

# **BIDDING DOCUMENT**

**TENDER NOTICE No: 20/2018- 2019/Bio-medical Equipment/IGIMS/Store**



**Supply, Installation & Commissioning of Bio-Medical Equipment's / Instruments**

**TENDER NOTICE No: 20/2018- 2019/Bio-medical Equipment/IGIMS/Store**

Issued to:

Cost of Document: Rs.2000/-

Paid By:           Cash:           Receipt No.:

Demand Draft:    No.:

Issuing Bank:

**(Authorized Signatory)**

**INDIRA GANDHI INSTITUTE OF MEDICAL SCIENCES,  
SHEIKHPURA, PATNA - 800014.**

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**IMPORTANT DATES**

<b>Last date for submission of completed bidding document</b>	14/05/2018 up to 4.00 PM. by registered/speed post/ Courier only
<b>Pre-bid meeting</b>	28/04/2018 at 11.00 A.M. in Conference Hall IGIMS, Patna.
<b>Date of opening of technical bid</b>	15/05/2018 at 3.30 P.M. in Conference Hall IGIMS, Patna.

**INDIRA GANDHI INSTITUTE OF MEDICAL SCIENCES,**  
**SHEIKHPURA, PATNA -800014 (Bihar, India)**

Sr. No. of Tender: \_\_\_\_\_

FILE NO. : Tender No.: \_\_\_\_\_

Tender form issued in favour of: \_\_\_\_\_

Dear Sir,

1. I/We hereby submit our tender for the \_\_\_\_\_
2. I/We are enclosing herewith the Demand Draft No..... dated..... for Rs. /- drawn in favour of **Director I.G.I.M.S. - Patna (payable at Patna)** towards **EMD / Bid Security.**

**(EMD AND COST OF BIDDING DOCUMENTS MUST BE SUBMITTED IN SEPRATE ENVELOP.TENDERS NOT ACCOMPANIED WITH EMD / BIDSECURITY ALONGWITH THE TECHNO-COMMERCIAL BID SHALL BE SUMMARILY REJECTED).**

3. I/We have gone through all terms and conditions of the tender documents before submitting the same.
4. I/We hereby agree to all the terms and conditions, stipulated by the I.G.I.M.S. - Patna including delivery, warranty, penalty etc. Quotations for each group are being submitted under separate covers, and sheets and shall be considered on their face value.
5. I/We have noted that overwritten entries shall be deleted unless duly cut & rewritten and initialled.
6. Tenders are duly signed and stamped.(No thumb impression should be affixed)
7. I/We undertake to sign the contract/agreement, if required, within 15 (Fifteen days) from the date of issue of the letter of acceptance, failing which our/my EMD/Bid deposited may be forfeited and our/my name may be removed from the list of suppliers

Yours faithfully,

(Signature of Bidder with full name and address)

**CHECK LIST FOR TERMS AND CONDITIONS**

**A.: To be filled by the bidder and submitted along with the Technical Bid.**

<b>Sr. No.</b>	<b>Terms &amp; Conditions as per Bidding Document</b>	<b>Page No.</b>	<b>Remarks</b>
1.	<p><b>Status of Bidder:</b></p> <ul style="list-style-type: none"> <li>• Manufacturer or Authorized Agent of the Manufacturer</li> <li>• Whether Public Undertaking, Public Ltd., Private Ltd. Company or Proprietary Firm/partnership firm</li> <li>•</li> </ul> <p>(Please attach Notary certified <b>MANUFACTURER'S AUTHORISATION FORM</b> as per <b>FORMAT</b> placed at <b>Annexure – III</b>)</p>		
2.	<b>Power of Attorney as per Annexure - V</b> in favour of person to sign, submit and negotiate the bid.		
3.	Certificate towards market standing of minimum 05 years in the area of supply and or maintenance of bio-medical equipment's.		
4.	Certificate for sole ownership / partnership		
5.	Statement of financial standing from bankers		
6.	Statements of turnover per year for last three successive years duly certified by the Chartered Accountants.		
7.	<b>Notary certified User List</b> (List of Govt. /Semi Govt., Reputed Pvt. Hospital) where quoted model of the items has been supplied and installed.		
8.	<b>Notary certified Supply</b> order copy (Minimum 3nos. or more) issued by Govt./Semi Govt./Reputed Pvt. Institutions/organization for the quoted items. ( same model)		
9.	<b>Notary certified Performance certificate</b> of the same supplied machine (of quoted make and Model) issued by <b>Head of the dept. or Institution</b> after a minimum period of six months of installation		
10.	Prerequisite (if any) for installation of the Machine, if any, to be provided by the Institute.		
11.	Whether rates quoted are inclusive of all taxes or not.		
12.	Whether rates are quoted as per format mentioned in the Bidding Document or not.		
13.	Affidavit to the effect that the bidder is not blacklisted by any Govt. agency or have no pending case either Civil or Criminal against them.		
14.	Affidavit, to the effect that the bidder is not supplying the quoted item(s) to any other Govt. / Pvt. Organizations / Institutions / Hospitals at the rate lower than the rate quoted against this tender.		

15.	<b>Quality Assurance Certificate</b> like ISI, ISO-9002, IP/BP, CE, FDA (US) or any other (please specify)		
16.	<b>Bid Security</b> amount deposited is enclosed or not. If yes, please mention the details.		
17.	<b>Original Technical Catalogue</b> of the quoted model .		
18.	Certificate, to the effect that bidder will maintain the quoted item(s) during Warranty period of three years including all spares, accessories, consumables etc.,  (Please mention the name of the item / items with price, which are not supplied by the bidder free of cost with frequency of replacement)		
19.	Certificate, to the effect that bidder has quoted its rate for Comprehensive Annual Maintenance Contract inclusive of labour, spares, consumables, accessories etc. on per year basis for a further period of seven years after expiry of warranty period of three years in the <b>price bid</b> .  (Please mention the name of the item / items with price, which are not supplied by the bidder free of cost with frequency of replacement during Comprehensive Annual Maintenance Contract period in the price bid)		
20.	Acceptance of all terms / conditions towards <b>after sales / services</b> as mentioned in the bidding document.( Clause No- 13 of “ Instruction to Bidder “ & clause no- 3, 4 and 5 of Condition of contract.)		
21.	<b>Compliance Statement</b> with relation to the technical specification as mentioned in the bidding document duly supported by the original catalogue. The bidder must quote specification in the compliance column Mere writing” Complied shall not be accepted.		
22.	<b>Compliance Statement</b> with relation to the terms & conditions as mentioned in the document.		
23.	<b>PAN and copies of Income Tax Returns</b> for the last three years.		
24.	Duly attested copy of sales tax/Vat registration certificate.		

**B: To be filled by the Bidder and submitted along with Price Bid**

<b>Sl. No.</b>	<b>Terms &amp; Conditions as per Bidding Document</b>	<b>Page No.</b>	<b>Remarks</b>
1.	<b>Item wise price for the item(s)</b> as mentioned in the Bidding Document and as per format attached as <b>Annexure – I(a) or I (b)</b>		
2.	<b>Rate for Comprehensive Annual Maintenance Contract</b> as per terms & conditions mentioned in the Bidding Document and as per format attached as <b>Annexure - II</b>		

**Note: If the above tender details are not mentioned and required documents are not attached at appropriate places, the offer of the bidder(s) shall be summarily rejected. Hence, bidder(s) are advised to go through the bidding document carefully and tender be prepared with all the required documents to avoid rejection of offer.**

(Name of the Bidder with signature & seal)

## ELIGIBILITY CRITERIA

01	Manufacturers or their authorized dealers/Indian subsidiaries/direct importers having a place of business in any of the States of India are eligible to participate in this tender.	Mentioned  Page no.
02	The bidder and manufacturer of the equipment offered should be in the business of the supply and installation of same / similar equipment for the last five calendar years.	
	<p>(a)The manufacturer should have completed at least 05( Five ) nos. installations of the quoted items in Govt. /Pvt. Institutions /Hospitals in India. The installations mentioned by the manufacturer in their offer must be functional and performance certificate for the same issued by the user concerned also be attached with the offer.</p> <p>(b) The bids quoted as the authorized representative of the manufacturer meeting the above criteria 02 (a) should have also supplied and installed at least 03( Three) nos. installations of the quoted items in Govt. /Pvt. Institutions/ Hospitals in India in last five years from the last date of submission of tender. The installations mentioned by the authorized representative in their offer must be functional and performance certificate for the same issued by the user concerned also be attached with the offer.</p>	
03	The Bidder should be public undertaking /Autonomous Body /Public Ltd./Pvt. Ltd. Company or proprietary firm /Partnership Firm and should be in medical equipment business since last five years in India. The Bidders having manufacturing facility in their name in India for the majority of the items offered by them shall be given preference.	
04	The Bidder (manufacturer or their authorized agent) should have had average annual financial turnover of Rs. 50 Lakh during the last three years ending s 31 <sup>st</sup> March 2016.	
05	Bidders who have the capability to attend repairs of these equipment within the time mentioned in this bidding document and who are willing to provide stand by equipment or replace the faulty equipment if the repair/down time extends beyond 72 hours from the time of reporting of the fault within the next 48 hours (total down time should not exceed 5 days in one instance). The bidders who have the capability to ensure the uptime mentioned in this document (Documentary proof shall be submitted on the after sales facilities and expertise of the bidder.)	
06	Bidders are not offering the equipment of a firm /company that has been blacklisted by Indira Gandhi Institute of Medical Sciences – Patna or blacklisted/debarred by any other State / Central Government's organization.	

Note:

- Notwithstanding anything stated above, the Institute reserves the right to assess the Bidder's capability and capacity to perform the contract satisfactorily before deciding on award of contract, should circumstances warrant such an assessment in the overall interest of the purchaser.
- The Institute reserves the right to ask for a free demonstration of the quoted equipment at a pre determined place acceptable to the purchaser of technical acceptability as per the tender specification, before the opening of the price tender.

## INSTRUCTION TO BIDDER

### GENERAL INSTRUCTIONS TO BIDDERS

#### 1. **Tendering System**

The tenders/Bids are to be submitted in two Parts i.e. **Part - I & Part II.**

**PART - I titled as TECHNICAL BID** shall contain the complete technical specifications and details on the competency of the bidder and also the commercial bid package with terms and conditions of supply, warranty, after sales service etc. (Except Price Bid Form). Apart from the documents and signed copy of the purchased tender document, the necessary enclosures should be submitted in this technical bid. In short, the technical bid should contain all the necessary documents to prove the technical competency and capability of the bidders for supplying and installing a trouble free equipment meeting the quality standards and technical specification and the ability of the bidders for providing efficient after sales service to the satisfaction of the Tender Inviting Authority and the user institution.

#### **PART - II titled as PRICE BID**

2. The tender offers, duly filled, shall be submitted in sealed covers for **technical**. Such covers shall be super scribed as **“Tender No..... (here mention the tender no as specified) TECHNICAL BID for supply of ..... (here mention the name of the equipment**
3. Quantity of items may increase or decrease. Director, I.G.I.M.S. - Patna reserves the rights to purchase different sub items/ components of items from different bidders.  
  
This rate Contract will be valid for one FY and repeat Supply Order will be placed as per requirement of the dept. of all the quoted and approved items.
4. The “Bidding Document” along with terms and conditions, technical specification can be obtained from the office of the Store Officer, IGIMS, Patna on payment of Rs.2000/- (Rs. Two thousand only) Non –refundable for each Group by demand draft favouring Director , IGIMS, Patna payable at Patna.
5. The “ Bidding Document” can also be downloaded from institute website [www.igims.org](http://www.igims.org). In case, downloaded bidding document is used ,Bidder(s) have to submit the cost of the Tender Document along with the completed documents in the form of demand draft in favour of Director , IGIMS, Patna, payable at patna towards cost of the “ Tender documents” Bidder is required to attach separate DD for the same in a separate envelop super scribed with “ cost of bidding document” if the cost of tender document is not submitted by the bidder, his offer shall be outright rejected .
6. **Last date for submission of bidding document is 14/05/2018 up to 4.00PM by speed/Regd. post/ Courier only and technical bid will be opened on 15/05/2018 at 03.30 PM in Conference hall IGIMS, Patna**
7. **Earnest Money Deposit (EMD):**  
**10 Lakhs for Group –A(Supply, Installation & Commissioning of Laboratory Automation System with Equipment) and for other groups Earnest Money will be 2% of the cost of Equipment** required to be submitted along with tender in envelope super scribed with “ EMD” in the form of Demand Draft from any scheduled Indian Bank (valid up to one year from the date of technical bid opening.) only along with the tender favouring Director, I.G.I.M.S. – Patna (payable at Patna). No interest is payable on EMD/ Bid security.



- a. Bidder may quote more than one/several models. In such a situation EMD will be payable on the basis of highest priced model.
  - b. EMD of the unsuccessful bidders will be returned to them at the earliest after expiry of final bid validity and latest on or before the 30<sup>th</sup> day after the award of the contract without any interest.
  - c. EMD must be submitted in separate sealed envelope and endorsement of the same with DD number & date Bank Guarantee No. and its validity period be made with technical bids without amount stating that the same has been complied with price bid. If same is later found not enclosed tender will be cancelled for the party.
  - d. Non- submission of sufficient EMD along with the Technical Bid shall be one of the primary reasons for rejection of the offer in the first round.
  - e. Cheque, Cash payment, Money Order, Fixed deposit etc will not be accepted as EMD.
  - f. Public Sector Units within the State or State micro, small and medium enterprises registered with Govt. are exempted from remittance of EMD subject to submission of valid documents.
  - g. The EMD shall be in one of the following forms:
    - i.; A demand draft in favour of Director, I.G.I.M.S. – Patna (payable at Patna);
    - OR
    - ii; A Bank Guarantee issued by a nationalized/ scheduled bank located in India, in the form prescribed in the tender document as Annexure- IV (valid up to one year from the date of technical bids opening) Bank Guarantee in any other format will not be acceptable and render the bid non-responsive.
    - iii.; The successful Bidder's EMD will be discharged upon the Bidders signing the contract and furnishing the performance security. The EMD deposited in the form of DD of the successful Bidder can be adjusted towards the security deposit payable.
9. Bidder(s) should mention the DGS & D registration, if registered, and attach photocopy of DGS & D registration certificate Photocopy of Income tax & sales tax clearance certificate should be enclosed.
10. For Imported Goods, Indian Agency Commission must be declared in financial bid.
11. The Bidder's shall have to submit the following documents (Certified by Notary) in technical bid: -
- a. User List (List of Govt. / Semi Govt., Reputed Pvt. Hospital) where quoted model of the items has been supplied and installed.
  - b. Supply order (minimum 3 nos. Or more issued by govt./semi govt./reputed pvt. institution/organisation for quoted items ( same model)
  - c. Performance certificate of the same supplied machine (of quoted make and Model) issued by **Head of the deptt. or Institution** after a minimum period of six months of installation.
  - d. Prerequisite (if any) for installation of the Machine if any to be provided by the Institute.
  - e. If the manufacturing company and/or its Indian agent (for Foreign manufactured) have authorized some agency for participation in this tender for a limited period than in that case they (Manufacturer / Indian agent) shall have to submit an undertaking duly notarized by Public notary that if their tender is selected they shall be solely responsible for compliance of all the terms and conditions mentioned in the bilateral agreement for purchase and subsequent supply order even if their authorized agent is changed. Any tender offer without such certificate duly certified by public notary shall be rejected in technical scrutiny itself.

- f. **Bidder must submit a compliance checklist along with the technical bid itself.**
- g. (Any tender offer without submission of above mentioned document (i.e. a to e) shall be rejected during technical scrutiny.)
- h. If any new System/ Latest model machine is a launched in the market and seller has not installed such quoted models they should submit an undertaking that he has not installed such models previously (Notarized by Public Notary).They may submit supply order / performance certificate of previous model, which was recently installed by them.

**Installation & site plan:-**

Requirement regarding site/location etc. for installation of equipment, if any, should be mentioned in the tender. Time required for installation of system after delivery must be mentioned. In case of delay in installation institute will have right to charge liquidated damage. Specify the following points for installation of the System: -

- a. Total power consumption along with break up of main System and Accessories.
- b. Whether the System needs uninterrupted power supply where ever applicable.
- c. Maximum tolerated transfer time in case of interruption of power supply.
- d. Whether the System needs any humidity control device.
- e. Whether the System needs any separate power line/isolation Transformer.
- f. Does the System need the electrical shielding?
- g. Does it require special civil works for installation?
- h. Whether Air conditioner is an essential requirement for the system.
- i. Does it require any special civil works for Installation?

**12. After Sales Service Conditions:**

- a. The Institute is in the pursuit of ensuring excellent after sales service for every user in respect of the equipment's supplied under this contract. The after sales services terms and conditions will be strictly enforced and those Bidders who are willing to support the Institute in its endeavour to provide trouble free operation/performance of the equipment's for the prescribed period need only participate in the tender.
- b. The after sales service shall be performed during the warranty period and also during the Comprehensive Maintenance Period (CMC)/ Annual Maintenance Contract, if awarded. The detailed terms and conditions for after sales service are mentioned hereunder.

**c. Guarantee/Warranty Terms:**

- i. The successful Bidder has to warrant that the Goods supplied under this Contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.
- ii. The successful Bidder further have to warrant that the Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Tender Inviting Authority's specifications) or from any act or omission of the successful Bidder, that may develop under normal use of the supplied goods.
- iii. All the equipment's including the accessories supplied as per the technical specification as mentioned in the bidding document should carry comprehensive warranty (including all spares, accessories and consumables) for a period mentioned in this document in the first instance. During this period, the successful Bidder shall replace all defective parts / accessories / consumables and attend to all repairs/break downs and undertake stipulated number of preventive maintenance visits to every user installation site. The cost of spare parts for all replacements has to be borne by the successful Bidder during the period of comprehensive warranty. The items which are not covered under warranty should be clearly mentioned along with rate of the items . If any spares / accessories / consumables etc. are not replaced by the bidder during warranty period, bidder should mention it clearly with name of the items with frequency of replacement and its rate of the item.
- iv. On expiration of the comprehensive warranty period, the successful Bidder shall be willing to provide after sales support for an additional period prescribed in this document.

- v. The prospective Bidder, who are not manufacturers, shall submit an undertaking from the Original Equipment Manufacturers (OEM) that they are willing to provide spare parts for the period of warranty as mentioned and also during the additional CMC/AMC period, if awarded. The OEM shall also assure continuity of service to their product, in the event of change in dealership or the Bidders – their existing dealers - couldn't provide service during the warranty / CAMC period. The undertaking from OEM is an essential document forming part of the Technical Bid, without which the tenders will be rejected summarily in the first round itself.
- vi. After sales service centre in Patna (Bihar) preferably or at least in East India should be available as part of the pre-qualification and the Bidder shall provide proof of their capability to undertake such maintenance/repair within the stipulated time.
- vii. The successful Bidder shall provide preventive maintenance as per the frequency mentioned in this document during the warranty period. The Bidder shall attend any number of break down/repair calls as and when informed by the institute authority.
- viii. Upon receipt of such notice for repair/breakdown from the institute, the successful Bidder shall, within the period as specified in this document, and with all reasonable speed, repair or replace the defective goods or parts thereof, without cost to the Tender Inviting Authority.
- ix. If the successful Bidder, having been notified, fails to rectify the defect(s) within the period specified mentioned in this document, the Tender Inviting Authority may proceed to take such remedial action as may be deemed necessary, at the successful Bidder's risk and cost and without prejudice to any other rights which the Tender Inviting Authority may have against the successful Bidder under the contract.
- x. Failure to attend the repairs in time or failure to attend the stipulated preventive maintenance visit or failure to replace the defective equipment's or to provide stand by equipment if the fault/down time exceeds the stipulated period or to ensure the stipulated up-time in an year shall lead to forfeiture of the performance security and/or may lead to blacklisting/debarring of the defaulting Bidder.
- xi. The equipment which requires quality assurance test shall be done at free of cost immediately after installation, during the comprehensive warranty period, during the CMC/AMC period, by the demand of User and also when major spares are replaced.
- xii. Any mandatory approval required for installation shall be obtained by the successful Bidder in liaison with the respective authorities.
- xiii. The Bidder shall submit the parameters which require calibration and the frequency of calibration required.
- xiv. The Bidder shall undertake on-site calibration of the equipment every year as part of the after sales service during the period of comprehensive warranty, CMC/AMC or on demand from the user.
- xv. The Bidders shall also have to submit whether periodic replacements of consumable items are required for proper functioning of their quoted machine/Equipment? If yes they should submit the list of such consumables along with price list and frequency of replacement per year, if the same is not replaced free of cost during warranty / guarantee period.
- xvi. An undertaking of the principal regarding continuity of after sales and services (CAMC) @ the agreement rate even in case of changes of Indian agent during the life span of the equipment, must be enclosed in the technical bid. Further, it will be the responsibility of the manufacturer Indian agent to get counter signature on the agreement to be executed with them by the principal.

Xvii;- The offered warranty includes:

- Visits to the user institutions at frequencies prescribed as part of preventive maintenance.
- Testing & calibration as per technical/service/operation manual of the manufacturer or as per the period specified or as per the demand of the user.
- Quality Assurance tests (if applicable).
- The cost of labour for all repairs/ and all spares required for replacement during repairs all kinds of accessories, Probes, all types of sensors and transducers, Electrodes, Detectors, battery, battery for UPS, other vaccumatic parts etc wherever applicable and also the accessories and other devices supplied along with the equipments like stabilizer, UPS, AC, Computer, Compressor, Monitor, etc, which forms part of the equipment system, without which it cannot perform satisfactorily.
- The exclusion of warranty of any vital equipment parts will be compared with offers of other Bidders during evaluation of the bids and this may be taken into consideration in deciding the successful Bidder on the basis of expert advice.
- The Bidder shall provide up-time warranty of complete equipment as mentioned in this document, the uptime being calculated on 24 (hrs) X 7 (days) basis failing Warranty period will be extended for every additional day of down time equal to one week.
- All software updates, if any required, should be provided free of cost during Warranty period.

**d. Comprehensive Annual Maintenance Contract:**

- The decision to enter into CMC or AMC will be determined on the basis of cost and complexity of the equipment by the Tender Inviting Authority, at its discretion, prior to the expiration of warranty period.
- The Comprehensive Maintenance Contract (CMC) is otherwise an extended warranty. All the terms and conditions agreed by the successful Bidder for executing the comprehensive warranty of the equipment shall be extended during the period of CMC, only difference being the payment of CMC charges is absent during the period of comprehensive warranty.
- The cost of CMC, accessories spares, and consumables as in case may be quoted along with taxes applicable, if any. The taxes to be paid extra, to be specifically indicated. 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.
- Failure/refusal on the part of the successful tender supplying/installing the equipment's to enter into CMC with the Tender Inviting Authority, at the end of the Comprehensive Warranty Period, if the Institute, as the case may be, desires so, shall lead to forfeiture of performance security and may also result in the blacklisting/debarring of the Bidder.
- The successful Bidder shall also indicate the rates for the CMC in price bid form and such rates are binding on the successful tenders after the expiration of the warranty period. The yearly rates for CMC shall remain the one and the same as quoted in the price bid form for the extended years.
- Cost of CMC (excluding taxes, if any) will be considered for Ranking/Evaluation purpose.
- The payment of the agreed CMC charges will be made as per frequency for payment after satisfactory completion of said period, on receipt of service report/ break down report from the user.
- The Bidder shall also have to submit whether periodic replacement of consumable items are required for proper functioning of their quoted machine/Equipment? If yes they should submit the list of such consumables along with price list and frequency of replacement per

year if the same is not included in quoted Comprehensive Annual Maintenance Contract charges per year.

**13. Time Limits prescribed**

<b>Sl. No</b>	<b>Activity</b>	<b>Time Limit</b>
a.	Installation & Delivery period	12 weeks from date of issuance of Supply Order
b.	Comprehensive warranty period	3 years from the date of successful installation.
c.	CMC period	7 years
d.	Frequency of visits to all User Institution concerned during Warranty/CMC	One visit every three months (4 visits in a year) for periodic/preventive maintenance and any time for attending repairs/break down calls.
e.	Frequency of payment of CMC charges	Every six months after completion of the Period.
f.	Submission of Performance Security and entering into contract	10 days from the date of issuance of Letter of Intent
g.	Maximum time to attend any Repair call	Within 24 hours.
h.	Uptime in a year during warranty as well as during CAMC period.	95% of 365 days.

14. Firm have to provide a minimum **UPTIME GUARANTEE** of 95% (95% of 365 Days) per year during the warranty period as well as during the Comprehensive Annual Maintenance Contract.
15. **While calculating the total unit price of the item / system to be procured, expenditure to be incurred in maintenance of the quoted item / system including all spare parts for a total period of seven years after expiry of the warranty period of three years shall also be taken into consideration. Accordingly, it is mandatory for the bidders to submit the rate for Comprehensive Annual Maintenance Contract (with spares) for a minimum period of seven years after the expiry of warranty period of three years.**
16. Supplier will submit undertaking for ensuring uninterrupted supply of spares during the total life span of the equipment's.
17. Indian agency commission and Installation charge if any will be paid in Indian rupees after successful installation and demonstration of the equipment's.
18. Principal's Invoice of the quoted items must be submitted with the quotations.
19. Proof of the official Indian agent certificate of the firm must be attached. (Notary Certified Photocopy)
20. In order to fully and optimally utilize the equipment, training to Para Medical Staffs and Doctors should be provided. In continuation to this training, separate maintenance training for the machine and the sub systems should also be given to the "Equipment Maintenance Engineer" and "Equipment Maintenance Technicians". All the financial commitments in this regard shall be met by the bidder(s).
21. Bidder(s) have to submit an affidavit to the effect that they have not supplied the offered item(s) to any Govt., semi Govt. / Pvt. Organization, Institution, Nursing Home etc. at the price lower than the price offered to I.G.I.M.S. – Patna.
22. All the claims regarding meeting the specifications shall be duly supported by appropriate, latest technical catalogues/brochures from the manufacturer. Simply stating that the equipment(s) meets the specifications is not sufficient and any such quotations will be summarily rejected. Computer printed documents or Photostat copy or laser printouts will not be accepted as technical catalogues / brochures.
23. Bidder might be required to demonstrate the system at the discretion of the institute.

**24. Notification of Award/Letter of Intent (LOI)**

- a. Before expiry of the tender validity period, the Institute will notify the successful Bidder(s) in writing, by registered / speed post or by fax or by email (to be confirmed by registered / speed post immediately afterwards) that its tender for equipment(s), which have been selected by the Institute, has been accepted, also briefly indicating there in the essential details like description, specification and quantity of the goods & services and corresponding prices accepted. This notification is undertaken by issuing a Letter of Intent (LOI) by the Institute.
- b. The successful bidder, upon receipt of the LOI, shall furnish the required performance security and submit an agreement in the prescribed format within ten days, failing which the EMD will forfeited and the award will be cancelled.
- c. The Notification of Award shall constitute the conclusion of the Contract.

**25. Signing of Contract**

The successful bidder shall execute an agreement for ensuring satisfactory supply, installation, commissioning and the after sales service/support during the warranty period and during the Comprehensive Annual Maintenance Contract.

27. The Director reserves the right to accept or reject any or all tenders without assigning reasons.
28. The Director reserves the right to modify, add or delete any terms & conditions of the contract as and when required.

**29. Amendment of tender documents:**

- a. At any time prior to the dead line for submission of Tender, the Institute may, for any reason, modify the tender document by amendment.
- b. The amendment shall be notified and uploaded on the institute website [www.igims.org](http://www.igims.org) only and such amendments shall be binding on them thereafter.
- c. The Institute shall not be responsible for failure to inform the prospective bidders. Purchasers of tender documents are requested to browse the website of the Institute for information/general notices/amendments to tender document etc on a day to day basis till the tender is concluded.

30. The Dispute, if any, will be subject to Jurisdiction at Patna (Bihar).

**Sd/-  
Director,  
I.G.I.M.S. - Patna**

## CONDITIONS OF THE CONTRACT

**01. Duty Free Clearance, Transportation, Forwarding & Handling Charges:**

Clearance charges at point of Entry / Air Port and on ward transportation charges with Insurance up to I.G.I.M.S. - Patna will be borne by supplier's Indian Agent for which this Institute will not pay the charges. The firm should quote as FOR IGIMS Patna including all expenditure.

**02. Demurrage, Taxes & Octroi:-**

No demurrage charges will be paid by the Institute in case of delay on the part of supplier. However, this Institute will provide all necessary documents required for clearance / transportation of the goods and for exemption of the taxes/octroi for which supplier/Indian agent will have to intimate/furnish his requisition of document required, if any, well in advance. Octroi will be payable by supplier / Indian agent, if required.

**03. Warranty Period:**

a. The “**Complete System**” shall remain under warranty period of **three years** from the date of satisfactory installation. The Complete System should include the basic unit and allied supporting components like UPS, Computer System, Printer, De-ionizer, Dehumidifier etc. to be supplied by the bidder along with basic unit if necessary for running the system.

b. During warranty period of three years, bidder shall provide at least **four maintenance visits per year** at regular interval for usual maintenance and supervision. If bidder fails to provide these maintenance visits at regular interval, a proportionate deduction in the form of penalty on pro-rata basis will be recovered from the bidder from the Bank Guarantee amount. In case the Bank Guarantee is not adequate, Institute shall have right to recover the losses / penalty from other sources as well.

c. Bidder shall also attend all breakdown calls within 48 hours of the receipt of the information from institute through fax/e-mail/mobile/sms etc.

d. During warranty period, **bidder** shall maintain and keep **95% uptime** per year of the “**Complete System**” as per calculation given below:-.

$$\begin{aligned} 1 \text{ Year} &= 365 \text{ days} \\ \mathbf{95\% \text{ of } 365 \text{ days}} &= \mathbf{347 \text{ Days per annum}} \end{aligned}$$

e. The bidder shall compensate the uptime less than the specified above for **every additional day** of down time over and above 18 days stipulated above, warranty period will get extended by one week as penalty at no extra cost i.e. the extended penalty period will be equal to one week for every additional day of down time.

f. During warranty period, **bidder** will make the “**Complete System**” in satisfactory working condition. In case, any spare parts, accessories, PCB, consumables etc. needs replacement due to normal wear and tear, **bidder** will supply and install the same for which no additional payment is to be made with a validity to cover warranty period if required.

g. In case, the **bidder** is not able to provide services (and the items / accessories is not functioning as the reason thereof) due to natural calamity (act of God), Political unrest, Riot and fire at the user site, then in such a situation the warranty period will be extended by the period for which the item / accessories could not be operated because of supplier not been able to provide services.

h. During warranty period, in case of any alleged damage due to accident / human error, a committee under the Chairmanship of Director, I.G.I.M.S. – Patna with one member from the bidder and one member from the Institute will decide the authenticity of the claim. The decision of the committee shall be final and binding on both the parties.

**04. After Sales Services: -**

a. After expiry of the warrantee/Guarantee period of the equipment, the Indian agent will have to undertake the Comprehensive Annual Maintenance contract (with spare parts, accessories, consumables etc.) of the Complete System for the further life span of equipment. The life span

of the equipment shall not be less than ten years. In special circumstances the total life span of the Equipment/ items may be reduced by the Institute.

- b. The Complete System should include the basic unit and allied supporting components like UPS, Stabilizer, Computer System, Printer, De-ionizer, Dehumidifier etc to be supplied by the bidder along with basic unit if necessary for running the system.
- c. During Comprehensive Annual Maintenance Contract, bidder shall provide at least **four maintenance visits per year** at regular interval for usual maintenance and supervision. If bidder fails to provide these maintenance visits at regular interval per year, a proportionate deduction in the form of penalty at the rate of 25% of contract amount per year will be deducted.
- d. Bidder shall also attend all breakdown calls within 48 hours of the receipt of the information from institute through fax/e-mail/mobile/sms etc.
- e. During Comprehensive Annual Maintenance Contract, **bidder** shall maintain and keep **95% uptime** per year of the “**Complete System**” as per calculation given below:-  
1 Year = 365 days  
**95% of 365 days = 347 Days per annum**
- f. The bidder shall compensate the uptime less than the specified above for **every additional day** of down time over and above 18 days stipulated above, warranty period will get extended by one week as penalty at no extra cost i.e. the extended penalty period will be equal to one week for every additional day of down time.
- g. During Comprehensive Annual Maintenance Contract, **bidder** will keep the “**Complete System**” in satisfactory working condition. In case, any spare parts, accessories, PCB, all type of consumables etc. needs replacement due to normal wear and tear, **bidder** will supply and install the same for which no additional payment is to be made. .If any spares / consumables / accessories etc. are not covered under Comprehensive Annual Maintenance Contract charges, it should be clearly mentioned with frequency of replacement and with rate. The validity of rate of such items should also be mentioned clearly. What will be the rate of escalation on the quoted rate after expiry of the validity of rate of such item must be mentioned.
- h. The payment of Comprehensive Annual Maintenance Contract will be made on half yearly basis after submission of satisfactory functioning report of the Complete System by the officials authorized by the Institute.
- i. In case, the **bidder** is not able to provide services (and the items / accessories is not functioning as the reason thereof) due to natural calamity (act of God), Political unrest, Riot and fire at the user site, then in such a situation the Comprehensive Annual Maintenance Contract will be extended by the period for which the item / accessories could not be operated because of supplier not being able to provide services.
- j. During Comprehensive Annual Maintenance Contract, in case of any alleged damage due to accident / human error, a committee under the Chairmanship of Director, I.G.I.M.S. – Patna with one member from the bidder and one member from the Institute will decide the authenticity of the claim. The decision of the committee shall be final and binding on both the parties.

#### 05. **Performance Security**

- a. There will be a performance security deposit amounting to 10 % of the total value of the equipment excluding taxes, which shall be submitted by the successful bidder within 10 days from the date of issuance of “Letter of Intent”.
- b. The contract duly signed and returned to the Institute shall be accompanied by a demand Draft or Bank Guarantee in the prescribed format.
- c. Upon receipt of such contract and the performance security, the Institute shall issue the Supply Orders containing the terms and conditions for the execution of the order.



- d. Failure of the successful bidder in providing performance security as mentioned above and / or in returning contract copy duly signed in time shall make the bidder liable for forfeiture of its EMD.
- e. The Performance security shall be denominated in Indian Rupees or in the currency of the contract as detailed below:
  - i. It shall be in any one of the forms namely Account Payee Demand Draft or Bank Guarantee issued by a Scheduled bank in India, in the prescribed form as provided in this document endorsed in favour of the Institute.
  - ii. Institute will release the Performance Security without any interest to the successful bidder on completion of the successful bidder's all contractual obligations including the warranty obligations & after receipt of certificates confirming that all the contractual obligations have been successfully complied with.

**06. Delivery period/Liquidated Damage: -**

Goods should be delivered within three months after receipt of irrevocable and confirmed Letter of Credit. If the delivery is not affected by due date, the Director, I.G.I.M.S. - Patna shall have the right to charge liquidated damage on supplier/his Indian agent as under: -

- i. 1<sup>st</sup> extension for a month or a part thereof @ 2% per month of C.I.F. value.
- ii. 2<sup>nd</sup> extension for an additional month or a part thereof @ 3% per month of C.I.F. value subject to maximum Limit of 20% of the order items. All expenses incurred for extension of L.C. will be borne by supplier/his Indian agent.
- iii. Cancellation.- If delivery is not done even after 2<sup>nd</sup> extension Institute shall have the right of cancellation of Supply order at its discretion..

**07. Payment: -**

100% payment through International Irrevocable Letter of Credit in favour of principal abroad, but 80% will be released on shipment of goods & balance 20% after satisfactory installation of equipment on submission of Bank Guarantee of value not less than 20% of the cost of the quoted equipment (with a minimum validity to cover up the warranty / guarantee period) will be submitted by supplier. This Bank Guarantee will be released after expiry of guarantee period.

- a. In case, the equipment is purchased in Indian Currency then the payment will be made as per following scheduled.
- b. 90% payment will be released against delivery and successful installation of the equipment & balance 10% will be released on submission of 10 % Bank Guarantee of the total cost of ordered value. This Bank Guarantee will be released after expiry of guarantee period.
- c. L. C. will be opened only after receipt of the 20% bank Guarantee of the total cost of equipment (with a minimum validity to cover up the warranty / guarantee period), confirmation letter of all our terms and condition, submission of agency certificate in favour of Indian agent who have submitted and quoted the price, name of the Bankers abroad; intimation about country of origin and 10 copies of Performa invoice of the ordered item. Indian Agency commission will be paid in Indian currency only to Indian agent, if any. No extra charges will be paid for installation/demonstration and training to personnel.

08. **Validity of Price:-**

Minimum up to one year from date of tender submission and it should be extendable.

09. **Part Supply:** No part supply/ wrong supply or short supply will be accepted by the Institute. The Director IGIMS, Patna will be the final authority and will have the right to reject full or any part of supply, which is contradictory to the terms and conditions agreed at the time of placement of order. In case of rejection of any supplied items due to nonconformity in quantity and/or quality, Institute will have right to charge liquidated damages, as it deems fit

10. **Packing & Marking:-**

Goods must be securely and adequately packed and protected in order to prevent damage, otherwise all losses and /or damage resulting from inadequate packing and/or inadequate protection or inadequate marking shall be borne by seller/seller's Principal abroad.

11. Supplier may have to provide required manpower for running the equipments at mutually agreed remuneration (Which shall not be more than remuneration payable for the particular category of staff at IGIMS) at the sole discretion of the Institute, till institute is able to arrange its own staff for the purpose.

12. **Insurance: -**

Insurance up to Patna will be borne/arranged by principal supplier/his Indian Agent.

13. **Installation & site plan:**

Requirement regarding site/location for installation of equipment, if any, should be mentioned in the tender. Time required for installation of system after delivery must be mentioned. In case of delay in installation institute will have right to charge liquidated damage.

Specify the following points for installation of the System: -

- a. Total power consumption along with break up of main System and Accessories.
  - b. Whether the System needs uninterrupted power supply.
  - c. Maximum tolerated transfer time in case of interruption of power supply.
  - d. Whether the System needs any humidity control device.
  - e. Whether the System needs any separate power line/isolation Transformer.
  - f. Does the System need the electrical shielding?
  - g. Whether Air Conditioner is required for the System.
  - h. Does it require special civil works for installation?
14. The bidder should also quote for supply of "Un-Interrupted Power Supply" (UPS) with a battery back up of at least 30 minutes, "Constant Voltage Transformer (CVT)" of reputed manufacturer of required capacity along with Spike Suppressor or "Servo Voltage Stabilizer" as per requirement of the System. Bidder may quote the prices for all the above items (UPS/CVT/SERVO VOLTAGE STABILIZER) and the decision will be taken during technical evaluation of the item whether UPS is suitable or CVT / Servo Voltage Stabilizer will serve the purpose.

15. **Responsibility:-**

The principal as well as its agent will be severally and jointly responsible for ensuring the minimum life span of 10 years for the equipment. Both the said principal abroad and his Indian agent will have the full responsibility for the proper functioning of the equipment/instruments within the warrantee period and thereafter during the life span of the equipment

16. The bidder is required to provide list of persons (along with their permanent and correspondence address) owing more than 1% share ownership in the company/firm (both principle and Indian Agent).
17. The bidder is required to submit compliance sheet, which should reflect details of clause-by-clause compliance of technical specifications as well as general terms & conditions failing which their offer shall be rejected.
18. In order to fully and optimally utilize the equipment, training to paramedical staff and Doctors should be provided. In continuation to this training a separate maintenance training for the machine and the sub system should also be given to the Equipment Maintenance Engineer and Maintenance Technicians of the Institute. All the financial commitment in this regard shall be met by the firm/Principal.
19. **Penalties for non-performance**  
The penalties to be imposed, at any stage ,under this tender are;
  - a. imposition of liquidated damages,
  - b. forfeiture of EMD/performance security,
  - c. termination of the contract,
  - d. Blacklisting/debarring of the bidder.
20. **Termination of Contract**
  - a. Termination for default:- The Institute, without prejudice to any other contractual rights and remedies available to it (the Institute), may, by written notice of default sent to the successful bidder, terminate the contract in whole or in part, if the successful Bidder fails to deliver any or all of the goods or fails to perform any other contractual obligation(s) within the time period specified in the contract, or within any extension thereof granted by the Institute.
  - b. In the event of the Institute terminates the contract in whole or in part, the Institute may procure goods and/or services similar to those cancelled, with such terms and conditions and in such manner as it deems fit and the successful bidder shall be liable to the Institute for the extra expenditure, if any, incurred by the Institute for arranging such procurement.
  - c. Unless otherwise instructed by the Institute, the successful bidder shall continue to perform the contract to the extent not terminated.
  - d. Termination for insolvency: If the successful bidder becomes bankrupt or otherwise insolvent, the Institute reserves the right to terminate the contract at any time, by serving written notice to the successful bidder without any compensation, whatsoever, to the successful Bidder, subject to further condition that such termination will not prejudice or affect the rights and remedies which have accrued and / or will accrue thereafter to the Institute.
  - e. Termination for convenience: - The Institute reserves the right to terminate the contract, in whole or in part for its (Institute) convenience, by serving written notice on the successful bidder at any time during the currency of the contract. The notice shall specify that the termination is for

the convenience of the Institute. The notice shall also indicate interalia, the extent to which the successful bidder's performance under the contract is terminated, and the date with effect from which such termination will become effective.

21. **Fall Clause:**

The prices charged for the equipment supplies under the contract by successful bidder shall in no event exceed the lowest price at which the successful bidder sells the equipments of identical description to any other persons during the period of contract. If any time, during the contract, the bidder reduces the sales price chargeable under the contract, he shall forth with notify such reduction to the Institute and the price payable under the contract of the equipments supplied after the date of coming into force of such reduction or sale shall stand correspondingly reduced.

22. **Applicable Law & Jurisdiction of Courts**

- a. The contract shall be governed by and interpreted in accordance with the laws of India for the time being in force.
- b. All disputes arising out of this tender will be subject to the jurisdiction of courts of law in Patna (Bihar, India).

**Sd/-  
Director,  
IGIMS - Patna**

**CHAPTER:**

**SCHEDULE OF THE REQUIREMENT**

<b>Group :A- Biochemistry</b>
Supply, Installation & Commissioning of Laboratory Automation System with Equipment's.
<b>Group :B- Dentistry</b>
<b>List of Equipment's</b> – 1.Dental Chairs- Complete set with Oil Free Air Compressor and Contra (Fibre Optic ) and Straight Hand pieces (02 each ) with inbuilt Scaler with 3 Tips and Light Cure Unit. Two Doctor's Stool for each chair with adjustable back rest .2. Front Loading Autoclave with capacity of 20Litres or more. 3. Dental Operating Microscope ( For Endodontic Use) with 5 Step Magnification 4. Cone Beam Computed Tomography Machine (CBCT) with 2 consoles (1 for image acquisition and 1 for image reconstruction) , DYCOM Printer and UPS and 1 Coloured Inkjet Printer
<b>Group :C- TB &amp; Chest</b>
<b>List of Equipment's</b> – 1.Flexible Video Thoracoscope
<b>Group :D- Anaesthesiology</b>
<b>List of Equipment's</b> – 1.Nerve Stimulator
<b>Group :E- Reproductive Biology</b>
<b>List of Equipment's-Group-A-</b> 1.IVF (Laminar Flow) Work Station with Integrated Stereozoom Microscope with Accessories 2. Portable Test Tube Warmer 3. Co2 Incubator with ¾ doors Gas Screen and USB Port with Moist Sterilization: Capacity-150-160 ltrs. 4. Inverted Microscope with Micromanipulator and heating system for ICSI with accessories. 5. Air Purification System 6.Sperm Counting Chamber 7. Oocyte Suction Pump 8. Equipment for IMSI 9. Co2 Analyser 10. Positive Air Pressure System 11. GSM Alarm System: Alarm System for Cryocans & Alarm System for Drug Refrigerator 12. Cryocans 13. Digital CCD/Microscopic Camera 14. Flexi Pet Handle 15. Heating Plate /Petridish Warmer 16.ET Table 17.Vibration Free Table For Micromanipulator System 18. Storage Cabinet 19. Laboratory Table for IVF and Andrology 20. Trigas Bench Top Incubator 21. Positive Air Pressure System with Accessories 22. Andrology Incubator Bench Top with Accessories 23. UPS 8 KVA Online with Battery Backup 24. Modular Monitor Trolley 25. Stage Warmer 26. Air Cleaning Module for Embryology Lab <b>Group-B-</b> 1. OT Table 2.Operation Theatre Light Shadowless 3. Gyne Couch for IUI transfer
<b>Group :F- Liver Transplant Unit</b>
<b>List of Equipment's-</b> 1.Rapid Fluid Infusion system 2. Autologous Blood Recovery System 3. Scrub station 4. Warming Cabinet 5. Patient Control Anaesthesia Pump (PCA) 6. Cardiac output Monitoring device (Flow track 4 <sup>th</sup> generation) 7. Cerebral Oxymeter 8. Haemodialysis Machine (Portable) 9. Transjugular Liver Biopsy Set (TJLV) 10. UV –Visible Spectro Photometer 11. Spyglass choangioscope 12. Extra corporeal membrane oxygenator (ECMO)

**ANNEXURES**  
**Annexure - I (a)**

**PRICE SCHEDULED FOR DOMESTIC GOODS OR GOODS OF FOREIGN ORIGIN  
LOCATED WITHIN INDIA.**

1	2	3	4	5							6
				<b>Price per unit (Rs.)</b>							
Sched uled	Brief descript ion of goods  Make: Model:	Countr y of origin	Qty. nos.	Ex- factory/ex- warehouse /ex- showroom/ off-the shelf	Excise duty( if any) % and value.	Sales tax/ vat( if any % and value.	Packi ng and forwa rding charg e	Inland transportatio n , insurance for a period including 3 months delivery, loading/ unloading and incidental cost till consignee site.	Incidental services ( including installatio n and commissi oning, supervisio n, demonstra tion and training) at the consignee site. (f)	Unit price ( at consign ee site basis(g)  a + b + c + d+ e + f	Total unit price ( At Consign ee Site) Basis Rs. 4x5(g)
				(a)	(b)	(C)	(d)	(e)	(f)		

Total quoted price in Rs. ....

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 warrantee shall be quoted separately as per price scheduled.

Place:

Name:

Date:

Business Address; -

Signature of Bidder;-

Seal of the Bidder;-

**Annexure: I (b)**

**PRICE SCHEDULED FOR GOODS TO BE IMPORTED FROM ABROAD**

1	2	3	4	5					6
				Price per unit ( CURRENCY)					
Schedule d	Brief descrip tion of goods  Make: Model:	Country of origin	Qty. nos.	FOB price at port/ Airport of loading	Carriage & Insurance ( of port of loading to port of entry) and other incidental cost .	Incidental Services ( Including Installatio n & Commissi oning, supervisio n, Demonstr ation And Training) at the consignee 's site. ( C )	Extended Insurance ( Local transportation and storage) from port of entry to the consignee site for a period including 3 month beyond date of delivery .	Unit Price on CIP Named port of Destination + Extended Insurance (Local Transportati on and storage)	Total Price on CIP Named Port of Destination + Insurance ( Local Transportati on and storage)
				(a)	(b)	( C )	(d)	(e_)	4x5(e)

To be paid in Indian Currency (Rs) : .....

Total Tender Price in Foreign Currency:.....

In Words;-.....

**Note:-**

- a) If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail.
2. The charges for Annual CMC after warrantee shall be quoted separately as per price scheduled.
3. The Bidder will be fully responsible for the safe arrival of the goods at the named port of entry in goods condition as per terms of CIP as per INCOTERMS, if applicable

Indian Agent;-

Indian agency commission:                      % of FOB

Name:  
Signature of Bidder;-  
Business address;-  
Signature of Bidder  
Seal of the Bidder;-

Place;-

Date

**Annexure - II**  
**COMPREHINSIVE ANNUAL MAINTENANCE CONTRACT PRICES SCHEDULE**

S. No.	Item Description	1 <sup>st</sup> Yr.	2 <sup>nd</sup> Yr.	3 <sup>rd</sup> Yr.	4 <sup>th</sup> Yr.	5 <sup>th</sup> Yr.	6 <sup>th</sup> Yr.	7 <sup>th</sup> Yr.	Total Comprehensive Annual Maintenance Contract over a period of seven years after expiry of warranty period of three years from the date of successful installation. (a + b + c + d + e + f + g + h + i)
a	b	c	d	e	f	g	h	i	j
1.	Name of the Equipment:  Make:  Model:  Qty.:								
2.	Name of the Equipment:  Make:  Model:  Qty.:								

**Scope of Contract (details as mentioned in the Clause No. – 13 of “Instruction to Bidder” & Clauses No.: 3, 4 and 5 of “Condition of Contract”):**

- a) The rate of Comprehensive Annual Maintenance Contract as mentioned above should cover the Complete System. Complete System should include the basic unit and allied supporting components like UPS, Stabilizer, Computer System, Printer, De-ionizer, Dehumidifier etc to be supplied by the bidder along with basic unit.
- b) **Preventive maintenance visit:** Four Maintenance visits at regular interval for usual maintenance & supervision failing which 25% of the contract amount per visit would be deducted as penalty.
- c) **Break down maintenance visit:** As & when required
- d) **Response Time:** within 48 Hours.
- e) Uptime Guarantee: 95% of 365 days
- f) The above-mentioned charges should includes labour charges for maintenance and breakdown visits per year, spares, accessories and all type of consumables required for the maintenance of the supplied items. If any spares / consumables /accessories etc. are not covered under above-mentioned charges; it should be clearly mentioned with frequency of replacement and with rate. The validity of rate of such items should also be mentioned clearly. What will be the rate of escalation on the quoted rate after expiry of the validity of rate of such item must be mentioned.
- g) Payment of Comprehensive Annual Maintenance Contract would be made on half yearly basis after completion of work and satisfactory working report. In no case, advance payment is to be considered.

Seal and Signature of the bidder



ANNEXURE – III

**MANUFACTURER’S AUTHORISATION FORM**

(To be submitted by authorized dealers/representatives/importers)

No.

Dated:

To  
The Director  
Indira Gandhi Institute of Medical Sciences,  
Sheikhpura,  
Patna – 800 014 (Bihar, India)

Dear Sir,

Tender No :  
Equipment Name :

1. We ..... (Name of the OEM) are the original manufacturers of the above equipment having registered office at ..... (full address with telephone number/fax number & email ID and website), having factories at \_\_\_\_\_ and \_\_\_\_\_ , do hereby authorize M/s. \_\_\_\_\_ (Name and address of bidder) to submit tenders, and subsequently negotiate and sign the contract with you against the above tender no.
2. No company or firm or individual other than M/s. \_\_\_\_\_ are authorized to bid, negotiate and conclude the contract in regard to this business against this specific tender.
3. We also hereby undertake to provide full guarantee/warrantee /Comprehensive Annual Maintenance Contract as agreed by the bidder in the event the bidder is changed as the dealers or the bidder fails to provide satisfactory after sales and service during such period of Comprehensive Warranty / Comprehensive Annual Maintenance Contract and to supply all the spares/ accessories / consumables etc. during the said period.
4. We also hereby declare that we have the capacity to manufacture and supply, install and commission the quantity of the equipment’s tendered within the stipulated time.

(Name)  
for and on behalf of M/s. \_\_\_\_\_

Date: \_\_\_\_\_ (Name of manufacturers)

Place:

**Note: This letter of authority should be on the letterhead of the manufacturing concern and should be signed by a person competent and having the power of attorney to bind the manufacturer.**

**ANNEXURE – IV**  
**BANK GUARANTEE FORM**

To

The Director  
Indira Gandhi Institute of Medical Sciences,  
Sheikhpura,  
Patna – 800 014 (Bihar, India)

WHEREAS \_\_\_\_\_ (Name and address of the supplier) (Hereinafter called “the supplier”) has undertaken, in pursuance of tender no \_\_\_\_\_ dated \_\_\_\_\_ (herein after called “the contract”) to supply The Director, Indira Gandhi Institute of Medical Sciences, (address) with \_\_\_\_\_ (Description of goods and supplies).

AND WHEREAS it has been stipulated by you in the said tender/bid that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the bid scope;

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total amount of \_\_\_\_\_ (Amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein. We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand.

We undertake to pay you any money so demanded notwithstanding any dispute or disputes raised by the supplier(s) in any suit or proceeding pending before any Court or tribunal relating thereto our liability under these presents being absolute and unequivocal.

We agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition no modification.

No action, event, or condition that by any applicable law should operate to discharge us from liability, hereunder shall have any effect and we hereby waive any right we may have to apply such law, so that in all respects our liability hereunder shall be irrevocable and except as stated herein, unconditional in all respects.

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

We, \_\_\_\_\_ (indicate the name of bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent, in writing, of The Director, Indira Gandhi Institute of Medical Sciences, Patna (Bihar). This Guarantee will remain in force up to (Date). Unless a claim or a demand in writing is made against the bank in terms of this guarantee on or before the expiry of (Date) all your rights in the said guarantee shall be forfeited and we shall be relieved and discharged from all the liability there under irrespective of whether the original guarantee is received by us or not.

(Signature with date of the authorized officer of the Bank) .....  
Name and designation of the officer

.....  
.....  
Seal, name & address of the Bank and address of the Branch

**ANNEXURE - V**  
**POWER OF ATTORNEY**  
**(On a Stamp Paper of relevant value)**

I/ We.....(name and address of the registered office) do here  
by constitute, appoint and authorise  
Sri/Smt.....  
.....(name and address) who is presently  
employed with us and holding the position of ..... as our  
attorney, to act and sign on my/our behalf to participate in the tender  
no.....for  
..... (Equipment name).

I/ We hereby also undertake that I/we will be responsible for all action of  
Sri/Smt..... undertaken by him/her during the tender process and  
thereafter on award of the contract. His / her signature is attested below

Dated this the \_\_\_ day of 201\_ For\_\_\_\_\_

(Name, Designation and Address)

Accepted

\_\_\_\_\_  
(Signature) (Name, Title and Address of the Attorney)

Date : \_\_\_\_\_

# Specification & Allied Technical Details

## Group-A : Biochemistry

### Supply, Installation & Commissioning Laboratory Automation System with Equipment's.

#### 1. SPECIFICATIONS FOR CHEMISTRY AUTOMATION SYSTEM

- **Throughput** – 1,800 or more photometric test/hr, & minimum 2200 test with ISE/hour for main instrument with a back-up unit of 1200 test/hr with ISE.
- **Minimum 12 Wavelengths**, between 340nm - 800nm required.
- **Assay type** - End point , fixed point kinetic, bio chromatic, turbidimetric, sample blanking, reagent blanking.
- **Types of sample** - Serum, Plasma, whole blood, Urine, CSF and other body fluid.
- **Sample tubes** - accepts primary collection tubes (diameter between 12-18mm and height between 50-110 nm) sample cups without adaptors.
- **Sample capacity**- 100 samples (or more) On-board at a time, with continuous loading and immediate stat sampling interruption.
- **Sample volume** – 1.5uL to 30uL in increment of 0.1 µl.
- **Reagent capacity** - more than 75 refrigerated position.
- **Facility of bar code reader** for reagent & sample in auto analyzer.
- Stat sample, automatic dilution and rerun facility.
- Facilities of liquid level sensor for reagent and sample, crash detection , bubble and clot detection, automatic washing of probes.
- Facility to detect and quantify , hemolytic, lcteric and lipemic interference automatically.
- Carry over must be less than <0.1 ppm.
- **Quality control**- Graphic display of calibration curve & QC. interactive levey Jennings charts, daily, monthly and batch quality control with data archiving , automatic quality control and automatic calibration with multiple calibrators.
- **Software** –Latest software with facility to update whenever applicable.
- **Data transmission** –full uni and bidirectional communication possible with editing facility. Report may be directionally printed through the printer and through LAN.

- **Sufficient data storage** with CD writer & additional hard disc and also facility to store in pen drive & CD.
- **Remote maintenance facility** should be available.
- System should be offered with the following accessories :-
  - A. **UPS:** Bidder must supply On-Line UPS of required capacity to cover complete system with a battery backup of 1 hour.
  - B. **VEIN ILLUMINATION DEVICE :**
    - i) Bidders also provide 2 units harmless Near Infra Red (NIR) technology based vein illuminator system. The system Should be a portable, **also foldable model** for easy handling stand for maintaining for trouble free phlebotomy for hand free operation.
    - ii) Vein imaging device should offer an image that provides for the same accuracy and reliability of image regardless of the rotation of the device/technique for use on the patient.
    - iii) Vein imaging system should be based on harmless Near Infra Red (NIR) technology and it should have the ability to visualize vessels up to 10mm deep.
  - C. **SAMPLE TUBE SORTING UNIT :**
    - i) All Common Sample Tubes are inserted in bulk, registered and sorted based on barcode and /or Cap Color information.
    - ii) Sorting Mode: Through LIS Communication.
    - iii) Facility for contentious tracking of all sample tubes during the entire process from Registration to Sorting of all specimen to increase overall process quality.
  - D. **High Speed Centrifuge Machine:** 2 Nos.
  - E. **PTS System** – Two Stations **PTS (Pneumatic Transport System)** should be connected from Sample Collection Room to Biochemistry Laboratory where proposed system is to be installed..
  - F. **Deionizer (Water Purification System)** to get deionized water for testing & washing) including adequate water reservoir with a Capacity of 100Ltr/Hr.
  - G. **Reagents, Controls, Calibrators, Consumables :-**
    - i) **Quotations of pack size and Cost/test** of the **OEM make** bio - chemistry reagents for the following items – Glucose, Cholesterol, Triglycerides, Urea, Creatinine, Uric Acid, Total Bilirubin, Direct Bilirubin, Total Protein, Albumin, Alkaline Phosphatase, GPT/ALT, GOT/AST, CK, Amylase, Calcium, Phosphorus, HDL-C(Direct), LDL-C(Direct),

- ii) **Test – Reagent:** The bidder has to quote the rate for reportable test for each parameter (i.e. inclusive of buffer, diluents, calibrator, controls and all other consumables) taking into consideration of the load per annum as given below. The cost of each reagent is also to be given according to the pack size, which shall remain fixed for 10 years from the date of installation. Total cost of the reagents will be computed for the total work load per annum and will be included in the cost of the equipment and CAMC for comparison purposes, The manufacturer, however, should certify the entire range of available test pricing.

SI No	Test's Name	Projected No. of tests per year (Approx.)	TEST/ pk	Cost/Test	Total Test Cost
1	URIC ACID	40000			
2	CHOLESTEROL	11500			
3	AMYLASE	3000			
4	TRYGLYCERIDE	10500			
5	CALCIUM	40000			
6	GAMA GT				
7	LDH	3500			
8	CKMB	1500			
9	CK NAC	2200			
10	GLUCOSE - HEX	64000			
11	HDL CHOLESTEROL DIRECT	10000			
12	LDL CHOLESTEROL DIRECT	6500			
13	TOTAL PROTEIN	41000			
14	ASO				
15	CRP				
16	ALBUMIN	45000			
17	UREA	52000			
18	BILIRUBIN DIRECT	35000			
19	BILIRUBIN TOTAL	35000			
20	CREATININE	70000			
21	ALKALINE PHOSPHATESE	40000			
22	SGOT(AST)	43000			
23	SGPT(ALT)	46500			
24	MICROALBUMIN	500			
25	DIRECT ENZYMATIC HBA1C KIT	6000			
26	PHOSPHROUS	40000			
27	IRON(FERROZINE)	3000			
28	LACTATE				
29	LIPASE	2500			
30	MAGNESIUM (CALMAGITE)	100			
31	PHOSPHOLIPIDS				
32	TIBC / UIBC	2200			

33	APOLIPOPROTEIN A1				
34	APOLIPOPROTEIN B				
35	COMPLEMENT C3				
36	COMPLEMENT C4				
37	IMMUNOGLOBULIN IgA				
38	IMMUNOGLOBULIN IgG				
39	IMMUNOGLOBULIN IgM				
40	RF				
41	Lp (a) TURBILATEX				
42	Sodium	44000			
43	Potassium	44000			
44	Chloride	44000			
45	24 Hr. Urine Protein	8500			
46	LDH	3500			
					TOTAL

H: **Site Preparation & Installation:** Bidder is to be responsible for site preparation as turn-key, installation, commissioning and trial runs providing trial kits for major tests along with respective calibrator and control.

I: **Guarantee:** 5 Years with complete maintenance and spares of equipment along with supporting systems (i.e. UPS, Computer System, Printer, De-ionizer etc.) at no extra cost to the purchaser.

J: **CAMC:** Rate of Comprehensive Annual Maintenance Contract (CAMC) for the machine and supporting systems for next 5 years after expiry of guaranty period of 5 years.

**Specific Terms & Conditions:**

- Service is required 24 hours x 7 days without interruption. Responsibility of back up instrument is of the vendor.
- IGIMS will be responsible for providing unfurnished space, electricity, manpower, technicians to run the machine.
- Cost per test include all expenses e.g. cost of consumables and spares (essential and others), wash solution, calibrator, control, (calibrator and control will be used as per NABL stipulation), repeat test etc.
- Cost/pack will be frozen for 10 years from the date of satisfactory functioning of the system. However, there will be annual review of the performance of the service with regard to cost per pack.

**Method of Tender Evaluation and Price Comparison:**

- Bidder should be same for the equipment and supply of reagents.
- The offer of only bidder will be considered who quotes for all 46 parameters separately.
- The comparative statement will be made on the basis of composite cost of 46 parameters for 10 years (on the approx. no. of investigations per annum), cost of machine, with 05 years of warranty and CAMC for further 05 years after 05 years of warranty / guaranty.

**2. Specification For Fully Automated Phlebotomy Tube Labeller on Turn Key Basis.**

- **Fully Automated Bar-coded tube labeller** for selection of the tube & generate the Barcode sticker and sticking on the tube automatically.
- **Minimum Throughput/hour** : more than 1200 Tubes or more per Hour.
- **Each stocker** should have up to 100 tubes capacity.

- **Label size** should be 50 mm X 30 mm. with print width of 25-50 mm.
- **Printing** should be direct thermal up with density to 200 dpi.
- **Print image** should be PCX, BMP, JPG, GIF, TIF.
- Should have built in backup printer.
- **Printing speed** should be within 4 seconds per label during continuous printing.
- **Labeling position** from tube top should be 0-45 mm as per the requirement.
- **Should be able to use different Bar codes types** i.e. CODE39, CODE128, Interleaved 2 of 5, NW-7 (CODABAR) etc.
- Should have on board display and operational Panel.
- Should work on 230 Volts, 50 Hz, Single Phase.
- Should be able to discharge up to 8 different types of tubes per patient.
- **Bidirectional IT interface with LIS** to be provided by the vendor.
- Bidder should do the interior for central collection area with the following scope of supply :
  - a. **Patient Waiting Chair** (minimum 50 nos.) of standard manufacturer like Godrej / Durian etc.
  - b. **High End Registration PC** (i5 or above with 4 GB RAM) - 02 Sets
  - c. **Phlebotomist Chair** 4 units & **patient Chair** 4 units
  - d. Air Conditioner - 4 units -2 ton each capacity.
  - e. **Online UPS**
  - f. Report generating .
  - g. Bar Code Scanner.

### Turnkey Work

- a. Bidders are strongly advised to visit the site and carry out the assessment of works before bidding.
- b. Area dedicated for sample collection room.
- c. Sample room should aesthetically look good and all the tubes, cables, diverters etc. should be properly routed .
- d. All electrical work required for commissioning and installation of equipment like cable wire, electrical outlets, switches, cable trenches, railings, etc. should be fire proof, of reputed make, certified for electrical safety as per international standard. All work has to be done by the bidder including Electrical Isolators, MCBs, Electrical boards, Switches, Sockets and any other thing which are required for smooth running of Equipment.
- e. Carry out the complete partitioning/separation of the work site with controlled access.
- f. Carry out the complete flooring inclusive of all materials.
  - i. Bidder has to specify its electrical load including equipment, air-conditioning, peripherals load, etc...
  - ii. Carry out all plant area renovation, maintenance and preparation, including, doors, furniture, windows, tiles, ceilings, lights, painting etc.
  - iii. Bidder may quote the consumable cost (Tubes, syringe, Cotton, Traniquate etc) separately.



## Group-B : Dentistry

### **1. Dental Chair with Compressor, Qty.- 2Nos.**

#### **Specification-**

- Should be computerized & electrically operated chair
- Should have independent up/down & backrest movement
- Should have seven working programmes including four programmable working positions with one switch for each and rest three for spitting, last working position and zero return.
- Should have anticrushing & movement locking system
- Should have double articulated head rest
- Should have automatic right arm rotatable with zero degree return
- Should have two Doctor's stool with adjustable back rest, tilt & height adjustment and suitable foot ring for attaining correct posture
- Should have three axis movement of shadow less cold & white 5 LED touch less sensor lights with variable intensity & of 35000 LUX
- Should have removable and autoclavable handles for dental light head
- Should have emergency RED switch to lock chair during emergency
- Should have multifunctional electrically operated foot control with joysticks for all 7 programmes
- Should have water heating system with three way syringe
- Should have two(02) three way syringe ( one for operator and one for assistant) , and points for low volume and high volume suction
- Should have auto sensor water activation for spittoon & cup filler
- Should have stainless steel autoclavable delivery tray with minimum size of 18\*20 inches
- Should have 18\*20 size dash board with computerized switches for all 7 programmes and 2 points for air rotor( 1 airtor cable should be optic light cable & 1 without optic light cable)
- Should have Contra ( Fibre Optic ) and Straight Hand pieces (02 each ) with inbuilt Scaler with 3 Tips and Light Cure Unit
- Should have 1point for micro motor and 2 point for three way syringe attachment, with inbuilt LED IOPA viewer
- Should have Removable ceramic water spittoon with 180 degree movable water unit
- Should have 3 KV Voltage stabilizer attached with the chair
- Should have dental unit water supply with RO system
- Should be imported Chairs excluding Chinese make
- Chairs with recent advances preferred
- 3 years warranty with 7 years CAMC is must.

#### **It should include an air compressor which:-**

- Should be Oil free & have low noise level
- Should have all proper safety features
- Should have Medical grade air
- Should have Epoxy coated tank of 50 L capacity
- Should have Moisture drain facility
- Should have Air filter with outlet
- Should have Wheels for easy displacement
- Should have Minimum power 1.5HP/ 750 W
- Should have Imported Compressor excluding Chinese make
- Should have compressor with recent advances preferred
- 3 years warranty with 7 years CAMC is must.

**2. Front Loading Autoclave with Capacity of 20 Liters or more, Qty.- 2Nos.**

**Specification-**

- Table top class B autoclave for hollow & porous products
- 3 times prevacuum autoclave
- Should have MOTOROLA sensor
- Should have 20 L or more tank capacity
- Should have temperature range of 121-134 C
- Should have microprocessor controlled with wide LCD screen display
- Should have electromechanical system with double protection lock
- Should have push button control system to operate
- Should have high penetration fractioned vacuum system to ensure the complete removal of air
- Should have customized vacuum drying facility
- Should go on standby mode after completion of cycle
- Should have automatic shutdown facility
- Must have integrated safety features and process evaluation system
- Should have B universal 134/B prion 134 & B universal 121 all types of cycles
- Should be supported with tray holder, 3 trays, tray remover, integrated water filling and draining tank & one pen drive USB point
- Should be FDA approved
- Imported autoclave preferred excluding Chinese make
- Front loading autoclave with recent advances preferred
- 3 years warranty with 7 years CAMC is must

**3. Dental Operating Microscope (For Endodontic Use) with 5 step Magnification, Qty.- 1 Nos.**

**Specification-**

- Should have 5 step magnichanger with 0.4x, 0.6x, 1.0x, 1.6x, 2.5x magnification Viewing Body should have ergonomic binocular tubes 0 - 210° tiltable, IPD range should be 55-75mm, f=170mm.
- Objective lens should have f=250mm with manual fine focus knob and sterilizable cap
- Should have wide field with adjustable eyepieces 10x/18mm with dioptre lock mechanism and retractable eye guard
- All optics should be coated with MaxLite™ coatings.
- It should have Swivel (525mm) and suspension arm (600mm) on roller bearing mount, locking and tension control knobs. Swivel arm rotation should have 360°, suspension arm should have rotation 320°. LED power cutoff in park position.
- It should have carrier arm and 120 coupling, tension adjustment locks and counter balance adjustment to ensure optimal accessory weight offset.
- It should have ergonomic handgrips with grip position adjustment.
- Should have H-shape base, 100mm anti-static castor wheels with brakes Illumination
- Should have Fiber optic cable (1300mm), 50W LED illumination, up to 60,000 hours Input
- Should have universal input 100V-240V AC, 50/60Hz Filters: Yellow and Green, slider control
- Should have quick acting fuse 2.5Amp Standard Accessories:
- Dust cover for microscope head and illumination box, set of sterilizable caps for all knobs Packed with power cord, instruction manual and installation kit

- Should have Labomed roto plate
- Should have labomed camera mount adaptor for DSLR Canon
- Should include 1 DSLR Canon Camera

**4. Cone Beam Computed Tomography Machine (CBCT) with 2 Consoles ( 1for image acquisition and 1 for image construction), DYCOM Printer and UPS and 1 Colored Inkjet Printer, Qty.- 1 Nos.**

- Should have High Resolution Computed Tomography Technology
- Should have 3-IN-1 SOLUTION, User should be able to Easily Switch Between 3D And Pano And Ceph For Best Result
- Should have Full Arch Field Of View 140x140 MM
- Should have Compact Design
- Should have Intuitive Navigation In The 3D Volume
- Should have Cross Sectional Views For Accurate Diagnosis
- Should have Voxel Size of 75 -400 Micron.
- Should have 7.7 Sec Fast Scan For 3D Image
- Should have Dedicated Sensor For Each Mode
- Should have Safety, Stability And Durability
- Should have Automated Sensor Switching For Each Scanning Mode.
- Should have all Axis Motorized Unit.
- Should have Multi-Fov Selection
  - Fov 40x50 Mm.
  - Fov 70x70 Mm.
  - Fov 80x80 Mm.
  - Fov 140x80 Mm.
  - Fov 140x140 Mm.
- Should have dimension of 1,832x1,130x2,383mm.
- The machine mode must be type approved by AERB( Atomic Energy Regulatory Board )
- Should be corrosion free
- Should have laser beam/ bright beam for accurate alignments of reference anatomical landmarks
- X-ray exposure switch with extensible cable
- Lead apron, thyroid collar and Gonadal shield and dosimetry badges must be provided with complete unit
- Must comply with rules and regulations of national and international radiation safety
- Cost of entire unit should include the cost of transportation, installation, approval from AERB and required size lead screen fixation ( inclusive of all taxes).
- The equipment should be US FDA/ European CE approved and AERB compliant
- The system should include**
  - 2 console units ( 1 for image acquisition and 1 for image reconstruction)
  - DYCOM printer and UPS
  - 1 Coloured inkjet printer

\*All equipment's must be CE & FDA Approved.

## Group-C : TB & Chest

### **Flexible Video Thoracoscope**

#### **Specification**

- The tip of Thoracoscope should be flexible, having capacity of upward movement of 160 degree and downward movement of at least 130 degree.
- The field of the view of the view should be 120 degree or more.
- The outer diameter should be 6 to 7 mm and depth of the field should be 3 to 100mm
- The equipment should be compatible with electro surgical unit and laser therapy equipment NDYAG laser, 810 nm diode.
- The scope should be autoclavable.
- The inner diameter of the working channel should be 2.8 mm or more.
- The working length should be 270 mm or more.
- It should be provided with insertion tube and universal cord.
- The equipment should be compatible with video monitor.
- Custom made trolley should be provided with the scope.
- The equipment should be supplied with at least three biopsy forceps and three channel cleaning brushes.
- It should be conveniently moveable from one place to another place.
- It should have good number of installation in India at least three and good service backup preferable within NCR.
- The equipment should be US FDA/European CE certified.

## **Group-D : Anaesthesiology**

### **Nerve Stimulator: Qty.5 Nos.**

#### **Ergonomic shape and large display**

Device type: BF

Battery: Should run on any 9V (alkaline) batteries

Power consumption: 6 mA (\*mA max)

Stimulation current: 5 mA max (0-12 K), Stimulation Voltage : 95V

Stimulation frequency: 1 Hz/ 2 Hz, Allowable load impedance: 0K -12

Stimulus duration: 1.0 ms -0.5 ms -0.3 ms – 0.1 ms – 0.05 ms

Digital dial for Precise and tactile current adjustment with convenient tactile feedback

Sense function stimulation duration SENSE (0.10 ms -0.10 ms- 0.15 ms to 1.0 ms)

Current measuring accuracy: +/- 0.02 mA

Impedance measuring range: 1 KOhms- 90KOhms for target stimulation current > 0.5mA Weight: 200 to 300gm

The enlarged full graphics LC display having good visibility with wide angle of view.

#### **The following information should be displayed on the stimulation screen at all times:**

Stimulus amplitude in mA (large digits)

Current range:

Stimulus duration in ms

Stimulus frequency in HZ

Load impedance in KΩ

Direct access keys: Direct access keys to let conveniently adapt the most important and frequently used settings to the clinical environment. (amplitude range – mA, stimulus duration – ms, stimulus frequency- Hz).

Convenient menu navigation: Adjust your default settings conveniently by navigating through the menu with the arrow keys on the menu keypad. Just press the power on/off button for less than a second to jump back to the stimulation screen.

Sequential electrical nerve stimulation (SENSe) – Featuring the option of selecting a frequency of either 1 Hz, 2 Hz or 3 Hz for SENSe and a stimulus duration of 0.05 ms – 0.10 ms -0.10ms -0.3 ms 0.05 ms -1.00 ms.

#### **It should have following Safety Features:**

Threshold current- To visually and acoustically indicate when the stimulus duration-dependent current threshold goes out –of – tolerance indicating that the needle may be too close to the nerve.

Visual warning: The full digits of the target current display converted to contoured digits when the current threshold drops below the preset level. The LED flashing yellow (instead of green).

Acoustic warning: A warning signal should be additionally sounded.

Impedance Check: The nerve stimulator alarm for unacceptable impedance levels that can be caused by a loose electrode cable or dry skin electrode.

Auto adjust current feature – the current adjusting automatically when the stimulus duration is changed.

#### **Optional Accessories:**

Remote control: That allows sterile one-handed operation.

Pen: The Pen for percutaneous nerve mapping to help to pre-assess the puncture site. Also suitable for training sessions.

#### **Disposable stimulation needles for single shot & continuous technique:**

Warranty: For 3 (Three) Years. The price should be inclusive of three years warranty.

Machine should be US FDA/European CE certified

**Group-E: Reproductive Biology**

**Part-A**

<b>NAME OF EQUIPMENT</b>	<b>SPECIFICATION</b>	<b>NO.</b>
<b>1. IVF (LAMINARFLOW) WORK STATION WITH INTEGRATED STEREOZOOM MICROSCOPE WITH ACCESSORIES</b>	<ul style="list-style-type: none"><li>• IVF work station should be fully heated</li><li>• Size 6 feet x 2 feet (1800 mm x 600 mm)</li><li>• Stainless Steel Table with provision for two working Microscope,</li><li>• It should have built in Two LCD screen</li><li>• It should have with Magnehlic pressure gauge</li><li>• Should have with image grabbing provision for image saving as well view rephrase</li><li>• SS table should be integrated with two rectangular glass heating stage and should be of minimum size: 230 x 110 mm and should flushed with SS table controlled by electronic temperature controller with digital display.</li><li>• Microscope should have Minimum zoom ratio range 6 - 7: 1</li><li>• Unit should have Temperature control with dual Sensor</li><li>• Unit should have Digital Microprocessor based Temperature regulator.</li><li>• Unit should also have stand by control system with lock and key with test tube warmer (Achieving 37 °C)</li><li>• The Workstation should produce class 100 air space (air cleanliness class 5)</li><li>• Noise level should be less than 59 db.</li><li>• Workstation should have its own electrical plug.</li><li>• Workstation should have Test Tube heater</li><li>• Two Numbers (2 Nos) Trinocular stereo zoom microscope (Minimum zoom ratio: 6 - 7: 1) capable for embryo and gametes related work and more working distance.</li><li>• Work station should have provision</li></ul>	1

	<p>of UV Light</p> <ul style="list-style-type: none"> <li>• Work station should have Warming Block for 4 well dish 2 No's 60 mm culture dish 2 no, Warming Block Test Tube 14 cc, Warming Block Test Tube 6 cc,</li> <li>• "C" Mount camera adapter.</li> <li>• Work station should have Base station for rechargeable Test Tube heaters with display.</li> <li>• 24 Test tube heater should have portable test tubes (14 ml) heaters with rechargeable</li> </ul>	
<p><b>2. PORTABLE TEST TUBE WARMER</b></p>	<ul style="list-style-type: none"> <li>• Should have clear front panel to allow continuous observation of test tubes contents.</li> <li>• Should have facility to prevent overheating.</li> <li>• Panel should be easily removable for decontamination.</li> <li>• Should accept at least 4 falcon test tubes.</li> <li>• Should have a poly carbonate stand.</li> <li>• Should have Temp accuracy <math>\pm 0.2</math> degree Celsius.</li> </ul>	<p>2</p>
<p><b>3. CO2 INCUBATOR WITH 3/4 DOORS GAS SCREEN AND USB PORT with MOIST STERILIZATION : Capacity : 150 - 160 liters</b></p>	<ul style="list-style-type: none"> <li>• CO2 incubators should provide the ideal in vitro environment: clean, reliable and easy to use, protecting valuable samples while optimizing cell growth.</li> <li>• The unit should have non-corrosive stainless steel or 100% pure antimicrobial copper.</li> <li>• Unit should have screen logs and usage recording Monitor alarm alerts visually on the display</li> <li>• Unit should have Simplified measurement and control navigation the standard thermal conductivity (TC) sensor with accurate gas sensor technology.</li> <li>• Unit should have Rapid Humidity Recovery Large, directly-heated water reservoir.</li> <li>• The unit should have water level alarm with audible and visual alerts.</li> <li>• The Incubator should have touch screen which improves control of important incubator information.</li> <li>• The incubator should have not less</li> </ul>	<p>1</p>

	<p>than 90°C moist /dry heat decontamination.</p> <ul style="list-style-type: none"> <li>• Unit should have software with USB port.</li> <li>• Incubator to be provided with stable table.</li> </ul>	
<p><b>4 INVERTED MICROSCOPE WITH MICROMANIPULATOR AND HEATING SYSTEM FOR ICSI WITH ACCESSORIES</b></p>	<ul style="list-style-type: none"> <li>• Inverted microscope with constant long working plan (CLWP)</li> <li>• Apochromatic objectives with optical contrast system with manual XY stage and photo micrographic adaptor.</li> <li>• With inbuilt intermittent 1.6 x min. image intensifier</li> <li>• Objectives should be 4x 10x 20x</li> <li>• Eye piece 10x / 15x wide angle.</li> <li>• Micromanipulator with homing device.</li> <li>• Coarse XYZ micromanipulator with min 20 mm traverse in each direction.</li> <li>• XYZ fine micromanipulator with min 10mm of traverse in each direction.</li> <li>• Option to have secondary pipette setup automatic for comfortable working.</li> <li>• Micro tool holder with 2 axis movement for quick setup of micro tools.</li> <li>• Pitch/Yaw/Tilt correction from micro tools holder point</li> <li>• For pitch/angle/Tilt correction from micro tools holder point</li> <li>• Micrometer screw actuated syringes for injections</li> </ul>	1
<p><b>5. AIR PURIFICATION SYSTEM :</b></p>	<ul style="list-style-type: none"> <li>• It should High performance 4 stages Filtration to improve air quality in IVF Lab / Operating room to increase overall results.</li> <li>• Unit should have clinical evidence for VOC reduction in IVF lab.</li> <li>• It should clear up to 600 Sq. ft</li> <li>• Air Exchange / Hr: 5 to 22 Times.</li> <li>• Voltage: 230 Volts.</li> <li>• Hepa Filter : 99.97</li> <li>• It should be portable and wheels with breaks.</li> </ul>	1
<p><b>6.SPERM COUNTING CHAMBER :</b></p>	<ul style="list-style-type: none"> <li>• Constructed should be of two pieces.</li> <li>• Upper layer should serves as a cover glass, with a 1 sq mm fine grid in the center subdivided into 100 squares of 0.1 x 0.1 mm each.</li> </ul>	2



	<ul style="list-style-type: none"> <li>• Lower part should be optically flat glass,</li> <li>• Spacing is firmly secured by four quartz pins.</li> <li>• For safety there should be metal frame in both pieces.</li> <li>• Unit should be easily rinsed with water for reuse.</li> <li>• Unit should have special lenses paper for wipe contact two surfaces after washing.</li> <li>• One with 10 micron depth with with 20 micron depth.</li> <li>• Unit should have CE mark</li> </ul>	
<b>7.OOCYTE SUCTION PUMP :</b>	<ul style="list-style-type: none"> <li>• The vacuum pump should have a cut off after a set vacuum range is achieved.</li> <li>• The low vacuum should be of minimum range of 300mmHg and high should be of minimum range 500mmHg.</li> <li>• The vacuum range can be set digitally and the desired vacuum should increase by of 1mmhg.</li> <li>• The operating switch to create vacuum should be a foot switch.</li> <li>• There should be toggle switch or system to instantly create high vacuum upto 500mmHg.</li> <li>• Unit should be placed on trolley (modular ) with wheels and brakes.</li> <li>• Unit should have independent UPS</li> </ul>	2
<b>8. Equipment for IMSI</b>	<ul style="list-style-type: none"> <li>• Should have total warm stage</li> <li>• Should have DIC prism for 60x objective ,DIC prism slider ,Should have analyser and polarizer for transmitted light .</li> <li>• Should have 60X dry objective with high resolution /semi apochromat objective 60X/0.9WD 0.2 with correction collar <math>\geq 2.8</math> mp non cooled digital camera for IMSI</li> <li>• Should have control box and hand switch for camera including 1394b cable, USB Flash memory ( 2GB) and AC adapter ,power cord</li> <li>• 22 " TFT monitor</li> </ul>	
	<ul style="list-style-type: none"> <li>• Unit should have Measurement</li> </ul>	1

<p><b>9.CO2 ANALYSER</b></p>	<p>Range 0 - 60%</p> <ul style="list-style-type: none"> <li>• Measurement Accuracy should be at 5% CO<sub>2</sub>, +/- 0.25%</li> <li>• Operating Temperature should be in between + 5 °C to 40 °C</li> <li>• It should measure Atmospheric Pressure</li> <li>• It should have Compensation Range 1000 +/- 256 mbar</li> <li>• Response Time should not be more than 2 minute</li> <li>• Unit should have dual wavelength infrared CO<sub>2</sub>, sensing system</li> <li>• Unit should also capable of measuring O<sub>2</sub>.</li> <li>• Atmospheric pressure and temperature compensation</li> <li>• Unit should have Built-in internal sampling pump</li> </ul>	
<p><b>10.POSITIVE AIR PRESSURE SYSTEM</b></p>	<ul style="list-style-type: none"> <li>• Model designed for continuous Fresh Air supply in IVF Lab. To create a positive pressure system in IVF lab. Used air must go out no reuse (circulation) air system is required.</li> <li>• Positive Air system have dimension of 640mmx430mmx700mm.</li> <li>• a mobile unit with 4 castrose,3 stage Air filtration system. Fine Filter, VOC Filter, HEPA filter.</li> <li>• Full Body made up of M.S powder quoted, control panel, with light alarm indication, green for on, yellow for caution to change the filter, and red to change the filter,</li> <li>• Duct to insert the fresh air in IVF lab through Medical grade Transparent, flexible, copper coated wire PU duct hose, fix with wall mounted duct.</li> <li>• Power 220-230 50Hz (V) circuit breaker/MCB</li> </ul>	1
<p><b>11.GSM ALARM SYSTEM :</b>  <b>Alarm system for Cryocans</b>  <b>Alarm system for Drug Refrigerator</b></p>	<p><b>A) Alarm system for Cryocans</b></p> <ul style="list-style-type: none"> <li>• It should Monitor Liquid Nitrogen Level</li> <li>• The alarm unit should have liquid nitrogen level with LCD display.</li> <li>• The unit should be equipped to enter any message and max 5 mobile nos. to send text message in case of an alarm event.</li> <li>• The unit should be able to accept any</li> </ul>	1

	<p>GSM SIM card and should be 230 Volt ac operated.</p> <ul style="list-style-type: none"> <li>• The unit should have capability of setting upper and lower temp limits.</li> <li>• The unit should have LN2 Level indicator.</li> </ul> <p><b>B) Alarm system for Drug Refrigerator</b></p> <ul style="list-style-type: none"> <li>• The unit should temperature</li> <li>• The alarm unit should temperature with LCD display</li> <li>• The unit should be equipped to enter any message and max 5 mobile nos. to send text message in case of an alarm event.</li> <li>• The unit should be able to accept any GSM SIM card and should be 230 Volt ac operated.</li> <li>• The unit should have capability of setting upper and lower temp limits.</li> <li>• Temperature range - 42°C to 50 °C.</li> </ul>	
<p><b>12. CRYOCANS :</b></p>	<ul style="list-style-type: none"> <li>• It should be reliable, long life and effectively in diverse tropical conditions. To be made up to high vacuum cryogenic container of Aluminum and with canister to be supplied with pouring spout with trolley.</li> <li>• Capacity : 26 Liters</li> <li>• Capacity LN2 : 25.5 liters</li> <li>• Static evaporation gross rate : 0.25 liter/day</li> <li>• Static holding time: 102 days.</li> <li>• No of canisters 11</li> <li>• Capacity 42 litres</li> <li>• Capacity LN2 47.3litres</li> <li>• Static evaporation gross rate -0.38 liters/day</li> <li>• Static holding time- 124 days</li> <li>• Canister height -280mm</li> </ul>	<p>1</p>
<p><b>13.DIGITAL CCD/MICROSCOPIC CAMERA</b></p>	<ul style="list-style-type: none"> <li>• CCD / Microscopic Camera with software to have an option to take potos with patient name and address details.</li> <li>• Progressive Scan, Have a reduction lens. with USB Port cable.</li> <li>• Optical Format: 1/1.8"</li> <li>• Frame Rate: 12fps</li> <li>• USB: 2.0/3.0</li> </ul>	<p>1</p>

	<ul style="list-style-type: none"> <li>Should be compatible with be stereo zoom microscope</li> </ul>	
<b>14.FLEXI PET HANDLE</b>	<ul style="list-style-type: none"> <li>Aspiration volume: 20-200 Micro Liter</li> <li>Should provide the fine control for oocyte, embryo, and/or blastomeric manipulation.</li> <li>Adjustable handle</li> </ul>	2
<b>15.HEATING PLATE/ PETRIDISH WARMER.</b>	<ul style="list-style-type: none"> <li>Fully Alluminium with powder quoted quality construction with digital Temperature controller,</li> <li>Temperature Accuracy <math>\pm 1^{\circ}\text{C}</math> to keep the Petridis during the procedure.</li> </ul>	1
<b>16.ET TABLE</b>	<p><b>STANDARD FEATURES:</b></p> <ul style="list-style-type: none"> <li>Manual back with air spring assist</li> <li>Stirrups</li> <li>Duplex, hospital grade electrical receptacle on patient's left side</li> <li>Paper roll holder: holds 21" x 3.5" paper roll (53.3 cm x 8.9 cm)</li> </ul> <p><b>OPTIONS:</b></p> <ul style="list-style-type: none"> <li>Pelvic tilt (7 degrees)</li> <li>Heated drawer (45 watt)</li> <li>Heated upholstery</li> <li>Premium or Ultra-premium upholstery top: 25" W x 60" L (75 cm W x 151.1 cm L)</li> </ul> <p><b>PATIENT WEIGHT CAPACITY:</b></p> <ul style="list-style-type: none"> <li>500 lb (226 kg)</li> </ul>	1
<b>17.VIBRATION FREE TABLE FOR MICROMANIPULATOR SYSTEM</b>	<ul style="list-style-type: none"> <li>Compact aluminium platform,</li> <li>nickel-plated, low profile (less than 60 mm),</li> <li>3 vibration isolators with rolling diaphragm to give excellent isolation from surface borne vibrations in all directions,</li> <li>simple to use, just inflate and leave alone,</li> <li>suitable for clinical and cleanroom environments,</li> <li>easy to retrofit on existing workplaces;</li> <li>capacity max. <b>more than 100 kgs</b></li> <li>internal pressure 2-5 bar,</li> </ul>	1

<b>18.STORAGE CABINET</b>		1
<b>19.LABORATORY TABLE FOR IVF AND ANDROLOGY</b>	<ul style="list-style-type: none"> <li>• Table SS</li> <li>• SS 304 grade table for placing the Co2 incubator</li> <li>• tri-gas bench top incubator,</li> <li>• test tube warmer and pipettes with appropriate size.</li> </ul>	1
<b>20.TRIGAS BENCH TOP INCUBATOR</b>	<ul style="list-style-type: none"> <li>• Should independent chambers for each dish and should have the minimum 6 chambers ( Each having 4 dishes)</li> <li>• Should have independent gas input and sensor for co2 and N2 gases and gas mixer to create premixed gas (Built in the unit)</li> <li>• Should have suitable filters to eradicate voc during the inlet of the gas ( Built in )</li> <li>• Should have a temperature controlled chambers &amp; should have simulated RH Mode.</li> <li>• Should have external gas sampling ports for validation</li> <li>• Should have data logger &amp; predefine PH measurement</li> <li>• Should have audible &amp; visible alarms</li> </ul>	1
<b>21.POSITIVE AIR PRESSURE SYSTEM WITH ACCESSORIES</b>	<ul style="list-style-type: none"> <li>• The positive pressure system should work on the basic principal that IVF Lab should be pressurized compare to the adjoining room.</li> <li>• Positive pressure shall be achieved by supplying clean, disinfected and treated air to the IVF Lab.</li> <li>• Should have an additional facility of introducing fresh air into the IVF Lab.</li> <li>• Should have unique alarm system to change the filter at the appropriate time.</li> <li>• Blower should have backward impeller</li> <li>• Filtration system should consist of Synthetic PU, 99.97% @ 0.3 microns, Efficient, unique blend of activated carbon and alumina (separate chambers)</li> <li>• Capacity not less than 350CFM</li> </ul>	1

	<ul style="list-style-type: none"> <li>• Should cover at least 300 Sq. ft.</li> <li>• <b>Unit should be CE Mark</b></li> </ul>	
<b>22.ANDROLOGY INCUBATOR BENCH TOP WITH ACCESSORIES</b>	<ul style="list-style-type: none"> <li>• <b>Capacity 30 to 35 lit</b></li> <li>• Precise temperature control 37dc +- 0.5%</li> <li>• Exceptionally stable and accurate.</li> <li>• Every corner inside the incubator chamber should be round.</li> <li>• Automatic CO2 sensor calibration.</li> <li>• Audiauble alarms guard specimens against any deviations from the user settings.</li> <li>• Unit should be compact and easy to handle while keeping on bench.</li> <li>• Inner Chamber Dimension should be less then W350 x D350 x H350 Capacity :</li> <li>• Calibration facility should be there.</li> <li>• Programmable , display of level of co2 and temperature throughout.</li> </ul>	1
<b>23.UPS 8 KVA ONLINE WITH BATTERY BACK UP</b>	<ul style="list-style-type: none"> <li>• SMF battery backup with 1 hours battery backup with SNMP and isolation transformer, battery rack inter connection links (42AH*20 nos)</li> <li>• Rectifier &amp; Inverter with IGBT and DSP Technology.</li> <li>• Voltage 400 ± 15% V, 3 Phase, 4 Wire.</li> <li>• Frequency : 45 to 55 Hz.</li> <li>• Display : Control Panel with LCD Screen.</li> <li>• Battery : Sealed Maintenance Free Rechargeable..</li> <li>• Back up : 1 Hr (60 Mts)</li> <li>• Protection : Overload &amp; Short Circuit.</li> <li>• Ventilation : Forced Air Cooling.</li> </ul>	1
<b>24. MODULAR MONITOR TROLLEY</b>	<ul style="list-style-type: none"> <li>• It should be suitable for keeping monitor, light source, camera unit, Video recorder, printer, stabilizer etc</li> <li>• Overall approximate size 680mm (l), 700mm (d), 1570mm (H)</li> <li>• It should have 5 MS shelves. Top shelf of size 640mm x 450mm diameter and other</li> <li>• shelves of size 510mm (l) x 450mm (d) with SS rails which can be</li> </ul>	1

	<p>adjusted at desired height in between top shelf and drawer</p> <ul style="list-style-type: none"> <li>• Should have MS drawer at bottom with lock</li> <li>• Aesthetically designed vertical uprights of aluminium extrusion and aluminium alloy base fitted with 4 non rusting swivel castors, 125mm diameter, 2 with brake</li> <li>• The trolley is provided with a socket to receive 5/15 amps -230V AC 3 pin plugs</li> <li>• The trolley has 2 handles SS IV rod and gas cylinder cage with non rusting caster</li> <li>• It should have 4 corner buffer strips</li> </ul>	
<b>25.STAGE WARMER</b>	<ul style="list-style-type: none"> <li>• Should be fully stainless steel (S.S 304) with digital temperature controller.</li> <li>• It should be easily fitted to the Stereo Zoom Microscope supplied.</li> </ul>	1
<b>26. AIR CLEANING MODULE FOR EMBRYOLOGY LAB:</b>	<ul style="list-style-type: none"> <li>• Should have three stage purification system.</li> <li>• Should have pre-filter, hospital grade HEPA filters, activated carbon.</li> <li>• Noise level less than 60 - 70 dB.</li> <li>• Should have auto indication for changing the filters</li> <li>• Should have audio or visual indicator for air cleaning process.</li> <li>• Should cover the entire lab</li> <li>• Should be certified with approval from international quality management process organization. Documentation should be submitted along with technical bid</li> </ul>	1

**Part-B**

**OT EQUIPMENTS WITH SPECIFICATION**

<p><b>1.OT Table</b></p>	<ul style="list-style-type: none"> <li>• Electrical/Automated,</li> <li>• Overall approx. extended size 1880 mm length*9000 mm</li> <li>• width*800mm height</li> <li>• Three section-top backrest adjustable on ratchet</li> <li>-middle section with ' U ' cut</li> <li>-Leg end section detachable</li> <li>- Gas sparing assisted trendelenberg position             <ul style="list-style-type: none"> <li>• SS head side railing, SS handgrips ,rubber padded</li> <li>• SS lithotomic rods and SS bowl</li> </ul> </li> </ul>	<p>1</p>
<p><b>2. OPERATION THEATRE LIGHT SHADOWLESS</b></p>	<ul style="list-style-type: none"> <li>• Single dome ceiling type OT light shadow-less</li> <li>• Diameter of the dome should be less than 650mm.</li> <li>• The dome should have single bulb or multi bulb. In case of single bulb stand-by bulb should operate in the event of failure of primary bulb.</li> <li>• Light output should be minimum 1,00,000 lux</li> <li>• Minimum light field size should be 200mm</li> <li>• Power supply to the lamp should be from a constant voltage source.</li> <li>• Color temperature should be between 4000°K to 5000°K</li> <li>• Should have a short circuit protection for the low voltage power supply</li> <li>• Should have easy lamp replacement</li> <li>• Should have heat reduction filters One extra sterile handle should be supplied.</li> <li>• Five spare bulbs should be supplied.</li> <li>• Minimum spring arm stroke of 700mm</li> <li>• Minimum four step intensity control</li> <li>• Should have minimum action radius of 2000 mm.</li> <li>• Should have CE mark or FDA</li> <li>• The light should be fixed in the Operation theater.</li> </ul>	
<p><b>3.GYNE COUCH FOR IUI TRANSFER</b></p>		<p>3</p>

Should provide all necessary support to start IVF ICSI Lab by

- a. Training of embryologist and gynecologists for IVF ICSI.
- b. Free supply of all media and consumables for first 10 cases.
- c. Providing all necessary support till first 10 positive pregnancy test of the patients.



## Group-F( Liver Transplant Unit)

### **1. RAPID FLUID INFUSION SYSTEM**

1. Should accommodate standard blood and fluid bags.
2. Should have 2 automatic pressure chambers with 300 torr pressure
3. Should have a compressor
4. Should have sensors to detect air in blood and fluid and capability to automatically clamp the system
5. Should have I.V pole
6. Should be capable of transfusion flow rates 75-60,000 ml/hr. at 39°C temperature of blood and fluid
7. Should have LCD display of temperature
8. Should have over-temperature, disconnection and water level alarms
9. Should have safety features designed to avoid and monitor for the presence of blood or air embolism, hypothermia, and line occlusion.
10. Should be operational between 170-260 V AC, 50 Hz and not require stabilizer
11. Should have CE standard.

### **2. AUTOLOGOUS BLOOD RECOVER SYSTEM**

1. Should be capable of processing the blood collected from a surgical site to produce washed red blood cells for return to patient at a later time
2. Should be microprocessor based
3. Should be fully automatic with provision for manual operability as well
4. Should have self-starting capability & ^absolutely minimal user intervention
5. Should have a two stage filling cycle
6. Should have an inbuilt & regulated vacuum suction
7. Should have adjustable centrifuge speed (0-10000 rpm) and pump flow rates (0-1000 ml/min.)
8. Should have variable speed pulse wash cycles
9. Should be capable of processing 25-30 gm of RBC mass/ min
10. Should capable of generating high quality blood product of haematocrit > 50% with minimal Complement factors, Platelets, WBC and heparin
11. Should have plasma sequestration capability to semi automatically collect platelet rich plasma
12. Should have injection port for adding anti-coagulants
13. Should have built-in safety features like electro clamps sensor, lock devices and bubble Sensor
14. Should be operational between 170-260 V AC, 50 Hz and not require stabilizer

### **3. SCRUB STATION**

1. Should be made of high grade stainless steel with satin polish finish
2. Bowl/Trough should be designed to eliminate backsplash, overflow and stagnation.
3. Should allow 2-3 persons to scrub simultaneously.
4. Should have sensor controlled water flow based on advanced microprocessor system.
5. Should have thermostatic control of water temperature.
6. Should have user selectable time-out control.
7. Should have jet irrigation facility to allow washing of instruments, tubes, endoscopes etc.
8. Should have 'By-pass' system during power/unit failure with provision of foot operated taps.
9. Additional features, if any, may be mentioned.

10. Firm should be ISO certified, have 5 years of manufacturing experience and submit proof of satisfactory after sale service.

#### **4. Warming Cabinet**

##### **Technical Specification of Warming Cabinet:-**

##### **Blood and Fluid Warming Cabinet**

1. Should be specific for warming intravenous/irrigation fluids and blankets
2. Should be complete stainless steel body
3. Should have separate compartments with separate temperature controls for fluids and blankets
4. Should have epoxy coated baskets with capacity of 12-15 ltr. For fluids storage
5. Should have 3 compartments in the fluids compartments and 2 in the blanket compartment
6. Should have individual temperature control for intra venous fluids and irrigation fluids
7. There should be a 4- digit LED display for temperature
8. There should be a safety alarm set 10 go off at a temp. 5 degree above set- point temperature.
9. There should be a built in lock to prevent inadvertent altering of temperature
10. Should have auto time programming for auto on-off at selected times
11. There should be glass window doors and interior lighting for easy visualization of contents
12. Should have offset door handles
13. The cabinet should be mounted on heavy duty castors with locking brakes
14. Should have heat indicator light
15. A warranty period of 3 years followed by 7 years CMC contract should be quoted

#### **5. Patient Control Anaesthesia Pump( PCA Pump)**

1. Should have continuous, demand dose and clinician bolus modes.
2. Should have subcutaneous, intra-arterial, epidural, intrathecal, intravenous and intraperitoneal delivery routes.
3. Should be able to deliver drug concentration 0.1-100mg/ml, 1-500µg/ml
4. Should be able to deliver continuous rate 0-50ml/hr, 0-500mg/hr, 0-25000 µg/hr
5. Should deliver dose volume: demand dose 0-9.9 ml, 0.990 mg, 4950 µg, clinician bolus 0-20ml, 0-200mg, 0.10000µg.
6. Should have dose demand lockout 5 min- 24 hrs, demand dose 1-12 per hour,
7. Should have carrying pouch 50 ml, 250 ml
8. Should have remote cord.
9. System should be supported by 5 years comprehensive all inclusive warranty

#### **6. Cardiac Output Monitoring Device**

- 1 It should be a touch screen with active area of 10.4 inch
- 2 It should be able to display intermittent &continuous hemodynamic measurements when used with appropriate disposable sensor.
- 3 It should be able to give Auto calibrated technology based continuous cardiac output, stroke volume, systemic vascular Resistance ( with CVP transducer) stroke volume variation when used with appropriate arterial sensor
- 4 It should have option of calibrating above parameters with Trans pulmonary Thermodilution technology using dedicated kit for the purpose along with displaying additional information on Global Ejection Fraction/Cardiac Function index, global end diagnostic volume/Intra Thoracic blood volume, extra vascular lung water, pulmonary vascular permeability Index.
- 5 It should give cardiac output update at least every 20 second with provision for 5 min .Average

- 6 The arterial disposable sensor should be able to give Continuous arterial pressure waveform when connected, on other beside monitors with IBP modules.
- 7 It should be able to give intravascular oximetry parameter i.e central Venous Oximetry updated every 2secs when used with dedicated disposable central venous catheter sensor.
- 8 It should be able to give derived value as Cardiac Power output, Oxygen Demand and Estimated oxygen Consumption.
- 9 It should have display capacity of at least 4 trend lines and 4 numerical display, optional physiology and physio-relationship screen.
- 10 It should have intervention analysis screen for recording events and analysing its effects.
- 11 It must save data for at least 72 hours
- 12 Must have screen shot and data download facility through any USB stick.

## 7. Cerebral Oximeter

### Technical Specifications for Cerebral Oximetry (Regional Oximetry)

#### Description of Function:

Regional Oximetry should use near-infrared spectroscopy (NIRS) and reflectance pulse oximetry to enable monitoring of tissue oxygen saturation (rSO<sub>2</sub>) in the brain and provide arterial oxygen saturation (SpO<sub>2</sub>)

Requirements	Specifications
<b>1. Operational Requirements</b>	<ul style="list-style-type: none"> <li>• Suitable for Adult and Pediatric patients</li> </ul>
<b>2. Display/Indicator Requirements</b>	<ul style="list-style-type: none"> <li>• Colour Display with Adjustable Brightness- Backlit Active Matrix TFT LCD</li> <li>• Touchscreen- Multi-Touch P-Cap or easily accessories button.</li> <li>• Parameters- Numerical Display of rSO<sub>2</sub>, O<sub>3</sub> SpO<sub>2</sub>, Δbase, AUC Index( Area under curve), ΔSpO<sub>2</sub>, SpO<sub>2</sub>, PR &amp; Perfusion Index <b>(Optional)</b></li> <li>• rSO<sub>2</sub> trend</li> <li>• Access to Menu and user settings for configuring and managing alarms</li> <li>• Screen Size- 10.1 in (25.65 cm) Diagonal</li> <li>• Resolution - 1280 x 800 Pixels</li> </ul>
<b>3. Technical Requirements</b>	<ul style="list-style-type: none"> <li>• Continuous display of Difference between current rSO<sub>2</sub> <b>(Optional)</b></li> <li>• and user-defined baseline</li> <li>• Continuous display of Difference between rSO<sub>2</sub> and SpO<sub>2</sub></li> <li>• Area under the curve (AUC) to quantify the duration and depth of patient's stay below the user-defined rSO<sub>2</sub> low alarm limit</li> </ul>
<b>4. Sensor Specifications</b>	<ul style="list-style-type: none"> <li>• Wavelengths- 4</li> </ul>
<b>5. Accuracy Specifications</b>	<ul style="list-style-type: none"> <li>• Trending Regional Oxygen Saturation (rSO<sub>2</sub>) ARMS- 3%</li> <li>• Absolute Regional Oxygen Saturation (rSO<sub>2</sub>) ARMS- 4%</li> </ul>
<b>6. Battery Requirements</b>	<ul style="list-style-type: none"> <li>• Rechargeable Batteries</li> <li>• Capacity – 4 hours( Preference)</li> </ul>
<b>7. Environmental Requirements</b>	<ul style="list-style-type: none"> <li>• Operating Temperature: 0-40°C</li> <li>• Storage Temperature: -40-60°C</li> <li>• Operating Humidity: 10-95%</li> </ul>

<b>8. Regulatory Requirements</b>	<ul style="list-style-type: none"> <li>• FDA/CE approved product</li> <li>• Manufacturer/Supplier should have ISO certification for quality standards</li> </ul>
<b>9. Connectors</b>	<ul style="list-style-type: none"> <li>• Ethernet- 10/100 MBps (1)</li> <li>• Nurse Call- 1/4-in Round Female (1)</li> <li>• USB- USB 2.0 (2)</li> </ul>
<b>10. Communication Requirements</b>	<ul style="list-style-type: none"> <li>• WLAN Radio- Tri Mode IEEE 802.11 a/b/g</li> <li>• Encryption- 64/128-bit WEP, Dynamic WEP, WPA-TKIP, WPA2-AES</li> <li>• Authentication- Open System, Shared Key, Pre-Shared Key (PSK)</li> </ul>

## **8. Portable Haemodialysis Machine**

### **Specification for portable Haemodialysis Machine**

1. Should have facility for acetate & bicarbonate Haemodialysis.
2. Machine should have facility for HD, SLEDD, Online HF & Online HDF.
3. Machine should have facility for paediatric HD & online HDF.
4. Machine should have special Paediatric user setup with more sensitive thresholds.
5. Machine should have Venous access monitoring system.
6. Machine should have facility to determine the venous needle disconnection(blood wet sensor).
7. Machine should have Blood volume monitoring system.
8. Machine should have automatic adaption of the ultrafiltration according to the measured relative blood volume change.
9. Machine should have 15" high-resolution TFT LCD with touch screen user interface. Monitor rotatable around the 3 axes.
10. Machine should have Display failure sensor
11. Machine should have Operating status indicator.
12. Machine should have automatic & online priming facility.
13. Machine should have Automatic control of the substitution rate by considering blood flow & UF rate.
14. Machine should have online reinfusion facility.
15. Should have balancing chamber with closed loop system.
16. Should have automatic self-test facility.
17. Should be able of arterial and venous pressure monitoring.
18. Should have Ultrasonic Air bubble detector.
19. Should have integrated Heparin pump with flow rate from 1-10 ml/hr(0.1 ml increments).
20. Should have Facility of cumulative graphical display of treatment data and physiological trends including sodium and ultrafiltration profile.
21. Should have Blood pump delivery rate from 30-600 ml/min and the direction of rotation of the blood pump is monitored.
22. Blood pump should have separate switches for Blood system Start and Blood system Stop.
23. Machine should have online arterial bolus facility.
24. Should have variable dialysis flow rate from 100 ml/ min-1000 ml/ min.
25. Machine should have flush option for Rinse of water supple line.
26. Machine should have Economical flow option for saving the Dialysate during preparation and reinfusion
27. Machine should have the smart dialysate flow function to regulate the dialysate flow depending on the blood flow automatically.
28. Should have volumetric concentrate dilution facility.
29. Should have conductivity measurement range: 12.8 – 15.7 ms/cm.
30. Should have temperature control range: 35-39°C in 0.5°C increment.
31. Should have volumetric ultrafiltration range 0-4 L hr, Pump volume accuracy: ± 1%
32. Machine should have isolated ultrafiltration process.
33. Should have facility of online preparation of bicarbonate dialysis fluid with dry bicarbonate cartridge.
34. Machine should have Blood temperature monitoring facility.

35. Machine should have inbuilt Blood pressure monitoring system.
36. Should have two ultrapure dialysate fluid filter, with retention capacity not less than  $10^{-6}$  IU
37. Should have one touch fully automated integrated disinfection and decalcification.
38. Should have battery backup for at least 20 minutes in case of power failure.
39. Should have build in Online Clearance Monitoring for real-time measurement of urea clearance (KT/V) and plasma sodium
40. Should be upgradable to future software developments and can be linked with Patient Data Management System.
41. Should be upgradable to single needle with double pump,
42. Should be CE (“conformite Europeene”)/US FDA Certified
43. Manufacturer should have all pediatric to adult range of disposables (Dialyzer, blood tubing and etc..) for dialysis treatment.
44. Bidder should supply 3KVA online UPS with 30 minutes backup for each machine.
45. **Portable Water Treatment Unit (ONLINE)**
46. Should be compact preferably on wheels for easy movement.
47. Should be able to produce 125 liters/Hours of permeate
48. Should be Microprocessor based
49. In build Capabilities to show on display for Permeate (Supply in liter/min, Temperature) & for
50. Raw water (Consumption in Liters/min & Pressure)
51. Should have build in dual column softener with fully automated brine, fill and clean cycles, also have a brine tank incorporated in the system.
52. Should have build in cartridge type Charcoal Filter.
53. Should have fully automatic disinfection system in place.
54. Should have build in cartridge filter of 10 Micron.
55. Should have programmable fully automated Rinse cycle for membranes wash.
56. Machine should run ONLINE mode of Permeate Supply, permeate supply is to be used to run dialysis machines directly without collecting permeate to tank it should be possible.
57. There should be a water saving system in place which adjusts the output to the number of machines in use and control yield accordingly.
58. Yield setting should be between 50 to 70%.
59. Conforms to AAMI standards of purity for Hemodialysis use.
60. Machine should have 20 micron filter at water inlet.

#### **9. Transjugular Liver Biopsy Set (TJLV)**

##### **Technical Specification:-**

- Needle gage length = 18/60mm
- Needle throw length = 20mm
- Used for Transjugular Liver Biopsy Pr

#### **10. UV – visible Spectrophotometer (Microplate Spectrophotometer)**

**Read methods;** Endpoint, kinetic, Spectral scanning, well area scanning

Micro plate types 6,12, 24, 48, 96 to 384well plates optional 1 cm cuvette adopter .

Software - Data Analysis Software with suitable PC.

##### **Absorbance ;**

Light source ; Xenon flash

Detector ; PMT

Wavelength selection ; Monochromator

Wavelength range ; 200 to 999 nm, in 1 nm increments Monochromator

Bandwidth: 5 nm

Dynamic range: 0 - 4.00D

Resolution : 0.0001 OD

Path length correction: yes

Read -96 wells: 15 seconds

Read 384 wells: 31 seconds

### **Physical Characteristics**

Power 100 240

Volts AC. 50/60 Hz.

Dimensions 12" W x 12.5" D x 7.7" H

(30.5 cm x 31.8 cm x 19.6 cm)

Weight <15 lbs (6.8 kg)

### **Regulatory**

Regulatory CE and TUV marked. ROHS compliant. In Vitro Diagnostic, use models are available.

## **11. Spyglass Choangioscope**

Spy Glass DS System Direct Visualization System Capital Components.  
Capital Components.

### **- Spyglass DS Direct Visualization System processor**

- Small Footprint combining 2 LEDs + DSP, fit on ERCP cart
- Single Connection with automatic focus and white balancing.
- Automatic Light Control (ALC)
- Standby button, for backload
- Adjustable illumination 'set point' x5... still automatically adjusts Video Connections
- DVI... Digital signal, optimal imaging
- S-video x2... Analog, widely compatible (PiP, etc)
- VGA... consumer standard (e.g. wall mount monitors)

## **12. Specifications of Extra corporeal membrane oxygenator ( ECMO)**

1. It should be small. Compact. Light in weight, movable with big lockable castor wheels.
2. Machine should have
  - A. Console
  - B. Centrifugal Pump
  - C. Oxygenator
  - D. Heating Unit
3. Detailed specification for each component:
  - A & B. Console with centrifugal Pump:
    - It should have integrated bubble sensor & a separate level sensor to monitor level.
    - It should be supplied with an Emergency Hand Crank.
    - Should have an adjustable arm assembly to hold Crank
    - Should have an adjustable arm assembly to hold its Drive Unit & also it should be able to fix it in any position
    - Should have battery back up for minimum 1.5 hours.
    - Should have RPM speed 0-5000 rpm.
    - Should have Flow Rate 0-9.99 liters per minute
    - It should have a warning Alert to the Operator that he has taken necessary clamp/valve to prevent back flow.
    - Should be possible to set higher & lower limit for RPM along with low limit setting for LPM
    - It should have an integrated flow measuring sensor
    - In case of any error message, an acoustic alarm must sound.
  - C Oxygenator:

- Certified for continuous use for at least 14 days CE Mark for adults and 30 days CE mark for Pediatric applications

#### D. Heating Unit:

- Temperature setting range of water temperature should be 30 to 39 degree Centigrade with increments of 0.1 deg. centigrade.
- Should have digital display for set & outlet temperature & should be capable of showing alarm indications.
- Water reservoir capacity should not be more than 2 liter.

#### Miscellaneous:

- Should have an advanced cart design maximizing safety and convenience to move the complete unit any where.
- Should have standard I.V pole and provision for a second one
- Should have a convenient oxygen cylinder storage facility.
- Gas Blender should be supplied with the unit
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- Should be CE/US FDA certified.
- Following ECMO Consumables per unit price to be quoted
  - a. Oxygenator
  - b. Tubing with bioline coated (heparin+albumin)
  - c. Pump-head (heparin + albumin coated)
  - d. Heat exchanger and
  - e. Any other accessories to make the system functional fully

05. It should give Cardiac output update at least every 20 Seconds. With Provision for 5min Average.

06. The arterial disposable sensor should be able to give Continuous arterial pressure waveform when connected, on other beside monitors with IBP modules.

07. It should be able to give intravascular oximetry parameter i.e. central Venous Oximetry updated every 2secs when used with dedicated disposable central venous catheter sensor.

08. It should be able to give derived value as Cardiac Power output, Oxygen Demand and Estimated oxygen Consumption.

09. It should have display capacity of at least 4 trend lines and 4 numerical display, optional physiology and physio-relationship screen.

10. It should have intervention analysis screen for recording events and analyzing its effects.

11. It must save data for at least 72 hours.

12. Must have screen shot and data download facility through any USB stick.

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