Bidding document for -Group A: Supply, Installation & Commissioning of RFID based Digital Library System.
Group B : Supply, Installation & Commissioning of Biomedical Equipt. for NELS Skill Lab.
Group C : Supply, Installation & Commissioning of Biomedical Equipt. for Paed. Medicine
Group D : Supply, Installation & Commissioning of Biomedical Equipt. for Trauma & Emerg.
Group E : Supply, Installation & Commissioning of Biomedical Equipt. for Gastroenterology
Group F : Supply, Installation & Commissioning of Biomedical Equipt. for Neurosurgery
Group G : Supply, Installation & Commissioning of Biomedical Equipt. for TB & Chest
Group H : Supply, Installation & Commissioning of Biomedical Equipt. for Anaesthesiology

BIDDING DOCUMENT

TENDER NOTICE No: 24/2018- 2019/Bio-medical Equipment/IGIMS/Store

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

TENDER NOTICE No: 24/2018- 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.

INDEX

IMPORTANT DATES

Last date for submission of completed bidding document	21.12.2018 up to 4.00 PM. by registered/speed post/ Courier only
Pre-bid meeting	06.12.2018 at 03.00 P.M. in Conference Hall (New Administrative Building) IGIMS, Patna.
Date of opening of technical bid	22.12.2018 at 3.30 P.M. in Conference Hall(New Administrative Building) 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 SUBMIITED 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.**

Sr. No.	Terms & Conditions as per Bidding Document	Page No.	Remarks
1.	**Status of Bidder:** • Manufacturer or Authorized Agent of the Manufacturer • Whether Public Undertaking, Public Ltd., Private Ltd. Company or Proprietary Firm/partnership firm • (Please attach Notary certified **MANUFACTURER'S AUTHORISATION FORM as per FORMAT placed at Annexure – III)**		
2.	**Power of Attorney as per Annexure - V** 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.	**Notary certified User List** (List of Govt. /Semi Govt., Reputed Pvt. Hospital) where quoted model of the items has been supplied and installed.		
8.	**Notary certified Supply** order copy (Minimum 3nos. or more) issued by Govt./Semi Govt.//Reputed Pvt. Institutions/organization for the quoted items. (same model)		
9.	**Notary certified Performance certificate** of the same supplied machine (of quoted make and Model) issued by **Head of the dept. or Institution** 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.	**Quality Assurance Certificate** like ISI, ISO-9002, IP/BP, CE, FDA (US) or any other (please specify)		
16.	**Bid Security** amount deposited is enclosed or not. If yes, please mention the details.		
17.	**Original Technical Catalogue** 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 **price bid**. (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 **after sales / services** as mentioned in the bidding document.(Clause No- 13 of " Instruction to Bidder " & clause no- 3, 4 and 5 of Condition of contract.)		
21.	**Compliance Statement** 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.	**Compliance Statement** with relation to the terms & conditions as mentioned in the document.		
23.	**PAN and copies of Income Tax Returns** 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

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

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.	
	(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. (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.	
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 31st 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 T0 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. 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 21.12.2018 up to 4.00PM by speed/Regd. post/ Courier only and technical bid will be opened on 22.12.2018 at 03.30 PM in Conference hall (New Administrative Building), IGIMS, Patna**

7. **Earnest Money Deposit (EMD):**

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 30th 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. <u>Bidder must submit a compliance checklist along with the technical bid itself.</u>

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. <u>Comprehensive Annual Maintenance Contract</u>:

- 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

Sl. No	Activity	Time Limit
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 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).

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:-.

1 Year = 365 days
95% of 365 days = 347 Days per annum

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 biding on both the parties.

04. **<u>After Sales Services</u>**: -

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 biding 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. 1st extension for a month or a part thereof @ 2% per month of C.I.F. value.

ii. 2nd 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 2nd 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).

Director,
IGIMS - Patna
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CHAPTER:

SCHEDULE OF THE REQUIREMENT

Group :A-Library
Supply, Installation and Commissioning of RFID based Digital Library System in IGIMS, Patna
Group :B-NELS Skill Lab
List of Equipment's – 1.ACLS Mannequin 2. Airway Management Trainer 3. Basic Life Support Trainer (Half Torso) 4. ALS Mannequin Infant 5.Anatomical Torso Trauma Mannequin 6. Head Trauma Mannequin 7. Syringe Infusion Pump 8.Phlebotomy Trainer Arm/ Peripheral IV Line Trainer 9.Infant Intraosseous Trainer 10.Central IV Mannequin with Internal Jugular, Subclavin and Femoral Access 11.AED Trainer with Simulator 12.Defibrillator-cum-Monitor with External Pacing 13. Flexible Spine Model 14.Cervical Spine Anatomic Model 15.Portable Ultrasound with Colour Doppler System 16. Life Support Trainer 17. Centralized Compressed Based Mechanical Ventilator 18. Rhythm Generator
Group :C-Paediatric Medicine
List of Equipment's – 1.Paediatrics Ventilator with Humidifier-2 Nos. 2. Portable Paediatric/Neonatal Colour Doppler/Echocardiography System-1 Nos. 3. Multi Channel ECG Machine-12 Channels-1 Nos.
Group :D-Trauma & Emergency & Orthopaedics
List of Equipment's – 1.Arthroscopy Instruments
Group :E-Gastroenterology
List of Equipment's – 1.Anaesthesia Work Station with Patient Monitor & Ventilator 2. Defibrillator
Group: F- Neurosurgery
List of Equipment's – 1.Anesthesia Workstation
Group :G-Tb & Chest
List of Equipment's – 1. Flexible Video Thoracoscope
Group :H-Anaesthesiology
List of Equipment's –1. Flexible Intubation Video Endoscope (Adult Size_ Ped Size) non fiber 2.Portable Colour Doppler Ultrasound Unit 3.Video Laryngoscope

ANNEXURES

Annexure - I (a)

PRICE SCHEDULED FOR DOMESTIC GOODS OR GOODS OF FOREIGN ORIGIN

LOCATED WITHIN INDIA.

1	2	3	4	5							6
				Price per unit (Rs.)							
Scheduled	Brief description of goods Make: Model:	Country of origin	Qty. nos.	Ex-factory/ex-warehouse /ex-showroom/ off-the shelf (a)	Excise duty(if any) % and value. (b)	Sales tax/ vat(if any % and value. (C)	Packing and forwarding charge (d)	Inland transportation , insurance for a period including 3 months delivery, loading/ unloading and incidental cost till consignee site. (e)	Incidental services (including installation and commissioning, supervision, demonstration and training) at the consignee site. (f)	Unit price (at consignee site basis(g) a + b + c + d+ e + f	Total unit price (At Consignee Site) Basis Rs. 4x5(g)

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)					
Scheduled	Brief description of goods Make: Model:	Country of origin	Qty. nos.	FOB price at port/ Airport of lading (a)	Carriage & Insurance (port of loading to port of entry) and other incidental cost . (b)	Incidental Services (Including Installation & Commissioning, supervision, Demonstration 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 . (d)	Unit Price on CIP Named port of Destination + Extended Insurance (Local Transportation and storage) (e_)	Total Price on CIP Named Port of Destination + Insurance (Local Transportation and storage) 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	1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.	6th Yr.	7th 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 : Library

1.	**RFID Tag for books/ document Identification and Security, integrated with KOHA latest version (Requirement: Approximately 12,000 tags and 12,000 IGIMS logo) and Tagging of RFID Tags on all the documents & Shielding of IGIMS Logo on RFID Tags.** **Specifications/features:** 1. Passive re-writable RFID tags consisting microchip and antenna a low acid free good quality self-adhesive RFID tags having 4096 bits memory, 13.56 MHz frequency and built in anti-theft control bit. 2. The RFID chip used in the tag have three sections i. Lockable section—for item identification ii. Re-writable section for library specific use iii. Security function (EAS) for item anti-theft 3. Tags should be ISO standards fully compliant with ISO 18000-3 Mode 1 and include both mandatory and optional commands specified in ISO 15693-3 4. **Dimensions:** Tag size minimum **50 mm x 50** mm (l x W), (+/-10%) 2000 per rolls (6000 per case) 5. Distance for detection from pedestal should be minimum of 36inches and as per ISO18000-3 6. Data rate- Tag to Reader: 26kbps minimum, Reader to Tag: 26kbps minimum. 7. A single tag for Identification and Anti-theft must be read even if not visible and must read in any orientation. It must tamperproof RFID and should support CIP/SIP2 complied with KOHA latest version	
2.	**Electromagnetic (EM) Security (Requirement: Approximately 60000 Strips) and Fixing of EM Strips on Library documents.** **Specifications/features:**	

	1. The Size of the Security Strip should be minimum 160MM X 3 MM for Hardbound and paperbound books and periodicals. 2. Strips must be guaranteed to perform for Life Time of the object in which they a placed. 3. Strips once applied on material should be hidden in Nature. 4. The security strips shall be one-piece, flexible, thin, nonrusting metallic alloy coated with an adhesive film. The film shall not discolor or lose its adhesive or cohesive strength with age. The strips shall require no moisture, heat or additional glue, or adhesive for affixing to library materials.	
3.	**Staff work Station for RFID- Two : (**A RFID workstation will be used at the circulation counter of the library for reactivating & deactivating RFID security (EAS-bit, setting and resetting along with ID identification)	
4.	**Staff work Station for EM – (Two)** 1. MUST be 100% compatible with the Library's Electromagnetic Security Strips and Detection System and be able to sensitize and desensitize the magnetic security strips. 2. System hardware must be attractive and contemporary, and be able to be integrated into Library's own furniture. 3. The proposed system must be able to mount in or on the work surface of a circulation station. 4. Must allow for check-in and checkout of multiple items. 5. Must have visual and audible cues to prompt the library staff during the conversion process. 6. The proposed system must provide dual function: capable of processing bar codes and EM in the same circulation transaction. 7. The proposed system must be able to be used for charge and discharge of library materials.	
5.	**Combined Self Check-In and Check-out Units (The unit should work for both EM and RFID)- (One)** It should work for self issue and return of multiple documents to the library users simultaneously through RFID, EM and barcodes. **Specifications:** • Long range RFID Reader and Antenna with multiple Read/Write facility • Customizable Kiosk Shell to suit the library decor • High Speed Thermal Kiosk slip Printer • LED flat Touch Screen Monitor (Capacitive Technology, minimum 20" or higher) • High resolution display • Branded/Reputed Small Factor CPU • Multi protocol firmware ISO 15693 and ISO 18000 compliant • Communication interface — USB • Client Software should perform functions like tagging,	
6.	**Library Security Gate i.e. 3 EAS (Electronic Article Surveillance) pedestals Gates compatible with RFID Tags complete in all respect with necessary accessories (– One pair).** Library security gate for RFID along with Dome Camera & DVR integrated with EAS Gates Security. gate should include	

	three theft detection pedestals, which are interdependent of each other and also have overlapping protection zones providing additional security. We plan to install these pedestals at one location in the library i.e. Entrance of the Library. The system should have suitable number of I/O ports for Standard electronic counter, web cam trigger, CCTV, Locking gates, etc. The offer must complete in all respects and must include all the components required for the functionality of the system. **Operating Frequency:** 13.56 MHz **Chip Compatibility:** ISO 15693/18000-3. Can be configured to detect different chip types simultaneously. **Detection Range: Upto 100 (cm) on either side between two pedestal (application dependent).** Specific version includes Ethernet interface. If EAS on detected, chip type, ID number, date and time are stored. Pedestal including 1 antenna set (3 antennas) for large detection field and 1 electronic unit (Controller) integrated into the pedestal bottom **Security Mode Alarms:** EAS & AFI (Application Family Identifier) Lights and Buzzer located at the top of the pedestal. Dome Camera (Color) **Gate Synchronization:** RF Protocols	
7.	**Shelf Management System/Portable Handheld RFID Reader with Antenna (Two)**	
8.	**Book Drop Box (Two unit)** Hardware: RFID Reader + Antenna + Book Drop Box with: 1. Branded/Reputed Steel Enclosure from the firm which has national/global presence 2. Check In RFID Reader (Ethernet): 13.56 MHz, ISO 15693 and ISO 18000 compliant 3. 250 Books Receiving Cart X 2 No (Branded/Reputed, having national/global presence) 4. Ethernet High Speed Thermal Slip Printer (Reputed/Branded) 5. Client software for checking-in facility and communicating with ILMS Software with provision for E-mail/SMS Confirmation 6. Magnetic Flap lock 7. Book Full Sensor 8. Book Bin full indicator to the counter station 9. Fire and water proof 10. Light weight 11. Multi protocol firmware ISO 15693 and ISO 18000 compliant 12. Should support NCIP/CIP2 complied with KOHA latest version and other international standard ILMS USB Communication interface.	
9.	**Printer for printing RFID tag based Library Membership Card (One)**	
10.	**RFID Smart Card** RFID Smart Cards [Smart Cards for 500 Patrons]ISO 15693/18000-3 with minimum of 4096 Bits Memory]. Smart card should follow the mifare card IC coil design guide.	

	Specifications : Dimensions : 86mm x 54mm x 0.9mm (App.) Unique Serial No. : 64 bit ID Antenna size : 45x76mm Frequency : 13.56 MHz Memory : 4096 bit Operating distance : 1.20 mts or more Material : PVC ISO Hard Plastic (Direct Print) Standard : ISO Credit Cards, white printable surface Printing : Colour	
11.	**Retrospective conversion of 12,000 documents**	
12.	**Integrated Library Management Software (ILMS) i.e. KOHA latest version with Linux Operating System (Multiple User and Branch library handling) and SIP2/NCIP protocol integrated with KOHA - (One)**	
13.	**Library Server**	

Server	**Make: HP/DELL/IBM or Equivalent**
Processor	Intel Xeon E5-2400 Series (two processor, 2.2 GHz/quad core/10 MB/DDR3 1066 MHz, 80 w) or Higher
Memory	16 GB, Advance ECC
Hard Disk Drive	1 TB x 6 6G (SATA) with rapid support
Model	Tower
Optical Drive	DVD R/W
Display	18.5" of Higher TFT Monitor
Network Interface:	Integrated dual Gigabit Ethernet
Controller	Smart Array
Fault Detector Component	LED
RPS	300 w-500 w (RPS)
Interface	Serial, USB 2.0/3.0, VGA
Accessories	Keyboard, Mouse, Cable Kit and other standard devices
Operating System Supported	Microsoft Windows Server 2008 R2, Red Hat Enterprise Linux 5 and 6, Suse Linux, Enterprise Server 10 and 11, VMware ESX 4.1 and VMware Vsphere 5
Warranty	3Y/3y/3y

14.	**UPS** Make/ Model: Microtek/iball or equivalent Maximum Power: 5 KVA Waveform: Pure Sinewave	
15.	**Computer** (Specification attached)	

Desktop – Core i5

Parameters	Minimum Specifications
Make/Model	HP/DELL/Lenovo
Processor	Intel CORE i5 6th generation or above
RAM	4 GB DDR4 expandable upto 16 GB
Mother Board	OEM mother board with OEM logo printed on mother board (no sticker) or Intel original mother board
HDD	1 TB or higher
Graphics subsystem	Integrated HD graphics
Combo Drive	8x or higher DVD writer (Internal)
USB ports	4 or above
Monitor	18.5 inches LED, antiglare, TCO 05 energy compliant (preferred)
Mouse	OEM make USB optical scroll mouse with mouse pad
Key Board	OEM make USB minimum104 key board
Network interface	10/100 ethernet LAN (IPV6 compliant) on board, WiFi/Bluetooth Enabled
Cable & connector	Power cable min. length 1.5 m (Indian type)
Security features	Power on password, selectable boot
Operating system	Windows 10 professional 32bit/64 bit preloaded with media, documentation and certification. Shall be supplied with appropriate license in name of RSCL
Production unit	ISO 9001 and ISO 14001 certified
Warranty	One/Three year and comprehensive

Group-B : NELS Skill Lab

SI NO.	Item	No. of units
1	Advanced Cardiac Life Support (ACLS) Mannequin	4
2	Airway Management Trainer	4
3	Basic Life Support Adult (Half Torso) Mannequin	4
4	ALS Infant Mannequin	2
5	Anatomical Torso Trauma Mannequin	2
6	Head Trauma Mannequin	1
7	Syringe Infusion Pump	1
8	Phlebotomy Trainer Arm	1
9	Infant Intraosseous Trainer	1
10	Central IV manikin with Internal Jugular, Subclavian & Femoral access	2
11	Ventilator (Normal Adult Ventilator used in ICU)	1
12	AED Trainer with Simulator	4
13	Defibrillator – Cum Monitor with External Pacing	4
14	Flexible Spine Anatomic model	1
15	Cervical Spine Anatomic model	1
16	Portable Ultra Sound Machine with Colour Doppler	1
17	Infant Basic Life Support Trainer	1
18	Rhythm Generator	2

1. **ACLS Mannequin- 4 Nos.**

Technical Specifications of ACLS mannequin-

1. It should have all anatomical landmarks relevant to adult CPR.
2. Should be able to perform mouth-to-mouth, mouth to mask and bag mask ventilation.
3. It should have realistic anatomy of the tongue, oropharynx, epiglottis, larynx, vocal cords, and trachea.
4. It should suitable for insertion of oral and nasal endotracheal tube, supraglottic devices, combitube, Laryngeal Tube, oropharyngeal and nasopharyngeal airway.
5. It should provide visual inspection of lung expansion along with auscultation of breath sounds.
6. Should be able to mimic airway obstruction which can be relieved by HT-CL and jaw thrust.
7. It should have realistic chest compression resistance, which allows to perform proper chest compressions in a real-life situation.
8. It should be capable of generating bilateral carotid pulse.
9. Insertion of Peripheral intravenous line availability.
10. Can match defibrillators and pacemakers of different factories and types to achieve real defibrillation and pacing.
11. It should have 3 or more ECG leads feature to monitor ECG readings.
12. It should have feedback device to allow real-time CPR performance feedback.
13. It should have device/software for different types of rhythm generation.
14. Computer with latest technology integrated with the mannequin.

15. The price and list of accessories to be quoted separately .
16. Should be European CE approved/ USFDA approved.
17. Electrical safety norms: should be compatible with Indian electricity supply.
18. Warranty of 2 years followed by CAMC for 5 years.
19. The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.
20. Shall meet IEC-60601-1-2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
21. Demonstration of equipment is must.
22. After sales service should be available locally.

2. **Airway Management Trainer-4 Nos.**

Technical Specifications of Airway management Trainer-

1. Adult Full face, normal skin colour with head, good quality material.
2. Airway Mannequin should have anatomical landmarks like teeth, tongue, oropharynx, nasopharynx, larynx, epiglottis, vocal cords and trachea, lungs, esophagus and stomach.
3. Should be able to demonstrate use of Supraglottic devices, NPA, OPA, oral and nasal endotracheal tubes.
4. It should give alarm with pressure on teeth during laryngoscopy
5. Should be able to demonstrate Triple manoeuvre, jaw thrust, chin lift and Bag mask ventilation.
6. Should have the facility for detection of Stomach inflation with esophageal intubation.
7. Visual inspection of two proper Lungs inflation
8. Airway demonstration model with each trainer
9. Mannequin on sturdy board
10. Provide Lubricant and Hard carry case
11. Should be USFDA/ European CE approved
12. The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.
13. Warranty for 2 years followed by CAMC for 5 years
14. Rate and list of accessories to be quoted separately
15. Demonstration is must
16. After sale service should be available locally.

3. **Basic Life Support Trainer (Half Torso)- 4 Nos.**

Technical Specifications of Basic Life Support Trainer (Half Torso)

1. It should have all anatomical landmarks relevant to adult CPR.
2. Should be able to perform mouth to mouth with option of nose pinching, mouth to mask and bag mask ventilation.
3. Chest rise should be with correct ventilations.
4. Should be able to mimic airway obstruction which can be relieved by HT-CL and jaw thrust.
5. It should have realistic chest compression resistance .
6. It should be capable of generating bilateral carotid pulse.
7. There should be feedback about adequate chest compressions.
8. Demonstration of quoted model is a must.
9. Warranty for 2 years and 5 years CAMC
10. Accessories: 5 - Face, 5 - Lungs, 5 - Airway, 10 – bottles Cleaning Spray
11. Rate and list of accessories to be quoted separately
12. Should be USFDA/ European CE approved
13. The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.
14. After sales service should be available locally.

4. ALS Mannequin Infant- 2 Nos.

Technical Specifications of ALS Mannequin Infant-

1. It should have all anatomical landmarks relevant to infant CPR.
2. Should be able to perform mouth to mouth, mouth to mask and bag mask ventilation.
3. It should have realistic anatomy of the tongue, oropharynx, epiglottis, larynx, vocal cords, and trachea.
4. It should suitable for insertion of supraglottic device, oropharyngeal and nasopharyngeal airway, oral or nasal intubation.
5. It should provide visual inspection of lung expansion along with auscultation of breath sounds.
6. Should be able to mimic airway obstruction which can be relieved by HT-CL and jaw thrust.
7. Should have the facility of intraosseous needle insertion with aspiration of bone marrow.
8. It should have realistic chest compression resistance which allows to perform proper chest compressions in a real-life situation.
9. It should be capable of generating bilateral carotid pulse.
10. Can match defibrillators and pacemakers of different factories and types to achieve real defibrillation and pacing.
11. It should have 3 ECG leads feature to monitor ECG readings.
12. It should have feedback device to allow real-time CPR performance feedback.
13. Computer with latest technology integrated with the mannequin
14. It should have device/software for different types of rhythm generation.
15. It should have the provision of intraosseus needle placement.
16. Should be USFDA/ European CE approved
17. Warranty of 2 Years followed by CAMC of 5 years.
18. Electrical safety norms: should be compatible with Indian electricity supply.
19. Rate of accessories to be quoted separately.
20. Shall meet IEC – 60601 – 1 -2: 2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
21. The unit shall be capable of operating continuously in ambient temperature of 10 degree Celsius to 50 degree Celsius and relative humidity of 15% to 90%.

5. Anatomical Torso Trauma Manikin-2 Nos.

Technical Specifications of Anatomical Torso Trauma Manikin-

It should allow needle and surgical cricothyroidotomy, needle decompression of chest, thoracic tube drainage and pericardiocentesis.

A. Cricothyroidotomy

1. Puncture site should include airway, cricoid cartilage and thyroid cartilage
2. The cricothyroid membrane should allow surgical cricothyroidotomy

B. Needle decompress of chest and thoracic tube drainage

1. There should be facility to create tension pneumothorax of the right or left of the chest.
2. Distension of jugular vein should be simulated in conjunction with tension pneumothorax.
3. Landmarks like Sternal angle and second intercostal space should be identifiable for needle chest decompression.
4. On needle puncture in simulated tension pneumothorax, air should flow out when syringe is attached with puncture needle, air pressure should lift the plunger.
5. Skin should be made of good quality silicone material
6. Insertion of chest tube should be possible
7. 5th and sixth intercostals spaces should be present for use as landmark for insertion of chest tube on both left and right side.

C. Pericardiocentesis

1. Landmarks like Xiphisternum and costal arch should be identifiable to enable pericardial puncture.
2. Should be able to draw simulated blood after puncture with correct angle and depth.

D. Demonstration is a must.

1. The price and list of accessories to be quoted separately.
2. Should be European CE approved/ USFDA approved.
3. Electrical safety norms: should be compatible with Indian electricity supply.
4. Warranty of 2 years followed by CAMC for 5 years.
5. The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.
6. Shall meet IEC-60601-1-2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
7. Demonstration of equipment is must.
8. After sales service should be available locally

6. **Head Trauma Mannequin- 1 Nos.**

Technical Specification of Head Trauma Mannequin-

1. Mounted to a base but can be easily transferred to adult manikins for use in full-body trauma scenarios.
2. Recognition and assessment of the following:
    1) Palpable fractures
    2) Open depressed skull fracture
    3) Le Fort I & III
    4) Nasal fracture
    5) Mandibular fracture (left)
    6) Fracture of C-6 vertebra
    7) Unequal pupils
    8) Haemotympanum
3. Demonstration is must.
4. Should be USFDA/ European CE approved
5. Warranty of 2 years followed by CAMC of 5 years.
6. Rate of accessories to be quoted separately.
7. The unit shall be capable of operating continuously in ambient temperature of 10 degree Celsius to 50 degree Celsius and relative humidity of 15% to 90%.
8. After sales service should be available locally.

7. **Syringe Infusion Pump- 1 Nos.**

Technical Specifications of Syringe Infusion Pump-

1. **Description of Function-**
1.1 The Syringe Infusion Pump provides uniform flow of fluid by Precisely driving the plunger of a syringe down its barrel. It provides accurate and continuous flow rate for precise delivery of I.V. medication in critical medical care.
2. **Operational Requirements-**
2.1 The syringe pump should be programmable, user friendly, safe to use and should have battery backup and comprehensive alarm system.
2.2 Demonstration of the equipment is a must.
3. **Technical Specifications-**
3.1 Flow rate programmable from 0.1 to at least 999 ml/hr or more in steps of 0.1 ml/hr with user selectable flow set rate option.

3.2 Bolus rate should be programmable from 0.1.to at least 999 ml/hr or more with infused volume display. Reminder audio after every 0.5 ml delivered bolus.
3.3 Display of Drug Name with a provision of memorizing 10~15 names by the operator with drug calculations
3.4 Keep Vein Open (KVO) must be available 1.0 ml/hr or set rate if lower than 1.0 ml. User should have choice to disable KVO whenever desired.
3.5 Occlusion pressure trigger three levels
3.6 Should be European CE/USFDA APPROVED/CERTIFIED
3.7 Should work with standard disposable syringes of10, 20, 50/60 ml sizes of different makes.
3.8 Automatic detection of syringe size & proper fixing. Must provide alarm for wrong loading of syringe such as flanges out of slot; disengaged plunger, unsecured barrel etc.
3.9 Anti bolus system to reduce pressure on sudden release of occlusion
3.10 Should have comprehensive alarm package including: Occlusion limit exceed alarm, Near end of infusion pre-alarm & alarm, Volume limit pre-alarm & alarm, KVO rate flow, Low battery pre alarm and alarm, AC power failure, Drive disengaged.
3.10 Power input to be 220-240 VAC, 50 Hz. Rechargeable Battery having at least 4~6 hour backup for about 5ml/hr flow rate with 50ml syringes. Larger battery life and indication of residual life will be preferred.
4. **System should include-**
4.1 Syringe Infusion Pump – 01
5. **Environmental factors-**
5.1 Shall meet IEC-60601-1-2: 2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
5.2 The unit shall be capable of operating continuously in ambient Temperature of 10 -40deg C and relative humidity of 15-90%
5.3 The unit shall be capable of being stored continuously in ambient temperature of 0 degree Celsius to 50 degree Celsius and relative humidity of 15-90%
5.4 Demonstration is a must.
5.5 ESSENTIAL TO SEPARATELY MENTION THE PRICE OF EACH CONSUMABLE
5.6 Should be USFDA/ European CE approved
5.7 Warranty of 3 years followed by CAMC of 7 years.
5.8 Electrical safety norms: should be compatible with Indian electricity supply.
5.9 Rate of accessories to be quoted separately.

8. **Phlebotomy Trainer Arm/ Peripheral IV Line Trainer- 1 Nos.**

Technical specifications of Phlebotomy Trainer Arm/ Peripheral IV line trainer-

1. Adult arm with replaceable skin and veins designed for peripheral intravenous therapy.
2. Venipuncture should be possible in the antecubital fossa , dorsum of the hand and forearm
3. Palpable veins should enable site selection and preparation
4. Infusible veins allow peripheral therapy with IV bolus or push injection method
5. Replaceable skin and veins should ensure longevity of model
6. *Accessories:* Replacement Skin & Vein Set, Simulated Blood, Blood Bag with Tubing and Connector, Clamp and Hook, Carry Case and Directions for Use.
7. ESSENTIAL TO SEPARATELY MENTION THE PRICE OF EACH CONSUMABLE
8. Demonstration is a must.
9. Should be USFDA/ European CE approved
10. Warranty of 2 years followed by CAMC of 5 years.
11. Rate of accessories to be quoted separately.
12. The unit shall be capable of operating continuously in ambient temperature of 10 degree Celsius to 50 degree Celsius and relative humidity of 15% to 90%.

9. Infant Intraosseous Trainer- 1 Nos.

Technical specifications of Infant Intraosseous Trainer-

1. Designed for training in infant intraosseous infusion techniques.
2. Provision for Intraosseous needle insertion.
3. Provision for Simulated tibia and anatomical landmarks at the tibial tuberosity and medial malleolus.
4. Provision for Fluid may be infused for realistic flashback.
5. Provision for Drain in heel connecting to reservoir bag.
6. ESSENTIAL TO SEPARATELY MENTION THE PRICE OF EACH CONSUMABLE
7. Demonstration is a must.
8. Should be USFDA/ European CE approved
9. Warranty of 2 years followed by CAMC of 5 years.
10. Rate of accessories to be quoted separately.
11. The unit shall be capable of operating continuously in ambient temperature of 10 degree Celsius to 50 degree Celsius and relative humidity of 15% to 90%.
12. After sales service should be available locally.

10. Central IV Manikin with Internal Jugular, Subclavin and Femoral Access- 2 Nos.

Technical Specification of Central IV Manikin with Internal Jugular, Subclavian and Femoral access-

1. It should enable the practice of IV access to the: Internal jugular vein, Subclavian vein and Femoral vein.
2. There should be palpable arterial pulsation.
3. Long catheters may be placed into the training model.
4. Realistic tissue simulation should be provided.
5. Both Neck Pad and Femoral Pad are to be replaceable without use of any tools.
6. The simulated veins inside the pads are to provide a natural resistance during puncture and a natural flashback of blood.
7. Both veins and skin are to self-seal so that the site of puncture is not visible to the next student.
8. A carry case for easy transportation and storage is to be included.
9. Four neck pads and four femoral pads to be provided with each manikin.
10. List of all consumables required for full functioning of the trainer along with their costs are to be provided.
11. Warranty of 2 years followed by CAMC for 5 years.
12. The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.
13. Shall meet IEC-60601-1-2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
14. Electrical safety norms: should be compatible with Indian electricity supply.
15. Demonstration of equipment is must.
16. After sales service should be available locally.

11. Centralized Compressed Based Mechanical Ventilator – 1 Nos.

Technical Specification of Centralized compressed based Mechanical Ventilator-

Ventilator for demonstration should be kept for at least 3 days for use as desired by the TEC during technical evaluation. Software simulation or detail videos explaining each feature should be provided in demonstration. Those who fail to demonstrate ventilator may be disqualified. Selection will be done by fulfillment of specification and maintenance cost.

Department of Anesthesiology should be contacted for any query about tender.

Attach images of all accessories intended to be provided along with information about make and model.

Features required in ventilators

Pediatric-Adult ventilator with Volume control, Pressure control, SIMV, NIV (pressure support and pressure control), Pressure regulated volume control, volume support (preferable)

Cost should be quoted in following parts for comparison

1. Cost of ventilator with features with accessories (except high flow oxygen therapy accessories) as mentioned
2. Cost of reusable flow sensor

Technical specifications:

1. Compressor based ventilator (independent of central gas installation) or turbine-based ventilator	
2. Brand of international repute with presence in market for at least 10 years (preferable)	
3. Modes of ventilation: • Volume control: VC with flow adaptation, VC without flow adaptation and VC with decelerating flow option is preferable • Pressure control • Pressure Regulated volume control • SIMV (VC) +PS • SIMV (PC) +PS, • NIV (NIV PS and NIV PC modes) with maximum leakage compensation level 50L/min • Pressure support including apnea backup ventilation. • Volume support(preferable) • High Flow oxygen therapy ((Preferable)	
4. Pediatric - Adult use with preferable tidal volume 100 ml- 2000 ml (in increments of 10 ml).	

5. Display: • At least 12.1" LCD TFT touch screen display (must) with intuitive menu with viewing area 246 x 184 mm approximately • Facility of rotation and 45° tilt of display • Ventilator settings can be made either via the touch screen, the main rotary dial, or a combination of both • High-resolution pressure, flow and volume waveforms & loops, Clear graphic presentation • Upto 3 waveforms should be displayed simultaneously. • Waveforms should be easily seen from distance for interpretation • Graphic scale: auto and adjustable scale. Ventilator with option of adjustable graphic scale will be preferable. • Machine should have the facility to show inlet pressure of oxygen & Compress Air. • 360-degree visible alarm lamp (preferable)	
6. Lung mechanics package including loops & respiratory parameters: resistance, static and dynamic compliance, P0.1, rapid Shallow Breathing Index, Work of Breathing, elastance, NIF	
7. Display following monitoring values: Breathing frequency, Spontaneous breaths per minute, Peak Airway Pressure, Mean Airway Pressure, Pause Airway Pressure, End Expiratory Pressure, Inspired Tidal Volume, Expired Tidal Volume, Inspired Minute Volume, Expired Minute Volume, Leakage fraction in NIV (%), Ti/Ttot, I:E ratio, Total PEEP, oxygen Concentration (measured), MVe sp / MVe, Spontaneous Exp. Minute Volume (MVe sp), End Expiratory Flow, Static Compliance, Dynamic Compliance, Inspiratory Resistance, Expiratory Resistance, Elastance, P0.1, NIF	
8. Special functions: • Suction maneuver: Pre-suction oxygenation, automatic disconnection detection for suction, automatic reconnection detection and post suction oxygen enrichment phase. • Manual inspiratory hold • Expiratory hold • Integrated medication nebulization • 100% O2 • P0.1 • NIF	
9. Automatic Disconnection detection and Reconnection detection	
10. Diagnostic trend tools to ensure accurate time and detail recording for at least 24 hours after an event 11. Event log: storage and display of events with date and time stamp	
12. Trended values: Breathing frequency, spontaneous breaths per min, peak airway pressure, mean airway pressure, pause airway pressure, end expiratory pressure, inspired tidal volume, Expired tidal volume, leak fraction in NIV, O2 concentration, spontaneous expiratory minute volume and optional values: static compliance, dynamic compliance, inspiratory resistance, expiratory resistance, elastance, P0.1, work of breathing, rapid shallow breathing index	
13. System Check • O2 /Air/Expiratory flow sensor test • Expiratory/safety valve test	

• O2 sensor test • Leakage/compliance/circuit resistance measurement • Leakage, resistance and compliance are automatically compensated during ventilation	
14. General ventilator specifications • Installed over mobile cart for intra-hospital transfer (Supplied by company) with connection slot for heated humidifier. • Ventilator side arm (imported and supplied by company) • Internal battery support upto 60 min • Low bias flow (2.0 LPM for adult) & high sensitivity at low volumes • Gas delivery system: Microprocessor controlled valves and precise gas delivery by speed in sensing and regulation • PEEP regulation: Microprocessor controlled valves. • Peak gas flow >180 L/min • Reusable flow sensor- for high sensitivity, accuracy, reliability & speed • O2 Sensor: Non-consumable and maintenance-free O2 sensor will be preferable • Autoclavable expiratory valve set • O2 high pressure hose with coupling with each ventilator • Air high pressure hose with coupling with each ventilator • Air festo filter with each ventilator	
15. Software: Free upgradation of software for lifetime of ventilator. 16. Vendor will have to inform about any updates in software every year.	
17. Accessories: should meet the requirements of relevant BS, ISO and EN standards **A.** Vibrating mesh nebulizer Unit (Aerogen) with AC-DC adapter with **reusable** nebulizer chambers**: 1** B. Extra reusable flow sensor with exhalation valve:**1** C. HME Cum bacteria filter (Pure hygroscopic or combined hydrophobic hygroscopic) with at least 70% efficiency, providing at least 30 mg/L of water vapor**: 10** D. Reusable NIV non-vented masks with soft silicon cushion with headgear with non-breakable clips: **2 small size and 2 medium size** **E.** Adult disposable dual limb circuit **:10** F. Autofill reusable humidifying chamber for heated humidifier(MR850) **: 1** G. Aeroneb nebulizer **: 1**	
18. Operational data • Operating temperature: +10 to +40ºC, Relative humidity: 15 to 85% noncondensing, Atmospheric pressure: 660 to 1060 hPa, Lowest pressure in breathing system –400 cmH2O • Certificates (Pre-market, sanitary; performance and safety standards (Specific to the device type); local &/or international: • FDA/European CE/BIS approved product. • Manufacturer and supplier should have ISO 13485 certification for the quality standards • Electrical safety conforms to the standards for electrical safety IEC60601 general requirement • Shall meet internationally recognized for electromagnetic compatibility (EMI/EMC) for electrometrical equipment: 61326-1 Certified to be complaint with IEC 61010-1, IEC 61010-2 40 safety	
19. Disinfection: Parts of the device that are designed to come into contact with the patient or the operator should be capable of easy disinfection	
20. Requirement for sign-off: • Certificate of calibration and inspection of parts from the manufacturer.	

• Training of staff (Medical, nurses, technicians): • Training of users on operation and basic maintenance for 2 weeks • Advanced maintenance task required shall be documented	
21. Maintenance and Service • Response time should be less than 24hrs. • Time to rectification should be less than 48hrs. • If rectification time more than 48 hrs then standby unit to be provided. • User & service manual should be provided (Soft copy & Hard copy). • Operating & maintenance training should be given to BME. • Calibration & quality testing certificate from manufacturer. • Uptime guarantee should be 95%. • Price list of the important spare parts with their parts number is must	
22. Warranty of 3 years followed by CAMC of 7 years.	
23. To quote price of enabling neonatal mode with proximal flow sensor separately	

12. AED Trainer with Simulator-4 Nos.

Technical Specifications of AED Trainer with Simulator -

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1. Manikin should be with realistic anatomical landmarks and lightweight adult CPR/AED trainer with all the essential features for adult CPR/AED learning.
2. Realistic feel when performing chest compressions with Vertical movement in the manikin's chest.
3. It should give feedback on chest compressions
4. Should allow for ventilation with mouth to mouth with facility of nose pinching, mouth to mask and pocket mask.
5. Natural obstruction of the airway should allows students to learn the important technique of opening the airway.
6. Head tilt/chin lift and jaw thrust allow students to correctly practice all maneuvers necessary when resuscitating a real victim.
7. Realistic airway functions- that the airway remains obstructed without proper head tilt/chin lift or jaw thrust.
8. Chest rise should be seen with correct ventilations
9. It should give feedback on correct placement of electrodes
10. Anatomically correct landmarks and sternal notch should allow the student to practice identification of all anatomical landmarks relevant to adult CPR.
11. Consumables: 6 sets of pads each for adult and pediatric to be provided with the equipment.
12. Demonstration is a must
13. The list and price for the consumables to be quoted separately and price to remain fixed for 3 years.
14. Should be USFDA/ European CE approved
15. Warranty of 2 years followed by CAMC of 5 years.
16. Electrical safety norms: should be compatible with Indian electricity supply.
17. Rate of accessories to be quoted separately.
18. Shall meet IEC – 60601 – 1 -2: 2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
19. The unit shall be capable of operating continuously in ambient temperature of 10 degree Celsius to 50 degree Celsius and relative humidity of 15% to 90%.
20. After sales service should be available locally.

13. Defibrillator-cum-Monitor with external pacing- 4 Nos.

Technical Specifications of Defibrillator-cum-Monitor with External Pacing-

Description of Function

1. Defibrillator should use low energy biphasic waveform for delivering shock energy & must have energy selection from 1-200J.
2. It should have AED as well as manual mode.
3. Should have facility to do ECG monitoring, transcutaneous pacing, defibrillation and synchronized cardioversion. Should provide CPR feedback, to measure chest compression rate & depth in real time & should provide visual & audible feedback.
4. Must be capable of monitoring ECG through ECG cables, multiple function electrodes/pads & external paddles.
5. Unit should have adult & in-built paediatric external paddles & should be able to defibrillate both adult & paediatric patients.
6. Machine should be compact & portable within built rechargeable battery for at least 1 hr. of continuous ECG monitoring.
7. It should have battery charge indicator.
8. Should have facility for self-test.
9. It should have disarm facility.
10. Defibrillator should have pulse - oximetry and NIBP as integral part of unit. Should have facility for external non-invasive pacing.
11. Should have user selectable alarm settings.
12. Should work on mains as well as rechargeable battery.
13. Should be supplied with following accessories-
    1) Battery: 1no.
    2) 5 Lead ECG cable – 1no.
    3) External defibrillator paddles (ped & adult)- 1no.
    4) Multi-function defibrillator & monitoring pads/gel sheets – 4 per unit
    5) SPO2 probe- finger probe one for adult per unit
    6) NIBP cuff for Adult - one per unit
13. Demonstration is a must.
14. Should be USFDA/ European CE approved
15. Warranty of 3 years followed by CAMC of 7 years.
16. Electrical safety norms: should be compatible with Indian electricity supply.
17. Rate of accessories to be quoted separately.
18. Shall meet IEC – 60601 – 1 -2: 2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
19. The unit shall be capable of operating continuously in ambient temperature of 10 degree Celsius to 50 degree Celsius and relative humidity of 15% to 90%.
20. After sales service should be available locally.

14. Flexible Spine Model- 1 Nos.

Technical Specifications of Flexible Spine Model-

1. Size: complete Spine model, standing Height 74.00cm approx.
2. Fully flexible mounting throughout spine. Flexibly mounted for effective demonstration on a stand
3. Full pelvis and occipital plate
4. Spinal nerve exits
5. Cervical vertebral artery
6. Durable and of good quality
7. Demonstration is must
8. Warranty of 2 years followed by CAMC of 5 years.

15. Cervical Spine Anatomic Model- 1 Nos.

Technical Specifications of Cervical Spine Anatomic Model-

1. This Model features a detailed occipital cervical vertebral column, which is mounted on a sturdy white base.
2. Model weighs .55 lbs. Model measures 6" H X 3" W X 4" L (without stand).
3. Model measures 8" H X 4" W X 5" L (including stand).
4. Warranty of 2 years followed by CAMC of 5 years.

16. Portable Ultrasound with Color Doppler System- 1 Nos.

Technical Specification of Portable Ultrasound with Color Doppler System-

A state of art fully digital, compact portable Colour Doppler Ultrasound machine is required suitable for vascular access (CVC placement, PICC, DVT), Nerve blocks (Lower as well as Upper Extremity), E-FAST examination, AAA Exam, small parts, applications in adults and pediatric patients, abdominal examination and also suitable for echocardiography, interventions etc. as per GTS.

General Technical requirement For TE :

General Technical Specification (GTS) for Portable Ultrasound with Colour Doppler System
A state of art fully digital, compact portable Colour Doppler Ultrasound machine is required with following technical features.

1. The unit should be compact, lightweight and portable.

2. It should be suitable for vascular access (CVC placement, PICC, DVT), Nerve blocks(Lower as well as Upper Extremity), E-FAST examination, AAA Exam, small parts, applications in adults and paediatric patients, abdominal examination and also suitable for echocardiography, interventions. Multiple preloaded application presets should be available.

3. The unit must have real time compound imaging for improved contrast resolution and eliminating ultrasound artefact to achieve optimum image quality on convex & linear transducers. 4. The unit should have automatic gain adjustment for B mode.

5. Adequate scanning depth must be available.

6. System should support broad band probes spanning with frequency range from 1 - 14 MHz (+1 MHz)

7. Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Continuous wave Doppler, Power (energy) Doppler should be available.

8. Controls for 2D mode: Total gain, depth, dynamic range, auto gain

9. System should have fast boot up to scanning as essential in critical and emergency situation in ICU.

10. Unit must be sturdy, resistant to breakage & damage.

11. Controls for colour Doppler: PRF, colour gain, position and size of ROI, steering of ROI, colour maps and colour invert.

12. Controls for pulsed Doppler: variable sample volume size from 1 to 5 mm or more,steer, PRF, baseline, gain, angle correction, spectral invert. 13. Cine memory on all modes.

14. DICOM ready system with print, save, modality work list for connecting to DICOM network.

15. Flat LCD/ TFT monitor of approx. 25 inch.

16. Alphanumeric soft keys keyboard with easy access scans controls, sanitization of system keyboard must be possible to avoid cross contamination.

17. Onboard storage of at least 10000 images. Storage in BMP and AVI format should be possible. Sorting of database with patient name and date should be possible. 18. USB port for connectivity to computer.

19. Unit should function with 200-240 V, 50 Hz AC, 5 amp power outlets. Specify power requirement.

20. Must be able to operate both on AC and inbuilt battery. Inbuilt battery pack should be self recharging and should last at least for 45 min when fully charged. One extra battery pack to be supplied.

21. Transducers:

i. High Frequency Linear transducer 6-12 MHz (+/- 1 MHz) for vascular access, small parts, vascular, musculoskeletal Interscalene, Supraclavicular, Axillary.

ii. Convex 2-5 MHz (+/- 1 MHz) for deep nerve access Specially Celiac , Epidural,

Subgluteal Sciatic nerve & abdominal applications

22. US FDA and CE (European) approved.

23. Suitable indigenous Mobile Trolley/Cart for the offer portable Ultrasound machine shall be provided.

(a) 95% up time Warranty of complete equipment with provision for extension of Warranty period by double the downtime period.

(b) All software updates should be provided free of cost during Warranty & CAMC period.

27. Add-on (Optional) items
The price of the following Add on (optional) items to be quoted separately:

a. Compatible Laparoscopic Transducer as per GTS

b. Compatible Phased array 2-4MHz(+/-1MHz)for Adult Echocardiography as per GTS

c. Compatible Endo-cavitary Transducer as per GTS

28. Warranty of 3 years followed by CAMC of 7 years.

17. Infant Basic Life Support Trainer-1 Nos.

Technical Specification of Infant Basic Life Support trainer-

1. It should have all anatomical landmarks relevant to Infant CPR.
2. Should be able to perform mouth to mouth, mouth to mask and bag mask ventilation.
3. Chest rise should be with correct ventilations.
4. Should be able to mimic airway obstruction which can be relieved by HT-CL and jaw thrust.
5. It should have realistic chest compression resistance.
6. There should be feedback about adequate chest compressions.
7. Demonstration of quoted model is a must.
8. Warranty for 2 years and 5 years CAMC.
9. Accessories: Face-5, 5 lungs, 5 airway, cleaning spray: 10.
10. Rate and list of accessories to be quoted separately.
11. Should be USFDA/ European CE approved.
12. The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.

13. Shall meet IEC-60601-1-2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
14. After sales service should be available locally.

18. Rhythm Generator- 2 Nos.

Technical Specification of Rhythm Generator-

1. Should be "A" battery powered ECG rhythm generator
2. Can show low battery indication
3. Capable of being used as stand alone unit to provide ECG signal for display on
4. Any 3/5 lead monitor.
5. Designed to provide basic and modified Adult and Pediatric rhythms .
6. Should simulate 30 ECG rhythms , including Torse de Pointes.
7. Should provide at least 17 modified rhythm with associated change in pulse rate and strength.
8. Should simulate at least 7 pediatric rhythms
9. Should have special features including paroxysmal , ignore shock and variable pulse strength.
10. LED display for ECG rhythm and low battery indication
11. Should come in soft case
12. Should be certified product and all regulatory certificates be enclosed
13. Authority certificate from manufacturer company
14. Warranty of 2 years followed by CAMC of 7 years.

GROUP-C: Paediatric Medicine

1. Paediatric Ventilator with Humidifier

1 .	**Paediatrics ventilator**	**1. Description of function** ICU ventilator (Neonatal to adult) provide artificial respiratory support to critical patients **2. Operational Requirement** 2.1 Should be microprocessor controlled ventilator with integrated facility for ventilation monitoring suitable for neonatal, Pediatric and adult ventilation. 2.2 The unit should be compressor based with same make and automatic switch over facility to central air supply (not a turbine/ piston/ blower based ventilator will be accepted). Demonstration of the equipment is a must. 2.3 Ventilator and compressor should be operable on mains and battery (upto 60 min) **3. Technical specification** 3.1 Hinged arm holder for holding the circuit 3.2 Should have colored Touch Screen, 10 Inch or more should have facility to measure and display (b) 3 Scalar waves – Pressure and time, volume and time and flow and time. 3.3(c) 3 loops P-V, F-V,P-F. (d) Graphic display to have automatic scaling facility for waves (e) Status indicator for ventilator mode, battery life, patient data, alarm setting etc. 3.4 Should have trending facility for 24 hours 3.5 Should have Automatic compliance and leakage compensation for circuit 3.6 Should have following settings for all age groups. (a) Tidal Volume 5 ml to 2000 ml (b) Pressure (insp) 2 – 80 cmH20 (c) Pressure Ramp / Flow patterns (d) Respiratory Rate 1 to 150 bpm, Insp. Time 0.1 to 3 sec, I: E Ratio 4:1 to 1:9 (e) Insp. Flow (Resultant) 0.2 to 180 LPM, continuous Flow 0-40 lpm (f) CPAP/PEEP 0-35 cmH2O (g) Pressure Support 2-80 cmH2O (h) FIO2 21 to 100% (i) Pause Time 0 to 2 sec (j) Flow Trigger 0.2 to 15 lpm or Pressure Trigger 0.5 to 20 cmH20 3.7 Should have monitoring of the following parameters. (a) Airway pressure (Peak & Mean) (b) Tidal Volume (Inspired & Expired) (c) Minute Volume (Expired) (d) Spontaneous Minute Volume (e) Total Frequency (f) FiO2 dynamic (g) Intrinsic PEEP (or trapped volume) (h) Plateau Pressure (i) Resistance & Compliance (j) Use Selector Alarms for all measured & monitored parameters 3.8 Should have modes of ventilation (a) Volume controlled (b) Pressure controlled – BIPAP with/without pressure support with spontaneous breathing (c) SIMV with/without pressure support. (d) CPAP/ PEEP (e) Non Invasive ventilation in all ventilation modes (f) PRVC/ Autoflow/PSV + assured tidal volume

2.		(g) Apnea / backup ventilation in CPAP/ PSV, SIMV mode 3.9 Expiratory block should be autoclavable and no routine calibration required. 3.10 Should have below advanced monitoring (a) Intrinsic Peep (b) Occlusion Pressure, Max Inspiratory pressure (p1 Max) (c) RSBI (d) Patient circuit compensation 3.11 Should have integrated ultrasonic nebulizer with capability to deliver fine particle size of < 3 micron to be used in on line. 3.12 Ventilator should have optional upgradation facility for integrated EtCO2. 3.13 Replacement of oxygen cells should be free within the period of warranty and CMC. 3.14 Should have RS232 port for data transfer and software compatible with windows. Should have facility for network connection and should be HL7 compatible. 3.15 With each ventilator, two sets each of reusable patient interface (masks) for non-invasive ventilation should be provided for infants, children and adolescents (that is total of six patient interfaces for non-invasive ventilation with each ventilator). 4. ICU Ventilator with imported, non corrosive trolley – 01 Adult, Pediatric, Neonatal reusable silicon patient circuit – 02 each Expiratory valve/ expiratory cassette – 02 nos. with each ventilator. Reusable and autoclavable flow sensor -10 nos. with each ventilator. Minimum Warranty on expiration cassette/expiratory valve should be 3 years. In case it fails, the company/ supplier should replace it without any charge. Proximal flow sensor for neonatal use- 05nos Hinged Support Arm – 1 no Oxygen Hose – 1 no ; Air hose – 2 nos. 4.1 Medical Air compressor USFDA and CE Certified 4.2 Reusable Masks (Small, Medium, Large) with each machine – 02 each 4.3 Humidifier –Automated, Servo Controlled with digital monitoring of inspired gas temperature, complete with heating wire – 01; with reusable infant and pediatric chamber. Should be USFDA and CE approved product. **Power and inlet gas pressure requirement** 5.1 Power input to be 220 – 240 VAC, 50 Hz 5.2 Gas input (air and oxygen) – 50-100 psi **6 Standards, Safety and Training** 6.1 Should be US FDA and CE approved Product. The company should attach valid 510 K and US FDA certificate along with in the technical bid. The supplier must be ISO certified company. 6.2 Demonstration of quoted equipment model is a must. 6.3 Should have local service facility. The service provider should have the necessary equipment recommended by the manufacturer to carry out preventive maintenance test as per guidelines in the service / maintenance manual. 6.4 Availability of consumables for at least 10 years after the date of installation. 6.5 Rates of consumables should be quoted and freezed for five years. .
	Humidifier	1) Automated, servo controlled humidifiers for delivering air-oxygen mixture through hood, CPAP or ventilator 2) Dimensions: not more than 15 x 18 x 14 cm (without chamber fitted) 3) Weight should be less than 3 kg (without chamber fitted) 4) Display: Should be of LED type with at least three digits 5) Single key selection of optimum temperature levels for invasive and noninvasive therapies. 6) Heating settings: • Heater plate – 150 W

		• Heater plate over-temperature cutout - 118 +/- 6 ºC • Heater with flow resistance up to 1 cmH20 /L/sec (7) Temperature control settings: • Temperature range: 28-40 deg. C • Invasive mode: Chamber outlet 35 -37 ºC, Airway 35-40ºC, humidity output >33mg/L • Non-invasive mode: Chamber outlet 31- 36 ºC, Airway 28-34 ºC, humidity output >10 mg/L • Warm up time less than 30 minutes • Temperature control accuracy: ± 0.5 deg. C 8) Alarm control and settings: • Automatic audible and visual alarms for high and low temperatures • High & low humidity alarm • Visual indicator for water level and digital display for temperatures • Temperature probe faulty/disconnect • Heater wire or heater wire adaptor faulty/disconnect • Chamber probe/airway probe improperly inserted 9) Power supply requirements: • Supply frequency, voltage: 50/60 Hz, 115 V-240 V (10) Should be USFDA and European CE approved and should be certified for neonatal use (11) Detailed operator manual (12) Minimum 4 preventive maintenance visits per year during warranty as well as CMC and visits on call basis (13) Rates of consumables should be frozen for the full duration of warranty and CMC. (14) Accessories to be supplied with each humidifier: • Reusable (autoclavable) chamber, neonatal and pediatric -1 no.each • Heater wire adaptors suitable for a disposable circuit – 2 nos. • Heater wire adaptor suitable for reusable (autoclavable) circuits – 1 no. • Temperature probes – 2 nos

2.PORTABLE PAEDIATRIC / NEONATAL COLOUR DOPPLER / ECHOCARDIOGRAPHY SYSTEM

SPECIFICATION FOR PORTABLE PAEDIATRIC / NEONATAL COLOUR DOPPLER / ECHOCARDIOGRAPHY SYSTEM

1. Fully digital onboard system with broadband digital beam former.
2. 12” or more high resolution non-interlaced monitor with tilt and swivel facility.
3. System should have multi channel frequency compounding facility to filter low and high frequencies returned from the transducer and then process these signals independently and in parallel to create an image.
4. System should have 2D, M-mode, colour flow, PW, CW, steer able CW, and directional color power angio facility.

5. System should have minimum 512 channels.
6. System should be upgradeable to higher number of channel at site.
7. the system should support broadband phased and linear array transducer technologies. Frequency processing facility for the transducer should be 1-15 MHz. This should be available without the need for frequency switching.
8. Phased array transducers frequency range should be 1-12 MHz.
9. System should have 256 gray shades.
10. Independently selectable gain control in both Axial and Lateral Plane or equivalent.
11. Triplex imaging.
12. System should be new generation ergonomically to curve minimum injury to the sonographer / physician.
13. Keyboard platform rotate-able and move-able, height adjustable (up/down) for use in ICCU and NICU.
14. Cineloop review facility minimum 700 frames higher will b preferred.
15. Facility for independent steering of B mode and color beam on liner probe.
16. Tissue Harmonic Imaging.
17. Linear Array Imaging with expanded field of view on both side of linear image or equivalent.
18. Transcranial Doppler.
19. 3 Active Imaging Transducer Port, it should be configurable upto 4 transducer ports.
20. Apicardial, Intra-operative, Multiplane TEE Transducer capability.
21. PW/CW Doppler facility in all imaging phased array sector transducer.
22. On-board image management.
23. Storage – should have >1,00,000 image storage facility in the hard disk drive.
24. System should have inbuilt image management, with facility for direct storage of images and cineloop of 5-6 sec in the Hard Disk Drive and also thumbnail review to view, edit, measure images, loops and also reports.
25. Archive – should have facility to transfer images to CDRW and Pen drive.
26. Print – should have direct connectivity to Inkjet printer for printing images and report.
27. Full functional measurement facility and calculation should be possible.

System should be quoted with the following transducers :

1. 3-8 MHz Broadband Phased Array Transducer for Pediatric Cardiac imaging.
2. 5-12 MHz Broadband Phased Array Transducer for Neonatal Cardiac imaging.
3. 4-8 MHz Broadband Convex Array Transducer for Pediatric and Neonatal Abdominal Imaging.
4. The aperture of cardiac probe should be preferably less than 10 mm.
5. Online UPS with 30 min backup.
6. Color inkjet printer.
7. B/W thermal printer.

Accessories:

1. A well stable trolley of imported make to keep machine, jelly, UPS, printer, VCRs etc. DVD mounted on heavy duty castor wheel.
2. Paper roll for inkjet printer and thermal printer for at least 1000 image.
3. Demonstration of equipment is a pre-requisite before finalization of tender enquiries.

3. Multi Channel ECG Machine-12 Channels

Specification-

1 Description of Function

1.1 ECG Machine is primary equipment to record ECG Signal in various configurations. 12 channels with interpretation are required for recording and analysing the waveforms with a special software.

2 Operational Requirements

2.1 The ECG Machine should be able to acquire all 12 Leads simultaneously and interpret them

3 Technical Specifications

3.1 Should acquire simultaneous 12 lead ECG for both adult and pediatric patients

3.2 Should have Real time display of ECG waveforms with signal quality indication for each lead

3.3 Should have Artifact, AC, and low and high pass frequency filters.

3.4 Should have a storage memory of at least 40 ECGs with easy transfer by optional modem and data card.

3.5 Should have full screen preview of ECG report for quality assessment checks prior to print.

3.6 Should have interpretation facility of the amplitudes, durations and morphologies of ECG waveforms and associated rhythm for adult and pediatric patients

3.7 Should have alphanumeric Keyboard for patient data Entry. (virtual or hard keys)

3.8 Should have High resolution (200 dpix500dpi on 25 mm/sec speed) digital array A4 size printer 3.9 Should have report formats of 3 x4; 6 x2, Rhythm for up to 12 selected leads; 12 Lead Extended measurements, 1 minute of continuous waveform data for 1 selected lead.

3.10 Should have battery capacity of at least 30 ECGs or 30 minutes of continuous rhythm recording on single charge

3.11 Should be able to be connected to HIS /LAN/Wireless LAN(OPTIONAL)

3.12 Should display ECG on LCD/TFT Display.

3.13 USB Support (optional) for Storage on external portable memories.

3.14 Minimum 150 ECG Storage in Floppy or flash memory or any better device.

4 System Configuration Accessories, spares and consumables

4.1 ECG Machine 12 Leads with Interpretation - 01

4.2 Patient Cable -02

4.3 Chest Electrodes Adult-(set of six) -02 sets.

4.4 Chest Electrodes Paediatric-(set of six) -02 sets

4.5 Limb Electrodes(set of 4)- 02 sets 4.6 Thermal Paper A4 Size for 500 patients

5 Environmental factors

5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%

5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

5.3 Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. or should comply with 89/366/EEC; EMC-directive.

6 Power Supply

6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug

7 Standards, Safety and Training

7.1 Should be FDA/CE or BIS approved product

7.2 Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements and IEC-60601-2-25 Safety of Electrocardiograms.

(OR EQUIVALENT BIS Standard)

8 Documentation

8.1 User Manual in English

8.2 Service manual in English

8.3 List of important spare parts and accessories with their part number and costing

8.4 Certificate of calibration and inspection.

8.5 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out

8.6 List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.

Group: D-Trauma & Emergency & Orthopaedics

1.Technical Specification for Arthroscopy Instruments

1. General Specifications

a. Should be USFDA certified
b. All the Electronic equipment's should comply with Electrical safety conforms to standards for electrical safety.
c. All the equipment's power input should be 220-240 V AC, 50 Hz fitted with Indian plug.
d. All should be Compatible with Smith & Nephew main machine installed in department (Ortho OT).
e. Warranty 3 years + 7 years CMC for equipment,
f. Warranty 5 years for Hand instruments and accessories.
g. Price should be quoted in Indian Currency.

2. Arthroscopy hand Instruments for Shoulder.

Sr. No.	Name of implants	Quantity
1.	Suture Manipulator with a traumatic tip to spread paraller strands of suture with its jaw to create a closed loop to allow suture slide freely during extraction	01
2.	Bankart Rasp	01
3.	Knife Rasp	01
4.	Shoulder Elevator	01
5.	Tissue penetrator cum suture retriever in below angles with Small Sharp penetration tip Straight	01
6.	Tissue penetrator cum suture retriever in below angles with Small Sharp penetration tip 35 Degree up	01
7.	Tissue penetrator cum suture retriever in below angles with Small Sharp penetration tip 45 Deg Right	01
8.	Tissue penetrator cum suture retriever in below angles with Small Sharp penetration tip 45 Deg left	01
9.	Tissue penetrator cum suture retriever in cigar handle with small sharp penetrator curved tip so that it can be used to grasp the labarum at 6' O Clock position Curved Left	01
10	Tissue penetrator cum suture retriever in cigar handle with small sharp penetrator curved tip so that it can be used to grasp the labarum at 6' O Clock position Curved Right	01
11	Multifunctional Suture passer with provision of only 1 needle, which can hold the cuff & at the same time pass the suture & retrieve it in one step	01
12.	Nitinol needles for passing the suture (1 box)	01
13.	Open ended suture cutter, side loading with function of leaving sufficiently long tail without chance of cutting knot	01
14.	Single hole knot pusher	01
15.	Hook knife	01
16	Reusable CANULATED Obturator for 8.5 mm cannula for easy cannula insertion	01
17	Reusable CANULATED Obturator for 7 mm cannula for easy cannula insertion	01
18	Reusable CANULATED Obturator for 5.5 mm cannula for easy cannula insertion	01
19.	Alligator locking grasper	01
20	Crochet hook	01
21	Shoulder Probe	01
22	1.8 mm Drill bit	01
23	2.5 mm Drill bit	01
24	6" X 3.5 mm spiked tip drill guide	01
25.	Sterilization Tray	01

3. Arthroscope with sheath and Obturator

1. Wide Angle Forward-Oblique Telescope 70 degree, enlarged view, Diameter 4 mm, length 18 cm, autoclavable, fiber optic light transmission incorporated. (One piece).

2. High Flow arthroscopic Sheath with snap in coupling mechanism diameter 6.5 mm working length 13.5 cm, two stopcocks, rotating, for use with telescopes 0 Degree, 30 Degree, 70 Degree with Obturator blunt (One Piece).

4. Arthroscopic Camera

Three-Clip, Camera should be HD, resolution of 1920 X 1080 native resolutions, Full HD Progressive. Video Output should have Minimum; DVI, S-Video, C-Video, HDSDI with Extra long fiber optic cable. (One Piece).

5. Arthroscopy Hand Instrument for PCL

Sr. No	Name of Instrument	Quantity
1.	PCL Director Drill Guide Handle	01
2.	Director PCL Elbow Aimer ranging from 40 to 65 deg for drilling to the laser mark at the aimer's elbow	01
3.	Director PCL Tip Aimer ranging from 40 to 65 deg for drilling to the of the aimer	
4.	Director PCL Tibial Aimer with broad face tip that easily passes through notch & provides protection to posterior capsule during guide wire drilling	01
5.	Director PCL Femoral Aimer for outside in drilling with medial incision, should have hoop tip to provide visual reference for the diameter of the fully reamed tunnel	01
6.	WIRE CATCHER PCL	01
7.	SAFETY STOP, PCL	01
8.	Director 4-point Bullet with four sharp points for secure engagement of the guide at any angle	01
9.	Endoscopic CANULATED drill bit 5 mm for femoral tunnel drilling including calibration	01
10.	Endoscopic CANULATED drill bit 5.5 mm for femoral tunnel drilling including calibration	01
11.	Endoscopic CANULATED drill bit 6 mm for femoral tunnel drilling including calibration	01
12.	Endoscopic CANULATED drill bit 6.5 mm for femoral tunnel drilling including calibration	01
13.	Endoscopic CANULATED drill bit 7 mm for femoral tunnel drilling including calibration	01
14.	Endoscopic CANULATED drill bit 7.5 mm for femoral tunnel drilling including calibration	01
15.	Endoscopic CANULATED drill bit 8 mm for femoral tunnel drilling including calibration	01
16.	Endoscopic CANULATED drill bit 8.5 mm for femoral tunnel drilling including calibration	01
17.	Endoscopic CANULATED drill bit 9 mm for femoral tunnel drilling including calibration	01
18.	Endoscopic CANULATED drill bit 10 mm for femoral tunnel drilling including calibration	01

19.	Endoscopic CANULATED drill bit 11 mm for femoral tunnel drilling including calibration	01
20.	Endoscopic CANULATED drill bit 12 mm for femoral tunnel drilling including calibration	01
21.	CANULATED drill bit 5 mm for tibial tunnel drilling	01
22.	CANULATED drill bit 5.5 mm for tibial tunnel drilling	01
23.	CANULATED drill bit 6 mm for tibial tunnel drilling	01
24.	CANULATED drill bit 6.5 mm for tibial tunnel drilling	01
25.	CANULATED drill bit 7 mm for tibial tunnel drilling	01
26.	CANULATED drill bit 7.5 mm for tibial tunnel drilling	01
27.	CANULATED drill bit 8 mm for tibial tunnel drilling	01
28.	CANULATED drill bit 8.5 mm for tibial drilling	01
29.	CANULATED drill bit 9 mm for tibial tunnel drilling	01
30.	CANULATED drill bit 10 mm for tibial tunnel drilling	01
31.	CANULATED drill bit 11 mm for tibial tunnel drilling	01
32.	CANULATED drill bit 12 mm for tibial tunnel drilling	01
33.	Slotted sizing block with slots to measure graft ranging from 5 mm to 12 mm with increment of 0.5 mm. Also, includes the scale to measure the length of the graft	01
34.	Universal Endo Femoral Guide Handle	01
35.	Endo-Femoral Aimer, no offset	01
36.	3mm offset Endo-Femoral aimer	01
37.	4mm offset Endo-Femoral aimer	01
38.	5 mm offset Endo-Femoral aimer	01
39.	6 mm offset Endo-Femoral aimer	01
40.	7 mm offset Endo-Femoral aimer	01
41.	Offset guide for precision tibial tunnel drilling, 2 mm -5 mm	01
42.	Notch master curette 8.0 mm	01
43.	Tendon Stripper Slotted & Closed	01
44.	Depth probe for measuring femoral tunnel length, Calibrated 10 mm to 130 mm in 2 mm increments	01
45.	3.5 mm CANULATED Hex Driver, 1.5 mm cannulation	01
46.	Bio Screw Driver & Screw Starter	01
47.	4.5 mm endoscopic CANULATED drill bit	01
48.	2.7 mm Graft passing pin wire (Box of 6)	01
49.	2.4 mm Tibial guide wire or tibial tunnel (Box of 6)	01
50.	Guide wire 1.5 mm cannulation with marking (Box of 6)	01
51.	Convex rasp	01
52.	Compound curve rasp	01
53.	Bone tunnel plug, Small 7.0-8.0 mm Package of 3	01
54.	Bio Screw interference Screw Driver	01

6. Shaver Hand Piece

a. The autoclavable shaver hand piece, which is compact, lightweight and ergonomically designed, with hand control.
b. The connecting cable should be autoclavable and replaceable with length of approx. 10 Ft.
c. The hand piece should be not more than 8 Inches length and 460 Gms.
d. The hand piece should have suction control lever.
e. The Shaver Hand piece should have safety mechanism of Blade Window Lock to avoid any unintentional tissue damages on pull out.
f. The Safety feature for window locking should be accessible and controllable from shaver hand piece.
g. The Shaver hand piece should have push-button motor controls: Forward, Reverse Oscillate, and Blade and Window Lock.
h. The Shaver should offer Maximum torque not be less than 32 oz.in
i. The shaver should be supplied with compatible shaver sterilization case.
j. The Shaver should be able to use any electro Blades, if desired.
k. Input voltage of 100 to 240 V, 50/60 Hz power consumption not more than 350 VA.

7. Consumables

a. Shaver Blades
b. Endo-Button
c. Bio-Screw
d. Suture Disc
e. Suture Post
f. Staple
g. Fiber tape
h. Fiber wire

Group: E- Gastroenterology

1. Anaesthesia Workstation, Qty. 2 Nos.

1. Description of Function

Anesthesia Workstation is used for delivering anesthesia agents to the patients during surgery. The complete unit also monitors the vital signs and ventilates the patients.

2. Operational Requirements

a) Anaesthesia machine complete and integrated with Anaesthesia gas delivery system; Circle absorber system; Precision vaporizer for halothane, isoflurane and Sevoflurane, Anaesthesia ventilator, Monitoring system to monitor Anaesthetic gases, ECG, EtCO2, FiO2, Pulse Oximeter and airway pressure, NIBP, IBP (number as required), rectal/&skin temperature & Bispectral index (optional).

b) Essential accessories to make the system complete and compatible with the existing system of gas outlets.

3 Technical Specifications

All components like anaesthesia machine, vaporisor, monitor and ventilator should be from one manufacturer/principal.
a) Flow management
-Should be Compact, ergonomic & easy to use
-Flow meters for O2, N2O & Air; cascade flow meters, total six
-One no. yoke each for Oxygen & Nitrous Oxide. Separate Pipeline inlet for Oxygen, Nitrous Oxide and Air with pressure gauge
-Hypoxic Guard to ensure minimum 25% O2 across all O2-N2O mixtures and Oxygen Failure Warning
b) Breathing system
-Latex free fully autoclavable.
-Sensor should not require daily maintenance.
-Bag to vent switch shall be bi-stable and automatically begins mechanical ventilation in the ventilator position.
-Adjustable pressure limiting valve shall be flow and pressure compensated.
c) Standard Circle Absorber System
-Should have adjustable pressure limiting valve, breathing circuit pressure measuring device.
-Should have a bag/ventilator selecting valve integrated onto the absorber.
- Should be suitable to use low flow techniques
- Facility to attach oxygen sensor.
-Should have CO2 absorbent chamber canister
d) Vaporizers
-New generation Vaporizer must be isolated from the gas flow in the off position and prevent the simultaneous activation of more than one vaporizer.
-Vaporizer should mount to a manifold of 2 vaporizers, which allows easy exchange between agents.
-Temperature, pressure and flow compensated vaporizers and Maintenance free - for Isoflurane, Halothane, and Sevoflurane

e) Ventilator (Integrated)-The workstation should have integrated Anesthesia Ventilator system for adult and paediatric patients.

-Ventilator should have Volume Control and Pressure Controlled SIMV, Pressure support preferably and PEEP.
-Ventilator should have a tidal volume compensation capability to adjust for losses due to compression, compliance and leaks; and compensation for fresh gas flow.
-The workstation should be capable of delivery of low flow anesthesia.
-Should have alarm system for high / low tidal volume, FiO2 and airway
pressure, apnoea
- Display of Ventilator preferably:
Tidal volume (VT), Inspiratory/expiratory ratio (I:E), Inspiratory pressure
(Pinspired), Pressure limit (Plimit). Positive End Expiratory Pressure (PEEP) & Spirometry with display of flow volume loops.
f) Anesthesia Monitoring System should be preferably modular:
-Monitoring of vital parameters: ECG (5 leads) with ST segment analysis, NIBP, SPO2 and 2 Invasive Pressure,Twin temperature measurement with skin and rectal probes
-Automatic identification and measurement of anesthetic agents, EtCO2, O2 and N2O and MAC value. FiO2 measurement
-Minimum 10" TFT multicolor display with preferably touch screen user display
-Depth of Anesthesia Monitoring module (Bispectral index) optional
-Neuromuscular Transmission Monitoring with all accessories. One set with each monitor (optional)
-Cardiac Output measurement facility by thermo dilution technology with all accessories (optional).
-24hrs of graphical and numerical trending
-Facility to store snapshots during critical events for waveform review at a later stage
-Audio visual and graded alarming system
g) Air compressor (optional)
- Medical grade oil free air compressor for pure & water free air
- Compact size, excellent mobility, easy handling, vibration free
- Microcontroller based alarm and control system with audio visual alarms for low pressure, fan failure, inoperable compressor etc.

2. Defibrillator, Qty. 1 Nos.

SPECIFICATION OF DEFIBRILLATOR

DEFIBRILLATOR WITH INTERNAL AND EXTERNAL

PADDLES FOR ADULT AND PEDIATRIC

1 Description of Function

1.1 Defibrillator is required for reviving the heart functions by providing selected quantum of electrical shocks with facility for monitoring vital parameters.

2 Operational Requirements

2.1 Defibrillator should be Bi- Phasic, light weight < 10kg with battery and latest model

2.2 Should monitor vital parameters and display them

2.3 Should print the ECG on thermal recorders.
2.4 Should work on both Manual and Automated external defibrillation (AED) mode
2.5 Should be capable of doing synchronized & asynchronized cardioversion
2.6 Can be operated from mains as well as battery
2.7 Should have defibrillator testing facility
2.8 Demonstration of the equipment is a must.

3 Technical Specifications

3.1 Should be a Low Energy Biphasic defibrillator monitor with Recorder, having capability to arrest all arrhythmia within a maximum energy of 200 Joules in Manual mode & for AED mode up to 150J
3.2 Should monitor ECG through paddles, pads and monitoring electrodes and Defibrillate through pads and paddles. Should have Automatic or Manual Lead switching to see patient ECG through paddles or leads
3.3 Should measure and compensate for chest impedance for a range of 25 to 125 ohms
3.4 Should have a built in 50mm strip printer/ thermal recorder
3.5 Should have charging time of less than 6 seconds for maximum energy. Charging indicator should be there.
3.6 Should have bright LCD / TFT display for viewing messages and ECG waveform of 4 seconds
3.7 Combined Adult and pediatric paddles should be available.
Internal paddles should also be available and price to be quoted separately."
3.8 Should have event summary facility for recording and printing at least 250 events and 50 waveforms. Patient data storage 90 mins of ECG and events.
3.9 Should have a battery capable of usage for at least 90minutes or 30 discharges.
3.10 Should be capable of printing Reports on Event summary, configuration, self-test, battery capacity etc.
3.11 Should have facility for self-test/check before usage and set up function
3.12 Should have SPO2 measuring and display facility.
3.13 Should be capable of delivering energy in increments of 1-2 joules up to 30J and increments of maximum 50J thereafter.
3.14 Should have user friendly 1,2,3 color coded operation.
3.15 Voice prompts on AED mode
3.16 Printing reports of events summary configuration/set test/ battery capacity
3.17 Optional non-invasive pacing/ transcutaneous pacing

4 System Configuration Accessories, spares and consumables

4.1 Defibrillator -01
4.2 Combined External Paddles Adult/Paediatric (pair) -01
4.3 Paddles –Internal -02 pair each for both adult & pediatric
4.4 Patient cable -02
4.5 ECG Rolls -50
4.6 Disposable pads-10 nos.
4.7 Reusable SPO2 Finger Probe-Adult -02
4.8 Reusable SPO2 Paediatric Finger Probe - 02

4.9 Complete set of ECG Leads- 02

5 Environmental factors

5.1 The unit shall be capable of operating continuously in ambient temperature of 10 -400 C and relative humidity of 15-90%

5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 -500 C and relative humidity of 15-90%

5.3 Shall meet IEC-60601-1-2: 2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.

6 Power Supply

6.1 Power input to be 220-240VAC, 50Hz

6.2 Resettable overcurrent breaker shall be fitted for Protection

7 Standards, Safety and Training

7.1 Should be USFDA or European CE approved product

7.2 Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements and IEC-60601-2-25 Safety of Electrocardiograms. (OR EQUIVALENT BIS Standard)

7.3 Should conform to international test protocols on exposure to shock forces and to vibration forces. The standard should be documented.

7.4 Should meet IEC 529 Level 3 (IP3X)(spraying water) for enclosure protection, water ingress.

7.5 Should have local service facility. The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.

7.6 Must submit User list and Performance report

8 Documentation

8.1 User Manual in English

8.2 Service manual in English

8.3 List of important spare parts and accessories with their part number and costing

8.4 Certificate of calibration and inspection from factory.

8.5 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

8.6 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.

8.7 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/Para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.

8.8 Must submit user list and performance report within last 3 years from major hospitals

Group: F- Neurosurgery, Qty. 2 Nos.

1. Anaesthesia Workstation

1. Description of Function

Anesthesia Workstation is used for delivering anesthesia agents to the patients during surgery. The complete unit also monitors the vital signs and ventilates the patients.

2. Operational Requirements

a) Anaesthesia machine complete and integrated with Anaesthesia gas delivery system; Circle absorber system; Precision vaporizer for halothane, isoflurane and Sevoflurane, Anaesthesia ventilator, Monitoring system to monitor Anaesthetic gases, ECG, EtCO2, FiO2, Pulse Oximeter and airway pressure, NIBP, IBP (number as required), rectal/&skin temperature & Bispectral index (optional).

b) Essential accessories to make the system complete and compatible with the existing system of gas outlets.

3 Technical Specifications

All components like anaesthesia machine, vaporisor, monitor and ventilator should be from one manufacturer/principal.
a) Flow management
-Should be Compact, ergonomic & easy to use
-Flow meters for O2, N2O & Air; cascade flow meters, total six
-One no. yoke each for Oxygen & Nitrous Oxide. Separate Pipeline inlet for Oxygen, Nitrous Oxide and Air with pressure gauge
-Hypoxic Guard to ensure minimum 25% O2 across all O2-N2O mixtures and Oxygen Failure Warning
b) Breathing system
-Latex free fully autoclavable.
-Sensor should not require daily maintenance.
-Bag to vent switch shall be bi-stable and automatically begins mechanical ventilation in the ventilator position.
-Adjustable pressure limiting valve shall be flow and pressure compensated.
c) Standard Circle Absorber System
-Should have adjustable pressure limiting valve, breathing circuit pressure measuring device.
-Should have a bag/ventilator selecting valve integrated onto the absorber.
- Should be suitable to use low flow techniques
- Facility to attach oxygen sensor.
-Should have CO2 absorbent chamber canister
d) Vaporizers
-New generation Vaporizer must be isolated from the gas flow in the off position and prevent the simultaneous activation of more than one vaporizer.
-Vaporizer should mount to a manifold of 2 vaporizers, which allows easy exchange between agents.
-Temperature, pressure and flow compensated vaporizers and Maintenance free - for Isoflurane, Halothane, and Sevoflurane

e) Ventilator (Integrated)-The workstation should have integrated Anesthesia Ventilator system for adult and paediatric patients.

-Ventilator should have Volume Control and Pressure Controlled SIMV, Pressure support preferably and PEEP.
-Ventilator should have a tidal volume compensation capability to adjust for losses due to compression, compliance and leaks; and compensation for fresh gas flow.
-The workstation should be capable of delivery of low flow anesthesia.
-Should have alarm system for high / low tidal volume, FiO2 and airway
pressure, apnoea
- Display of Ventilator preferably:
Tidal volume (VT), Inspiratory/expiratory ratio (I:E), Inspiratory pressure
(Pinspired), Pressure limit (Plimit). Positive End Expiratory Pressure (PEEP) & Spirometry with display of flow volume loops.
f) Anesthesia Monitoring System should be preferably modular:
-Monitoring of vital parameters: ECG (5 leads) with ST segment analysis, NIBP, SPO2 and 2 Invasive Pressure,Twin temperature measurement with skin and rectal probes
-Automatic identification and measurement of anesthetic agents, EtCO2, O2 and N2O and MAC value. FiO2 measurement
-Minimum 10" TFT multicolor display with preferably touch screen user display
-Depth of Anesthesia Monitoring module (Bispectral index) optional
-Neuromuscular Transmission Monitoring with all accessories. One set with each monitor (optional)
-Cardiac Output measurement facility by thermo dilution technology with all accessories (optional).
-24hrs of graphical and numerical trending
-Facility to store snapshots during critical events for waveform review at a later stage
-Audio visual and graded alarming system
g) Air compressor (optional)
- Medical grade oil free air compressor for pure & water free air
- Compact size, excellent mobility, easy handling, vibration free
- Microcontroller based alarm and control system with audio visual alarms for low pressure, fan failure, inoperable compressor etc.

Group: G- Tb & Chest

Purchase of flexible Video Thoracoscope-

1. The tip of Thoracoscope should be flexible, having capacity of upward movement of 160 degree and downward movement of at least 130 degree
2. The field of the view should be 120 degree or more
3. The outer diameter should be 6 to 7 mm and depth of the field should be 3 to 100 mm.
4. The equipment should be compatible with elector surgical unit and lase4r therapy equipment NDYG lase, 810 mm diode.
5. The scope should be autoclavable
6. The inner diameter of the working channel should be 2.8 mm or more.
7. The working length should be 270 mm or more
8. It should be provided with insertion tube and universal cord.
9. The equipment should be co partible with the video monitor
10. Custom made trolley should be provided with the scope.
11. The equipment should be supplied with at least three biopsy forceps and three channel cleaning brushes.
12. It should be conveniently moveable from one place to another place.
13. It should have good number of installation in India at least three and good service backup preferably within NCR.
14. The equipment should be US FDA/ European CE certified

Group: H- Anaesthesiology

1. FLEXIBLE INTUBATION VIDEO ENDOSCOPE (ADULT SIZE + PED SIZE) non fiber, Qty. -2 Sets

SPECIFICATION OF FLEXIBLE INTUBATION VIDEO ENDOSCOPE (ADULT SIZE + PED SIZE) non fiber

- Flexible Intubation Endoscope with CMOS chip on tip for digitally transferring the image to the screen. There should be NO Optical Fiber bundles/non fiber optics. Intubation Endoscope should display Full Frame 4/3 or 16/9 Imaging and not the circular image.
- For adult outer diameter of scope should be ranging 4.8- 5.5mm with working length of 65cm or more. Up and down tip deflection should be same ranging 120-160 degrees. Working channel should be 2.0 - 2.3mm and it should take ETT from 5.5 sizes onwards.
- For Pediatric outer diameter of scope should be ranging 3.0- 4.1 mm with working length of 65cm or more. Up and down tip deflection should be same ranging 120-160 degrees. Working channel should be 1.4 -1.6mm and it should take ETT from 3.5 sizes onwards.
- Flexible Intubation scope should display good quality picture by connecting it with 7inch or more TFT monitor/integrated LED light source (**One monitor for each video Endoscope**)
    - TFT monitor/Screen should have feature control buttons on the screen with HDMI output for connecting to a big screen.
    - Automatic/ manual white balance facility should be available
    - Monitor should run on battery, when fully charged should work for more than 60 minutes
    - Monitor should be upgradable
- Documentation of Video & still images should be possible with operating buttons on the scope to be recorded on SD card and USB pen drive present in the monitor
- It should be light weight , high resolution & potable flexible scope
- Airway Guide (cum Bite block) for Oral intubation should be provided with the set.
- ET TUBE HOLDER has to be a part standard accessory and 5 piece should be provided
- Set should include- Suction Adaptors (Disposable), Cleaning brush & Leakage tester as standard accessories
- Container for sterilization and storage of scope should be provided
- One imported Trolley to hang Scope as well monitor should be provided
- Ten reusable suction caps to be also provided
- Equipment should be European CE/ US FDA approved

- Suitable for following applications-
    - Bronchoscopy
    - Endotracheal Intubation
    - Foreign body removal
    - Bronchial Lavage
    - Inspection of the Airways
    - Dilatation Tracheotomy

-biopsy forceps, grasping forceps should be provided with alligator jaw

-Trolley from same manufacturer

-USFDA or CE European approved

Rate of consumable should be quoted separately

Note: All equipment's /accessories should be reusable /Autoclavable/ chemical sterilization

2. Portable colour Doppler Ultrasound unit, Qty.-2 Nos.

Technical specification for portable colour Doppler Ultrasound unit

1. A state of art fully digital, compact portable Colour Doppler Ultrasound machine weighing < 6.6kg with battery is required with following technical features:

2. Unit should be able to give very high image quality with advance technologies like compound imaging with at least 5 sights of lines for better cardiac contrast resolution, tissue differentiation and edge detection, equivalent to high end cart based systems. Please specify the technology.

3. The system shall have the ability to enhance tissue margins and improve contrast resolution by reducing artefacts and improving visualization and improving visualization of texture patterns & needle tip within the image, please specify the technology.

4. System should have both online (Read) as well as offline (write) zoom facility.

5. Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Continuous wave Doppler, Power Doppler must be available on all cardiac transducers.

6. System must have fast start up to scanning in less than 30 seconds from off condition , for use in critical and emergency situations.

7. System should support transducer technologies like phased array, convex, linear, TEE etc.

8. Cine memory on all modes.

9. The system shall process a dynamic range that is at least 165db. The system must display at a maximum depth of 35 cm.

10. The system must have a dedicated cardiac calculation packages with PISA, TDIL calculation packages, vascular calculation package.

11. The unit must be compact, portable and lightweight, weighing with battery less than 6.6 kg.

12. Unit must be sturdy, resistant to breakage & damage on fall/ hit against the wall or hard surface for out of the hospital use.

13. Flat LCD / TFT monitor of at least 10 inches with flicker free image.

14. Alphanumeric soft keys keyboard with easy access scans controls, facility to sanitize the system keyboard to avoid cross contamination.

15. The system must have the ability to function by AC/ DC or battery power with the same degree of functionality, the battery life (run time) shall be at least 2 (Two) hours, this need to be demonstrated.

16. The system must have archive capability for storage and retrieval of images and clips, data.

17. Data transfer facility should be available as standard, to transfer image etc. easily onto another system/ computer etc.

18. System should posses software for Enhanced needle Visualization to track the needle clearly at steep angle during the procedures while maintaining striking image quality of the target structures and the surrounding anatomy with simple on / off functionality. This facility should be available on both High frequency Linear an Curvilinear probes for superficial as well as deeper blocks.

19. Unit must be sturdy, resistant to breakage & damage on fall/ hit against the wall or hard surface.

20. The system shall support the all DICOM functionality, Storage, Print, and work list, also ready to connect to PACS.

21. The manufacture shall provide a loaner system in case of failure of system.

22. The equipment should be mountable on trolley & locking mechanism should be inbuilt into the trolley for safety & security of the system.

23. System configured application specific educational video tutorials should be provided as standard with the system.

24. Both system and transducers to be USFDA and European certified.

25. System should ability to sanitize the Keyboard and screen to control infection patient to patient.

26. System should have facility of pin less probe connecter.

Transducers to be supplied as standard:

1. 2-5 MHz multi- frequency broadband curved array transducer with Biopsy Guide for general purpose & abdominal applications.

2. 1-5 MHz multi- frequency, broadband phased array transducer for adult cardiac, abdominal, FAST, imaging.

3. High Frequency Linear Transducer 6-13 MHz for nerve blocks, vascular access, Vascular Imaging. With small foot print of 25 mm for an aesthesia applications in paediatric patients.

4. 6-13 MHz Linear (Hockey Stick Shaped) Musculoskeletal Nerve Superficial vascular venous 6cm Depth.

Optional items to be quoted:

- Mobile cart with transducer holder and space for printer.
- TTC (Triple Transducer Connector) Capability to connect three transducers.
- B/W Thermal printer.
- Imported phantom with blood vessels and nerves.

3. Video laryngoscope- 2 Nos.

Specification of Video Laryngoscope

Laryngoscope required with video illumination to visualize and document the operational area on screen. It should consist of following features:

- Required is Macintosh blade with Metal finish size 2,3 and 4 with integrated camera chip and LED light illumination for obtaining more than 50000 Lux of brightness.
- One miller size 0 & 1 blade should present in the set.
- Screen size 7-10 inch for display with feature control buttons on the screen with HDMI output for connecting to big screen.
- It should be a chip based video Laryngoscope and not a prism based device
- Monitor should have facility to connect flexible scope and video- laryngoscope blade
- Automatic as well as manual white balance facility should be available
- Integrated video as well as still picture recording should be possible on data card

And USB drive with JPEG and MPEG4 format which can be easily transferred to the computer/ Laptop. Monitor should have two ports for SD card and USB drive Video and still picture can be retrieved on the screen. It should be an upgradable system

- Safety bag for screen to be provided with the facility to operate monitor from the bug.
- Unit should run on both a/c and battery with battery life more than 60 minutes
- Movable stand should be provided to hand the screen
- Accessories like protection cap, tray for cleaning and sterilization of blades (at least two blades at a time) should be provided
- Sterrad and Steris should be permissible for disinfection of blades
- Blades and connection cable should be fully immersible in disinfecting solution
- Equipment should be European CE/ US FDA approved
  -All accessories/ equipments should be of same manufacturer and USFD/ CE approved.
  - All equipments should be reusable, can be autoclave/ ETO and chemical sterilised
  - Warranty and CAMC- As per institution rule
  - Rate of consumable should be quoted separately .

Optional:

One special blade for difficult intubation with device for introduction of suction catheter for size 16-18 fr., angle of view should be approx 80 degree.

Special shaped adult and paediatric Magill forceps for foreign body removal and for assisting nasal intubation should be provided