Evidence regarding credibility of stable performance and maintenance service capability must be provided. The purchaser reserves the right to make judgment on this score and reject bids that, in the purchaser's view, do not carry sufficient credibility for performance and/or service.

35. Notification of Award

35.1 Prior to expiry of the period of bid validity, the purchaser will notify the successful bidder in writing by Purchase Order.

35.2 Upon the successful Bidder's furnishing of performance security, the purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security.

36. Order Acceptance

36.1 The successful bidder should submit acceptance of the Purchase Order immediately but not later than 21 days in any case from the date of issue of the Purchase Order failing which it shall be presumed that the vendor is not interested and his bid security is liable to be forfeited.

37. Performance Security

- 37.1 The successful Bidder shall furnish the performance security equivalent to 10% of the cost of equipment, in the form of Bank Guarantee from any Nationalized Bank only after installation/ commissioning of the equipment(s).**
- 37.2 Bank Guarantee (BG) will not be accepted directly from supplier, it should be received through the banker of Supplier.
- 37.3 In exception case, BG will be accepted directly from the party/supplier provided a covering letter with Xerox copy of BG is received directly from banker of supplier.
- 37.4 Without the receipt of BG along with the letter from Bank, the payment will not be released.

38. Buy Back Items

- 38.1 If the goods are to be quoted on 'Buy Back' basis, then bidders must offer a separate buy back price for the old item. The Purchaser reserves the right to place the order with or without 'buy back' option. If required, the condition of old buy back goods may be examined by the bidder before submission of its bid.

39. Progress of Supply

- 39.1 Supplier shall regularly intimate progress of supply, in writing, to the Purchaser as under:
- (i) Quantity offered for inspection and date;
 - (ii) Quantity accepted/rejected by inspecting agency and date;
 - (iii) Quantity dispatched/delivered to consignees and date;
 - (iv) Incidental services have been satisfactorily completed with date;
 - (v) Number of rectifications/repairs/replacements effected/completed on receipt of any communication from consignee/Purchaser with date;
 - (vi) Date of completion of entire Contract including incidental services, if any; and
 - (vii) Date of receipt of entire payments under the Contract (In case of stage-wise inspection, details required may also be specified).

40. Right to Use Defective Goods

- 40.1 If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.

41. Supplier Integrity

- 41.1 The Supplier is responsible for and obliged to conduct all contracted activities in accordance with the Contract using state of the art methods and economic principles and exercising all means available to achieve the performance specified in the contract.

42. Training

- 42.1 The Supplier is required to train designated Purchaser's technical and end user personnel to enable them to effectively operate the total equipment.
- 42.2 The training shall be initially carried out during installation & commissioning for operating and maintaining the system. The specific training on application shall also to be imparted by the supplier. The duration of such training need to be finalized with the end user of the equipment.
- 42.3 In case any supplier is not willing to impart such training, the bid shall be treated as non- responsive.

I Purchaser:

**Director,
Tata Institute of Fundamental Research,
Homi bhabha Road, Navy Nagar,
Colaba, Mumbai – 400 005.**

ii Supplier:

(To be filled in by the supplier)

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

SPECIAL CONDITIONS OF CONTRACT (SCC)

In addition to the General Conditions of contracts contained in above, the following special conditions shall apply to contract for supply of plant/machinery/manufactured equipment. These special conditions where they differ from the general conditions in part I shall override the latter.

1. Final Test:

The final test as to performance and guarantee shall commence immediately after completion of installation.

2. REJECTION OF DEFECTIVE CONSIGNMENT:

If the completed instrument or any portion thereof before it is finally accepted is found to be defective or fails to fulfill the requirements of the contract, the purchaser shall give supplier notice setting forth the details of such defects or failure and the supplier shall forthwith rectify the defective instrument to be replaced in place of plant or alter the same to make it comply with the requirements of the contract. Should the supplier fail to do so within a reasonable time the Purchaser may reject and replace at the cost of the supplier, whole or any portion of the plant as the case may be, which is defective or fails to fulfill the requirements of the contract. Such replacement shall be carried out by the purchaser with a reasonable time and the reasonable price and where reasonably possible to the same specifications and under competitive conditions. The supplier shall be liable to pay to the Purchaser the extra cost if any of such replacement delivery and or/or erected as provided for in the contract, such extra cost being the difference between the price paid by the purchaser, under the provisions above mentioned for such replacement and the contract price for them. Supplier shall refund to Purchaser any sum paid by the Purchaser to the supplier in respect of such defective instrument to be replaced in place of instrument.

3. WARRANTY:

The supplier has to provide warranty for a period as specified in the technical specifications after the instrument has been put into operation. The supplier shall be responsible for any defects that may develop under conditions provided for by the contract and under proper use, arising from faulty materials, designs or workmanship in the plant or from faulty erection of the instrument by the supplier, but not otherwise and shall rectify such defects at his own cost when called upon to do so by the purchaser who shall inform in writing such defects.

If it becomes necessary for the supplier to replace or renew any defective portions of the instrument for the purpose of rectification under the clause, the provisions of this clause shall apply to the portions of the plant of replaced or renewed till the end of the above mentioned period. If any defects be not rectified within reasonable time, the, purchaser may proceed to get the work done at supplier's risk and expenses but without prejudice to any other rights which the Purchaser may have against the supplier in respect of such defect.

4. AVAILABILITY FOR SPARE PARTS & Service Support:

The supplier shall undertake that before going out of production of the spare parts he will give adequate advance notice to the Purchaser so that the latter may order his requirement of spares in one lot if how so desires.

The supplier shall further guarantee that if he goes out of production of spare parts, then he will make available blue-prints, drawings of spare parts and specifications of material at no cost to the Purchaser, if and when required in connection with the equipment to enable Purchaser to fabricate or procure spare parts from other sources.

The provision of the clause shall remain effective and binding upon the supplier even after the completion or expiration of the contract and till the instruments supplied under the contract is in use by the Purchaser.

Details of service support facilities that would be provided after the warranty period should be submitted in the Service Support Details Form.

That, in the case of a Bidder not doing business in India, the Bidder is/or will be (if successful) represented by an Agent in India who shall be equipped and able to carry out the Supplier's maintenance, repairs and spare parts, stocking obligations prescribed by the conditions of the contract.

5. TRAINING:

The supplier has to provide complete training at site for operation (including trouble shooting) of the instrument.

BID FORM

To,
The Director,
Tata Institute of Fundamental Research,
Homi Bhabha Road, Navy Nagar, Colaba,
Mumbai – 400 005.

Dear Sir,

Having examined the bidding document, the receipt of which is hereby duly acknowledged, we the undersigned offer to supply and deliver _____ (Description of Goods) in conformity with the said bidding documents for a sum or such other sums as may be ascertained from the bid.

We undertake if our bid is accepted, to deliver the goods in accordance with the delivery schedule specified.

If our bid is accepted we will obtain the guarantee of the bank as specified in SCC for the due performance of the contract, in the form prescribed.

We agree to abide by this bid for requisite period as fixed for bid opening as per the instructions to the bidders. Further it shall remain binding upon us and accepted at any time before the expiry of that period.

Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award shall constitute a binding contract between us.

Commission and gratuities, if any, paid or to be paid by us to the agents relating to this bid, and to contract execution if we are awarded the contract, are listed below:

Name and address of agent	Amount in Rupees	Purpose of Commission
(if none, state "none")		

We understand that you are not bound to accept the lowest or any bid you may

receive. Dated this _____ day of _____ 20_____

Signature _____
In the capacity of _____

Duly authorized to sign the bid for and on behalf of _____

MANUFACTURERS' AUTHORIZATION FORM

No. _____

Date: _____

**Director,
Tata Institute of Fundamental Research,
Homi Bhabha Road, Navy Nagar,
Colaba, Mumbai – 400 005.**

Dear Sir:

We _____ who are established and reputable manufacturers of having factories/works at _____ (*address*) do hereby authorize M/s _____ (*Name and address of Agent*) to submit a bid, negotiate and receive the order from you against your tender enquiry mentioned on front page.

No company or firm or individual other than M/s _____ is authorized to bid, and conclude the contract in regard to tender.

We hereby extend our full guarantee and warranty as per Clause 10.2 (iv) of the General Conditions of Contract and Clause of the Special Conditions of Contract for the goods and services offered by the above firm.

Yours faithfully,

(Name)

(Name of manufacturers)

Note: This letter of authority should be on the **letterhead of the manufacturer** and should be signed by a person competent and having the power of attorney to bind the manufacturer. It should be included by the Bidder in its techno-commercial un priced bid.

Bid Securing Declaration
(to be submitted on company's letter head)

I/We the undersigned hereby declare that if we withdraw or modify the bids during the period of its validity, or if we are awarded the contract and fail to sign the contract, or to submit a performance security before the deadline defined in the request for bids document or fail to execute the contract, we will be suspended for the period of time specified in the request for bids document from being eligible to submit bids for contracts with the entity that invited the bids.

Name and Signature
of Authorized Signatory
and Company Seal

PERFORMANCE BANK GUARANTEE

In consideration of the TATA INSTITUTE OF FUNDAMENTAL RESEARCH (hereinafter called "The TIFR") having agreed under the terms and conditions of Purchase Order No..... dated..... made between. TIFR...and M/s..... (hereinafter called "the said Contractor{s} "). for the PurchaseOrder..... (hereinafter called "the said Purchase Order") having agreed to production of an irrevocable bank Guarantee for Rs. (Rupees only), as a security / guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said Purchase Order, we(Indicate the name of the Bank) (hereinafter referred to as "the Bank") hereby undertake to pay to the TIFR an amount not exceeding Rs. (Rs..... only) on demand by the TIFR.

2. We (indicate the name of Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the TIFR stating that the amount claimed is required to meet the recoveries due or likely to be due from the said Contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (Rupees.....only).

3. We, the said bank, further undertake to pay to the TIFR any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any Court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Contractor(s) shall have no claim against us for making such payment.

4. We..... (indicate the name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Purchase Order and that it shall continue to be enforceable till all the dues of the TIFR under or by virtue of the Purchase order have been fully paid and its claims satisfied or discharged or Purchase Officer on behalf of the TIFR certifies that the terms and conditions of the said Purchase Order have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

5. We (indicate the name of Bank) further agree with the TIFR that the TIFR shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Purchase Order or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the TIFR against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Purchase Order and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act of omission on the part of the TIFR or any indulgence by the TIFR to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

7. We, (indicate the name of Bank) lastly undertake not to revoke this guarantee except with the previous consent of the TIFR in writing.

8. This guarantee shall be valid up to, unless extended on demand by TIFR. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. (Rupees only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Signed and sealed

Dated the day of for (indicated the name of Bank)

TECHNICAL COMPLIANCE STATEMENT FORM

An item-by-item commentary on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.

ITEM NAME			
Sr. No.	Tender Specifications	Bidder's Specifications	Remarks/Deviation If any

(Technical literature/brochures/manuals should be attached along with this format)

Please note:

1. Compliance/Deviation statement comparing the specifications of the quoted model to the required specifications. This statement should also give the page number(s) of the technical literature where the relevant specification is mentioned.
2. Bids must have supporting documents (technical literature or copies of relevant pages from the service manual or factory test data) for all the points noted above, failure regarding which may result in rejection of bid.

Director

Price Bid Format

PRICE SCHEDULE 'A'

PRICE SCHEDULE FOR DOMESTIC GOODS OR GOODS OF FOREIGN ORIGIN TO BE SUPPLIED IN INDIAN CURRENCY

1	2	3	4	5						6
Item Sl. No.	Brief Description of Goods (with make & model)	Country of origin	Quantity (Nos)	Price per unit (Rs.)						Total price (at consignee site) basis (Rs.)
				Ex-factory / Ex-warehouse / Ex-showroom / Off-the shelf	GST (if any) [%age & value]	Transportation, loading/ unloading and incidental costs till consignee's site	Insurance charges for a period including 3 months beyond the date of delivery	Incidental services (including installation & commissioning, supervision, demonstration and training) at the consignee's site	Unit price (at consignee site) basis	
				(a)	(b)	(c)	(d)	(e)	(f) =a+b+c+d+e	

Total Tender price in Rupees: _____

In words: _____

Note: -

1. If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail.
2. The charges for Annual CMC after warranty shall be quoted separately as per Section-XI – Price Schedule C

Place: _____

Date: _____

Name: _____

Business Address _____

Signature of Tenderer _____

Seal of Tenderer _____

PRICE SCHEDULE

PRICE SCHEDULE FOR GOODS TO BE IMPORTED FROM ABROAD IN FOREIGN CURRENCY

1	2	3	4	5											
Item Sl. No.	Brief description of goods (with make & model)	Country of origin	Qty (Nos.)	Gross FOB price at sea/airport of Lading (inclusive of agency Commission)	Amount and percentage of Agency Commission **	Net FOB excluding Agency Commission (a-b)	Insurance & Freight	Net CIP by Air/Sea at the port of entry (c+d)	Custom Duty amount as % of Net CIP (amount with CDEC as applicable) **	Custom Clearance & Handling charges **	Loading/ Unloading, inland transportation, insurance & incidental costs till consignee's site **	Installation commissioning, supervision. Demonstration & training at the consignee's site **	Unit price on DDP basis at consignee's site		
				(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	In foreign currency	In Indian rupees	
														=(e)	=(b+f+g+h+i)
** To be quoted in Indian Currency															

Total price at Consignee's site

(A) In Foreign currency : column(e) _____ (In figures and words) plus

** (B) In Indian Rupees : column(b+f+g+h+i)Rs. _____ (In figures and words)

Note:

- In DDP shipment the tenderer will be fully responsible for the safe arrival of the goods at the consignee site in good condition as per terms of contract.
- The bidder breaks up of price under various columns is for comparison of price up to delivery of goods at consignee's site for tender evaluation.
- The quoted prices should be supported with original proforma invoice. The proforma invoice should indicate the percentage of agency commission included in the FOB prices. Indian Agent to be paid in Indian currency.
- All the components of the DDP price will be paid by the tenderer. The purchaser will make the payment of DDP price preferably after receipt of goods at consignee's site in good condition as per payment terms in the contract. The purchaser can place the order on Ex-Works, FOB/FCA, CIP or DDP basis.
- The price quoted in foreign currency in column (e) shall be converted in Rupees at the selling rate of exchange applicable on the date of tender opening. The customs duty amount so worked out as percentage of net CIP value in rupees will be taken for evaluation and comparison of tenders.
- The charges for Annual CMC after warranty shall be quoted separately as per price schedule 'B'.

Place: _____

Date: _____

Name: _____

Business Address _____

Signature of Tenderer _____

Seal of Tenderer _____

PRICE SCHEDULE 'B'

PRICE SCHEDULE FOR COMPREHENSIVE MAINTENANCE CONTRACT AFTER WARRANTY PERIOD

1	2	3	4					5
Item Sl. No.	Brief Description of the Goods	Quantity (Nos.)	Comprehensive Maintenance Contract Cost for each Unit year wise*.					Total Comprehensive Maintenance Contract Cost for 5(or as specified) Years [5 x (4a+4b+4c+4d+4e)]
			6th	7th	8th	9 th	10th	
			A	B	C			

* After completion of warranty period

Note: -

1. The cost of Comprehensive Maintenance Contract (CMC) which includes preventive maintenance including testing & calibration as per technical/service/operational manual and labour, after satisfactory completion of warranty period may be quoted for next 1(or as specified) years on yearly basis for complete equipment.
2. The cost of CMC may be quoted along with taxes applicable on the date of Tender opening. The taxes to be paid extra, to be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.
3. The uptime warranty will be 98% on 24 (hrs) x 7 (days) x 365 (days) basis.
4. The stipulation in technical specification will supersede above provision.
5. The supplier shall keep sufficient stock of spares required during comprehensive maintenance contract period. In case the spares are required to be imported, it would be the responsibility of the supplier to import and get them custom cleared and pay all necessary duties.

Place: _____

Date: _____

Name: _____

Business Address _____

Signature of Tenderer _____

Seal of Tenderer _____

Technical Specifications
High performance Quadrupole Inductively Coupled Plasma Mass Spectrometer (ICPMS)
with Collision and Reaction Cell

Note: Latest model of the instrument with all major components from a single manufacturer should be supplied.

Performance of the quoted model of the equipment may be verified by using user supplied blind samples to assess technical qualification of the quotation.

Specifications	Requirement
Application	<ul style="list-style-type: none"> • Detection of Metals and metalloids in biological matrices such as in cell lysates, in blood samples, in tissue extracts, in buffers such as PBS and in nanocomposites. • Detection all elements of the Periodic Table from the minerals, ore & Environmental samples like sea water. • Instrument should be able to quantify a metal in samples from higher ppm to ppt or sub-ppt level. • Able to handle biological or environmental samples with 25% high TDS and high matrix without any liquid dilution outside the instrument.
Basic Design	<ul style="list-style-type: none"> • Instrument mainframe should be bench top utilizing minimum lab bench space. • Vacuum accessories including rotary vane pump should fit under the bench.
Sample introduction system	<ul style="list-style-type: none"> • System should be quoted with Glass or Quartz concentric nebulizer. • The system should be quoted with all the accessories such as interface cones, dilution accessories etc. required to handle dirty high matrix, high TDS samples (25%) avoiding manual liquid dilutions. • The system should be upgradable to accommodate other kits such as single cell analysis module, HF handling kit etc. • The ICP-MS should have the option to couple with other sample introduction techniques such as laser ablation, GC, IC and HPLC.
Spray chamber	<ul style="list-style-type: none"> • Peltier-cooled (Temp Range -5 to 20 Deg C) Glass or Quartz spray chamber
Peristaltic pump	<ul style="list-style-type: none"> • Sample introduction shall be via an integral, close coupled, low pulsation, 10 to 12 rollers with minimum 3-channels peristaltic pump. • The rollers shall be metal free. • The pump speed shall be computer controlled to provide programmable sample pumping both during and between acquisitions. Provision shall be included for the pump to be automatically switched off upon instrument shutdown. • Peristaltic pumps should be located adjacent to spray chamber for faster rinse in/out & minimum transfer line volume.
Injector and Torch	<ul style="list-style-type: none"> • One-piece torch with wide bore glass or quartz Injector. • Capable of handling aqueous & organic media. • The ICP torch should be demountable for ease of alignment. The torch should be mounted in a “snap-in” holder and be self-locating to minimize the need for torch alignment in the case of re-installation after routine cleaning. The torch assembly will also feature “connection free” operation for all torch gases, i.e. no fittings need to be touched during exchange of the torch. • If the torch is consumable for the system, two additional glass or quartz torch should be quoted. • Instrument should be quoted with required accessories to analyze easily ionizable elements (EIE).

Computer control of torch	<ul style="list-style-type: none"> The torch position should be fully computer controlled & auto tunable in XYZ axes with movement in each axis independent of other two. Torch position resolution & reproducibility should be 0.1 mm in all three axes. The system should have the ability to store and re-call the position of the torch for specific method after maintenance.
Auto sampler	<ul style="list-style-type: none"> Auto sampler should have more than 200 positions and manufactured by the same vendor
Plasma generator, Plasma ion source and plasma gas control	<ul style="list-style-type: none"> Digitally controlled solid-state RF generator operating between 27 MHz or 40 MHz capable of operating from 500 to 1600 Watt. Vendor must certify that the RF Generator is full solid-state design. Vendor should ensure the RF generator life time for at least 5 years without fail, else required spare of RF generator should be included in the standard offer. RF generator must have an active cooling system. System should have computer programmable plasma generator, with auto tuning features. The system should be able to change over from normal Plasma conditions to cool Plasma with direct control from software. System should have capability of Automatic shutdown of the plasma by the system after completion of analysis.
Extraction interface: Sample and skimmer cones	<ul style="list-style-type: none"> Standard large orifice Ni sampling and skimming cones with suitable diameters are to be provided Sampler and skimmer cones should be easily mountable and dismountable without any tool like screw driver, tweezers etc. and without venting the system. The ion path must be maintenance free. Additional sets of Ni sampler, skimmer, hyper skimmer cones for dirty, high matrix & higher sensitivity (two extra quantities of each) should be quoted.
Ion focusing and extraction system / Ion guide or lens system	<ul style="list-style-type: none"> System should have some mechanism to efficiently remove photons & neutrals from ion path without damaging the optics. All ion lenses should be outside the high vacuum region for maintenance free replacement by operator. Lens cleaning and replacement procedure should be without the need to put off or open the main vacuum system to minimize the down time of instrument. If focusing lenses are consumables for a system, vendor should offer 2 sets of each lenses (X-lenses and extraction lenses) as consumables.
Cell technology	<ul style="list-style-type: none"> ICP MS shall incorporate a Cell offering operations in Standard Mode, Collision mode (using He) and Reaction mode using reaction gases for interference removal. System should have separate gas line for each required gas to analyze all the elements in the periodic table. Cell must be Non-consumable with zero maintenance. System should offer at least 2 dedicated gas channels; one for He and one for reactive gas. The cell should be capable of upgrading with gas lines if required in the future. Vendor should provide valid application note/Data on the use of pure and / or

	<p>mix gases. Published international journal papers or application notes should be enclosed along with technical specification of equipment used to demonstrate the applicability of the instrument proposed on pure helium and pure hydrogen or any other reaction gas etc.</p> <ul style="list-style-type: none"> • System should have the option to operate in Collision mode and Reaction mode simultaneously and well as separately. • System should have Dynamic Bandpass tuning and extended dynamic range to address wide variety of samples and wide variety of matrices. • System must have provision of both Low and high mass cut off to prevent primary and secondary formed interferences in the cell. • Vendor should quote all gas lines for inert & reactive gases to meet above applications along with its gas cylinders & dual stage regulators. • In case of other than gases above listed are used in collision and reaction cell then it must be declared with all supporting along with application note from international journal with technical specifications and corresponding separate dedicated gas lines, gas cylinders & regulators to be quoted with the system. • The Instrument shall be able to be used for the multi element analysis of unknown sample containing Cl, SO₄ and Organic content, without the need for any interference correction equations. All interferences shall be removable by the Cell – avoiding the need for any correction equations. • The ICP-MS shall be able to remove ClO interference on Vanadium, to enable good Vanadium measurement in chloride matrices. The ICP-MS shall be able to be used for semi quantitative analysis in cell mode for all analytes. The instrument shall demonstrate its applicability for the trace determination of V in a chloride matrix.
Quadrupole Mass analyzer	<ul style="list-style-type: none"> • Quadrupole should be resolving between 0.3 to 0.5 amu. • Mass range: 7-260 amu or better • Quadrupole scan speed should be greater than 3000 amu/sec over the entire mass range during the data acquisition at every mass. • Background Equivalent Count (BEC) would be less than 3 cps (In No gas mode) • Background Equivalent count (BEC) would be less than <0.5cps (In gas mode) • Abundance Sensitivity (at Cs): Low Mass side: $\leq 5 \times 10^{-7}$ or better • High Mass side: $\leq 1 \times 10^{-7}$ or better • Dwell time should be 100 microseconds or better
Ion detector assembly	<ul style="list-style-type: none"> • Dynode electron multiplier type detectors that can operate in simultaneous dual-modes. • 11 orders or more of linear dynamic range (0.1 cps to 10Gcps, or better) • Dwell time of minimum 100 Micro seconds (in both pulse count and analog modes) • The maximum working concentration of the detector should be 5000 ppm or higher in Gas mode without any adjustment of settings such as resolution, detector voltage etc.
Vacuum System	<ul style="list-style-type: none"> • Turbo pump should be differential pumping. In the event of power failure, either high vacuum is maintained or the entire vacuum system is to be automatically back-filled by inert gas to preserve the cleanliness of the system.
Minimum Computer configuration	
Make	<ul style="list-style-type: none"> • Reputed brand

Operating System	<ul style="list-style-type: none"> Windows 10 Professional, 64bit latest version
Processor	<ul style="list-style-type: none"> Latest Intel® Processor
Memory	<ul style="list-style-type: none"> 16 GB or more
Hard Disk	<ul style="list-style-type: none"> 1 TB 7200 rpm
Ports	<ul style="list-style-type: none"> 8x USB 3.0 (2 in front, 6 rear) 2x USB 2.0 (2 in front)
Input Devices	<ul style="list-style-type: none"> Keyboard, Optical Scroll Mouse
Monitor	<ul style="list-style-type: none"> 21.5-inch IPS Monitor
Printer	<ul style="list-style-type: none"> Latest Color LaserJet Printer
UPS for entire system	<ul style="list-style-type: none"> 15 KVA with 1 h battery backup
Performance Specification	<ul style="list-style-type: none"> The CeO/Ce ratio should less than 2.5%. Double charge ratio (Ce⁺⁺/Ce⁺) is ≤ 2% Sensitivity of elemental mass should be ≥ 50 Mcps/ ppm across the mass range. Collision reaction cell should perform in Helium gas mode for all elements having polyatomic interference and application notes should be provided. The resolution of the quadrupole should not be changed during the analysis. Short term stability and long term stability of the instrument should be < 3% Auto tune facility should optimize Plasma condition, lens & cell voltages, mass resolution & mass accuracy for best ionization and sensitivity. Semi Quantitative mode should be able to operate in collision mode to generate qualitative scan of elements in less than a minute. The ICP-MS system should have capability to integrate with any commercially available laser ablation device for routine/research applications in future. It should have optional provision of Arsenic & Chromium speciation for specialized applications. It should be compatible with intelligent sequencing software at later stage. Provide lowest Detection limits (DL) of as many elements as possible including Pt, V, Cr, Rh, Ag, Au, Bi, Pd, Al, Os, W, Zr, Gd, La, Er, Y, Re, Tc, Ti, Ru, Ir, Cu, Fe, Mn, Co, Ni, Hg, Zn, Ca, Eu, Tb, P, As, and give the conditions at which the DL's are measured. Software should be capable of including QC check in between samples and must be able to show graphically QC control data. To facilitate the installation requirement the installation pre requirement and installation guide should be provided along with the quotation dually stamped and signed. All the performance specification document should be provided along with tender dually stamped and signed Only factory specifications not the typical performance on Sensitivity will be considered. Detection limit: 9Be: 0.5 ppt or better; 115In: 0.1 ppt or better, 238U: 0.5 ppt or better Detection of Fe in ppt level in biological samples using collision or reaction mode needs to be demonstrated during the demo. Sensitivity required: Li/Be > 50 Mcps/ppm, Y/In > 310 Mcps/ppm, Tl/Bi > 240 Mcps/ppm at < 1.5 oxide ratio. Above mentioned sensitivity must be to be demonstrated during demo

Accessories to be quoted with the main system	<ul style="list-style-type: none"> Dilution accessory to handle high matrix & high TDS (>25%) samples Hydride Generator if required for the quoted system Re-circulating Chiller Imported Gas filters for the gases used Interface for dirty, high matrix & high sensitivity Required exhaust system for the ICP-MS should be included. All required consumables for pumps and rotary pump oil for trouble free operation of at least next 5 years.
Manual	<ul style="list-style-type: none"> Operation and maintenance manual for each unit in hard and soft copy.
Application notes	<ul style="list-style-type: none"> Application notes (CD-ROM) for elemental analysis in environmental, biological samples should be provided
Standards	<ul style="list-style-type: none"> NIST Certified Multi-elemental or single element standards (100 ug/mL, at-least 125 mL each standard) for the following elements should be quoted Pt, Ag, Au, Bi, Pd, V, Cr, Al, Os, W, Zr, Gd, La, Er, Y, Re, Tc, Ti, Ru, Rh, Ir, Cu, Fe, Mn, Co, Ni, Hg, Zn, Ca, Eu, Tb, P, As
Instrument validation Performance Check	<ul style="list-style-type: none"> Validation Performance Check Solution (1 Set each) to be provided.
Operation kit	<ul style="list-style-type: none"> Operation kit comprising all required items pump tubing's, transfer tubing's, work coils etc. for startup/regular operation of instruments to be quoted
Gas Cylinder	<ul style="list-style-type: none"> Argon-5, Helium-2 and one cylinder for each reaction gas required to meet the applications mentioned above should be included. Higher Pressure Seamless Stainless Steel Cylinders filled with High Purity 99.999 % gases. Gas Capacity 7 M3, Water capacity 47 liters, Cylinder should be ISI marked conformed with IS-7285 specifications.
Gas Regulators	<ul style="list-style-type: none"> Dual stage automatic switchable regulators for all the gas cylinders to be quoted
Operation and maintenance training component	<ul style="list-style-type: none"> Installation, commissioning & operational training cost should be included. Vendor should give a maintenance chart for ICPMS operation Cleaning procedures of each and every component of the system should be tabulated. Vendor has to give 5 days on site training after the installation.
General conditions of supply	<ul style="list-style-type: none"> The instrument and all its sub units should operate on 230 10 volts 50 Hz power supply. All the operation and maintenance manuals, circuit diagrams, application notes and application software's to be supplied should be in English language.
Warranty and service	<ul style="list-style-type: none"> System should be quoted with 5 years warranty inclusive of all parts from the date of installation.
Support	<ul style="list-style-type: none"> Supplier should have dedicated team of service & application engineers in Mumbai to provide after sales service & application support as and when required. In case of breakdown of the system, the servicing to be done immediately by the supplier during the warranty period, Maximum down time –period is 1 week. (Six working days).
Delivery	<ul style="list-style-type: none"> 6-8 weeks from the receipt of PO and IVL license
OPTIONAL ITEM (should be quoted separately)	<ul style="list-style-type: none"> Vendor should include separate quotes as well as provide separate compliance statement for the following optional items: 1. Microwave digestion system; 2. Single Cell analysis Kit; 3. HF handling kit

1. Microwave digestion system with following specification

- The latest model with the best technology should be quoted
- System with at least 10 nos. of high-pressure vessel rotor for quick dissolution of various sample like nanocomposites, animal and plant tissues, waste water, sludge, soil, ceramics, minerals, alloy etc. without loss of heavy metals from sample solution.
- The system should have metal body and front loaded due to safety reasons.
- The cavity should be made of stainless steel coated with PTFE for corrosion resistance. Also all hardware should have protective coating to prevent acid caused corrosion.
- The cavity volume should be 60 lit or more.
- The microwave system should have dual Magnetron system (minimum 950W each) with good diffuser for homogenous microwave power distribution in the cavity.
- Should allow pressurized reaction with user selection of continuous or pulsed Microwave reaction.
- Maximum Temperature capacity of vessel is 250°C or higher
- Maximum Pressure capacity of vessel is 100 bar or higher
- Rotor as well as reaction vessels should be coated with acid and corrosion proof material (PTFE).
- Direct temperature monitor and control should be via IR Temp. sensor for each vessel
- The software should automatically reduce the microwave power in case of over temperature avoiding sample loss
- The over pressure release mechanism of vessel should be through a vent-and-reseal spring to safely release the pressure in case of overpressure.
- It should have a Touch-screen to control all the parameters such as temperature, time, power etc.
- The system should be quoted with 5 years of warranty from the date of installation.

2. Single Cell analysis Kit

Single cell analysis kit compatible with the quoted ICP-MS model for analyzing multiple elements using cell suspension should be included with the specification.

3. HF handing kit with separate nebulizer, spray chamber, torch, injector, Pt-sample cone and Pt-skimmer cone should be quoted as optional item