



**INDIRA GANDHI INSTITUTE OF MEDICAL  
SCIENCES, SHEIKHPURA, PATNA-14.**

**Tel: 0612 - 2297631, 2297099, Fax: 0612 - 2297225, Website:**

[www.igims.org](http://www.igims.org)

**Notice Inviting Tender**

***E-tendering mode only on website- [www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in) )***

**E-Tender Notice No. 05/2019-2020/Bio Medical Equipt /IGIMS/Store**

- 01 Name & address of advertiser: : Director, IGIMS, Sheikhpura, Patna -14  
P.O.-B.V. College, Patna 800014
- 02 Date of issue of E-Tender notice. : 30/ 11/2019
- 03 Period for download of tender document : From 03/12/2019 to 14/01/2020 up to  
12.00 hours through above website
- 04 Date, Time & Place of pre bid meeting: : 18/12/2019 at 03.00 Noon at IGIMS (2<sup>nd</sup>  
Floor, New administrative building),  
Patna.
- 05 Last date & Time for uploading tender: : 14/ 01/2020 up to 17.00 Hours
- 06 Last date, time and place for submission  
of Technical bid by Speed/Registered post/  
Courier only : 15/01/2020 up to 16.00 Hours, at Director  
IGIMS,- Patna-800014, P/O- B. V.  
College Patna
- 07 Date, Time and Place of opening of Techno  
Commercial bid : 16/01/2020 at 14.00 hours on  
**[www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in)**
- 08 Date, Time and Place of opening of price bid : Date & Time will be communicated later  
Subsequent to approval of techno  
commercial bid Place:  
**[www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in)**

<i>Sl. No</i>	<i>Group</i>	<i>Name of Equipment</i>	<i>Cost of Tender Docume nt</i>	<i>Earnest money to be Deposited.</i>	<i>Bid processing fees to be paid on- line (non- refundable in Rs.)</i>	<i>Compl etion period</i>
01.	A: Trauma & Emergency	1. ADULT AIRWAY MANAGEMENT TRAINER	Rs. 2000.00	Rs.5,000.00	Rs.1180.00	8-12 Week
		2. PAEDIATRIC INTUBATION TRAINER		Rs.5,000.00		
		3. INFANT AIRWAY MANAGEMENT TRAINER		Rs.2,500.00		
		4. CRICOTHYROTOMY TRAINER		Rs.2,500.00		
		5. CHEST TUBE & PNEUMOTHORAX TRAINER		Rs.15,000.00		
		6. CENTRAL LINE TRAINING MANIKIN		Rs.10,000.00		

7. INFANT INTRAOSSEOUS TRAINER	Rs.2000.00
8. IV ARM TRAINER	Rs.2000.00
9. ADULT QUALITY CPR MANIKIN	Rs.5,000.00
10. CHILD QUALITY CPR	Rs.5,000.00
11. INFANT QUALITY CPR	Rs.6,000.00
12. AED TRAINER	Rs.5,000.00
13. TRAUMA AND ADVANCE CARDIAC LIFE SUPPORT SIMULATOR	Rs.35000.00
14. HIGH END ICU VENTILATOR	Rs.40,000.00
15. HIGH END MULTI PARA-MONITOR	Rs.12,000.00
16. ANESTHESIA WORKSTATION	Rs.50,00.00
17. BLOOD GAS ANALYZER MACHINE	Rs.16,000.00

09. For participation in the above e- tender process the bidders are required to get themselves Registered as per details given at [www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in) so that the user ID, Password and Digital signatures are issued to them and may please contacted on 7542028164, 0612-2523006 for any query.

10. Detailed NIT can be seen on website [www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in) and on [www.igims.org](http://www.igims.org).

The undersigned reserves the right to accept / reject any or all tenders without assigning any reason.

**Director  
IGIMS, Patna**

Ref: dated: /11/2019  
Copy forwarded to: Administrative Officer for advertisement in National News papers/ Suptt. Engg. (B M E) for uploaded at the Institute Website/F& Chief accounts Officer for information& Necessary action.

**Director  
IGIMS, Patna**

**Bidding document for-**

**Group A : Supply, Installation & Commissioning of Biomedical Equipmt. for Trauma & Emergency.**

## **BIDDING DOCUMENT**

**E-TENDER NOTICE No: 05/2019- 2020/Bio-Medical Equipment/IGIMS/Store**



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

**E-TENDER NOTICE No: 05/2019- 2020/Bio-medical Equipment/IGIMS/Store**

Issued to:

Cost of Document: Rs.2000/-

Paid By:           Cash:           Receipt No.:

Demand Draft:    No.:

Issuing Bank:

**(Authorized Signatory)**

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

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**IMPORTANT DATES**

<b>Last date for Purchase of Bidding Document</b>	Can be downloaded from Institute website
<b>Date, Time &amp; Place of pre bid meeting</b>	18/12/2019 at 03.00 Noon at IGIMS (2 <sup>nd</sup> Floor, New administrative building), Patna.
<b>Last date for submission of completed bidding document</b>	15/01/2020 up to 4.00 PM. by registered/speed post/ Courier only
<b>Date of opening of technical bid</b>	16/01/2020 at 11.00 A.M. in Conference Hall IGIMS, Patna.
<b>Date of demonstration of equipment</b>	To be informed to the qualified bidders qualifying after opening of technical bids.

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

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

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

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

Dear Sir,

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

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

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

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.	<b>Status of Bidder:</b> <ul style="list-style-type: none"><li>• Manufacturer or Authorized Agent of the Manufacturer</li><li>• Whether Public Undertaking, Public Ltd., Private Ltd. Company or Proprietary Firm/partnership firm</li><li>•</li></ul> (Please attach Notary certified <b>MANUFACTURER'S AUTHORISATION FORM</b> as per <b>FORMAT</b> placed at <b>Annexure – III</b> )		
2.	<b>Power of Attorney as per Annexure - V</b> in favour of person to sign, submit and negotiate the bid.		
3.	Certificate towards market standing of minimum 05 years in the area of supply and or maintenance of bio-medical equipment's.		
4.	Certificate for sole ownership / partnership		
5.	Statement of financial standing from bankers		
6.	Statements of turnover per year for last three successive years duly certified by the Chartered Accountants.		
7.	<b>Notary certified User List</b> (List of Govt. /Semi Govt., Reputed Pvt. Hospital) where quoted model of the items has been supplied and installed.		
8.	<b>Notary certified Supply</b> order copy (Minimum 3nos. or more) issued by Govt./Semi Govt./Reputed Pvt. Institutions/organization for the quoted items. ( same model)		
9.	<b>Notary certified Performance certificate</b> of the same supplied machine (of quoted make and Model) issued by <b>Head of the dept. or Institution</b> after a minimum period of six months of installation		
10.	Prerequisite (if any) for installation of the Machine, if any, to be provided by the Institute.		
11.	Whether rates quoted are inclusive of all taxes or not.		
12.	Whether rates are quoted as per format mentioned in the Bidding Document or not.		
13.	Affidavit to the effect that the bidder is not blacklisted by any Govt. agency or have no pending case either Civil or Criminal against them.		
14.	Affidavit, to the effect that the bidder is not supplying the quoted item(s) to any other Govt. /Semi Govt. Organizations / Institutions / Hospitals at the rate lower than the rate quoted against this tender.		
15.	<b>Quality Assurance Certificate</b> like ISI, ISO-9002,		

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

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

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

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

(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 31 <sup>st</sup> March 2018.	
05	Bidders who have the capability to attend repairs of these equipment within the time mentioned in this bidding document and who are willing to provide stand by equipment or replace the faulty equipment if the repair/down time extends beyond 72 hours from the time of reporting of the fault within the next 48 hours (total down time should not exceed 5 days in one instance). The bidders who have the capability to ensure the uptime mentioned in this document (Documentary proof shall be submitted on the after sales facilities and expertise of the bidder.)	
06	Bidders are not offering the equipment of a firm /company that has been blacklisted by Indira Gandhi Institute of Medical Sciences – Patna or blacklisted/debarred by any other State / Central Government's organization.	

**Note:**

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

## INSTRUCTION TO BIDDER

### GENERAL INSTRUCTIONS TO BIDDERS

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

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

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

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

2. The tender offers, duly filled, shall be submitted in sealed covers for **technical**. Such covers shall be super scribed as “**Tender No..... (here mention the tender no as specified) TECHNICAL BID for supply of ..... (here mention the name of the equipment**”
3. Quantity of items may increase or decrease. Director, I.G.I.M.S. - Patna reserves the rights to purchase different sub items/ components of items from different bidders.  
  
**This rate Contract will be valid for Two year from date of 1<sup>st</sup> satisfactory installation and acceptance of the equipment. Repeat Supply Order will be placed as per requirement of the Institute of all the quoted and approved items. The rate contract may be further extended for period of one year as decided by Director, IGIMS-Patna.**
4. The “Bidding Document” along with terms and conditions, technical specification can be obtained from the office of the Store Officer, IGIMS, Patna on payment of Rs.2000/- (Rs. Two thousand only) Non –refundable for each Group by demand draft favouring Director , IGIMS, Patna payable at Patna.
5. The “ Bidding Document” can also be downloaded from institute website [www.igims.org](http://www.igims.org). In case, downloaded bidding document is used, Bidder(s) have to submit the cost of the Tender Document along with the completed documents in the form of demand draft in favour of Director , IGIMS, Patna, payable at patna towards cost of the “ Tender documents” Bidder is required to attach separate DD for the same in a separate envelop super scribed with “ cost of bidding document” if the cost of tender document is not submitted by the bidder, his offer shall be outright rejected .
6. **Last date for submission of bidding document is 15/01/2020 up to 4.00PM by speed/Regd. post/ Courier only and technical bid will be opened on 16/01/2020 at 11.00 AM in Conference hall IGIMS, Patna**
7. **Earnest Money Deposit (EMD):**  
**Earnest Money 2% of the cost of Equipment required** to be submitted along with tender by Demand Draft from any scheduled Indian Bank (valid up to one year from the date of technical bid

opening.) only along with the tender favouring Director, I.G.I.M.S. – Patna (payable at Patna). No interest is payable on EMD/ Bid security.

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

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

**Installation & site plan:-**

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

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

**11. After Sales Service Conditions:**

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

**c. Guarantee/Warranty Terms:**

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

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

manufacturer Indian agent to get counter signature on the agreement to be executed with them by the principal.

xvii;- The offered warranty includes:

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

**d. Comprehensive Annual Maintenance Contract:**

- The decision to enter into CMC or AMC will be determined on the basis of cost and complexity of the equipment by the Tender Inviting Authority, at its discretion, prior to the expiration of warranty period.
- The Comprehensive Maintenance Contract (CMC) is otherwise an extended warranty. All the terms and conditions agreed by the successful Bidder for executing the comprehensive warranty of the equipment shall be extended during the period of CMC, only difference being the payment of CMC charges is absent during the period of comprehensive warranty.
- The cost of CMC, accessories spares, and consumables as in case may be quoted along with taxes applicable, if any. The taxes to be paid extra, to be specifically indicated. In the absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.
- Failure/refusal on the part of the successful tender supplying/installing the equipment's to enter into CMC with the Tender Inviting Authority, at the end of the Comprehensive Warranty Period, if the Institute, as the case may be, desires so, shall lead to forfeiture of performance security and may also result in the blacklisting/debarring of the Bidder.
- The successful Bidder shall also indicate the rates for the CMC in price bid form and such rates are binding on the successful tenders after the expiration of the warranty period. The yearly rates for CMC shall remain the one and the same as quoted in the price bid form for the extended years.
- Cost of CMC (excluding taxes, if any) will be considered for Ranking/Evaluation purpose.

- The payment of the agreed CMC charges will be made as per frequency for payment after satisfactory completion of said period, on receipt of service report/ break down report from the user.
- The Bidder shall also have to submit whether periodic replacement of consumable items are required for proper functioning of their quoted machine/Equipment? If yes they should submit the list of such consumables along with price list and frequency of replacement per year if the same is not included in quoted Comprehensive Annual Maintenance Contract charges per year.

## 12. 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 /5 years from the date of successful installation.
c.	CMC period	5/7 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.

13. 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.
14. **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/ five 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.**
15. Supplier will submit undertaking for ensuring uninterrupted supply of spares during the total life span of the equipment's.
16. Indian agency commission and Installation charge if any will be paid in Indian rupees after successful installation and demonstration of the equipment's.
17. Principal's Invoice of the quoted items must be submitted with the quotations.
18. Proof of the official Indian agent certificate of the firm must be attached. (Notary Certified Photocopy)
19. 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).
20. Bidder(s) have to submit an affidavit to the effect that they have not supplied the offered item(s) to any Govt., semi Govt. /Organization, Institution, etc. at the price lower than the price offered to I.G.I.M.S. – Patna.
21. 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.
22. Bidder might be required to demonstrate the system at the discretion of the institute.

**23. 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 be forfeited and the award will be cancelled.
- c. The Notification of Award shall constitute the conclusion of the Contract.

**24. 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.

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

**27. Amendment of tender documents:**

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

**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 in **Indian Rupees only**.

**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/ five years** from the date of satisfactory installation. The Complete System should include the basic unit and allied supporting components like UPS etc. to be supplied by the bidder along with basic unit if necessary for running the system.
- b. During warranty period of three/five 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:-  
  
$$1 \text{ Year} = 365 \text{ days}$$
$$95\% \text{ of } 365 \text{ days} = 347 \text{ Days per annum}$$
- 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 binding on both the parties.

**04. After Sales Services: -**

- a. After expiry of the warrantee/Guarantee period of the equipment, the Indian agent will have to undertake the Comprehensive Annual Maintenance contract (with spare parts, accessories, consumables etc.) of the Complete System for the further life span of equipment. The life span of the equipment shall not be less than ten years. In special circumstances the total life span of the Equipment/ items may be reduced by the Institute.
- b. The Complete System should include the basic unit and allied supporting components like UPS, Stabilizer, 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 = 365days  
**95% of 365 days = 347 Days per annum**
- f. The bidder shall compensate the uptime less than the specified above for **every additional day** of down time over and above 18 days stipulated above, warranty period will get extended by one week as penalty at no extra cost i.e. the extended penalty period will be equal to one week for every additional day of down time.
- g. During Comprehensive Annual Maintenance Contract, **bidder** will keep the “**Complete System**” in satisfactory working condition. In case, any spare parts, accessories, PCB, all type of consumables etc. needs replacement due to normal wear and tear, **bidder** will supply and install the same for which no additional payment is to be made. .If any spares / consumables / accessories etc. are not covered under Comprehensive Annual Maintenance Contract charges, it should be clearly mentioned with frequency of replacement and with rate. The validity of rate of such items should also be mentioned clearly. What will be the rate of escalation on the quoted rate after expiry of the validity of rate of such item must be mentioned.
- h. The payment of Comprehensive Annual Maintenance Contract will be made on half yearly basis after submission of satisfactory functioning report of the Complete System by the officials authorized by the Institute.
- i. In case, the **bidder** is not able to provide services (and the items / accessories is not functioning as the reason thereof) due to natural calamity (act of God), Political unrest, Riot and fire at the user site, then in such a situation the Comprehensive Annual Maintenance Contract will be extended by the period for which the item / accessories could not be operated because of supplier not being able to provide services.
- j. During Comprehensive Annual Maintenance Contract, in case of any alleged damage due to accident / human error, a committee under the Chairmanship of Director, I.G.I.M.S. – Patna with one member from the bidder and one member from the Institute will decide the authenticity of the claim. The decision of the committee shall be final and binding on both the parties.

05. **Performance Security**

- a. There will be a 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 security money deposit, 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 security money deposit 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 security money deposit 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 Supply Order. If the delivery is not affected by due date, the Director, I.G.I.M.S. - Patna shall have the right to charge liquidated damage on supplier/his Indian agent as under: -

- i. 1<sup>st</sup> extension for a month or a part thereof @ 2% per month .
- ii. 2<sup>nd</sup> extension for an additional month or a part thereof @ 3% per month subject to maximum Limit of 20% of the order items.
- iii. Cancellation.- If delivery is not done even after 2<sup>nd</sup> extension Institute shall have the right of cancellation of Supply order at its discretion. The institute may also cancel the supply order without giving any extension.

07. **Payment: -**

- a. 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.

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 breakup 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 backup 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/ Security money deposit,
- 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 equipment's 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 equipment's 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.**

**CHAPTER:**

**SCHEDULE OF THE REQUIREMENT**

<b>Group -A-Trauma &amp; Emergency</b>
<b>ADULT AIRWAY MANAGEMENT TRAINER</b>
<b>PAEDIATRIC INTUBATION TRAINER</b>
<b>INFANT AIRWAY MANAGEMENT TRAINER</b>
<b>CRICOTHYROTOMY TRAINER</b>
<b>CHEST TUBE &amp; PNEUMOTHORAX TRAINER</b>
<b>CENTRAL LINE TRAINING MANIKIN</b>
<b>INFANT INTRAOSSEOUS TRAINER</b>
<b>IV ARM TRAINER</b>
<b>ADULT QUALITY CPR MANIKIN</b>
<b>CHILD QUALITY CPR</b>
<b>INFANT QUALITY CPR</b>
<b>AED TRAINER</b>
<b>TRAUMA AND ADVANCE CARDIAC LIFE SUPPORT SIMULATOR</b>
<b>HIGH END ICU VENTILATOR</b>
<b>HIGH END MULTI PARA-MONITOR</b>
<b>ANESTHESIA WORKSTATION</b>
<b>BLOOD GAS ANALYZER MACHINE</b>

**ANNEXURES**  
**Annexure - I**

**PRICE SCHEDULED**

**LOCATED WITHIN INDIA.**

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

Total quoted price in Rs. ....

In Words: .....

**Note:**

1. If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail.
2. The charges for Annual CMC after warrantee shall be quoted separately as per price scheduled.

Place:

Name:

Date:

Business Address:-

Signature of Bidder;-

Seal of the Bidder;-



**Annexure - II**

**COMPREHINSIVE ANNUAL MAINTENANCE CONTRACT PRICES SCHEDULE**

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

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

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

Seal and Signature of the bidder

ANNEXURE – III

**MANUFACTURER'S AUTHORISATION FORM**

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

No.

Dated:

To

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

Dear Sir,

Tender No :  
Equipment Name :

1. We ..... (Name of the OEM) are the original manufacturers of the above equipment having registered office at ..... (full address with telephone number/fax number & email ID and website), having factories at \_\_\_\_\_ and \_\_\_\_\_ , do hereby authorize M/s. \_\_\_\_\_ (Name and address of bidder) to submit tenders, and subsequently negotiate and sign the contract with you against the above tender no.
2. No company or firm or individual other than M/s. \_\_\_\_\_ are authorized to bid, negotiate and conclude the contract in regard to this business against this specific tender.
3. We also hereby undertake to provide full guarantee/warranty /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.....f or..... (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: Trauma & Emergency**

### **1. Adult Airway Management Trainer**

- It should be an Adult upper torso with Tongue and teeth
- It should be able to teach following Intubation Procedures
  - Tracheal (oral and nasal)
  - Pharyngeal (oral and nasal)
  - Retrograde intubation
  - Esophageal
  - Fiber optic intubation (oral/nasal)
- Possibility of Sellick maneuver
- Right mainstem intubation
- Should be able to teach Suctioning techniques
- Should be able to perform Bronchoscopy
- The Airway Management Trainer shall be an airway training manikin mounted on practice board.
- It must be able to provide realistic and complete training in all intubation procedures tracheal-oral and nasal and the use of the Laryngeal Mask Airway and Combitube.
- It should provide realistic anatomy, nostrils. Lips, teeth, tongue, pharynx-oral and nasal, larynx with glottis opening, vallecula, arytenoids, vocal cords, sub glottis cricoid ring, trachea, including carina lungs, esophagus and stomach.
- It must provide realistic head positioning. Neck flexion, extension and rotation, head lift and jaw movability.
- It should be able to provide realistic complications as, laryngospasm, vomiting, and with excessive laryngoscope pressure on teeth will produce and audio signal.
- It should be able to provide realistic checking for proper tube placement with visual inspection of lung expansion during ventilation, and auscultation of breathing sounds.
- It should be able to establish and maintain an open airway by head tilt, chin lift, neck lift and jaw thrust.
- It should permit realistic practice in lung ventilation, also with the use of Bag Mask Ventilation.
- It should be supplied with separate model for demonstration airway anatomy.
- It must be able to provide the possibilities for practical training in clearing the obstructed airway by suctioning liquid foreign matter from, oral cavity, oro- or naso pharynx, oro- or naso trachea, via endotracheal tube. Gastric drainage may also be practiced.
- It should be supplied with a sturdy carrying case, directions for use, sanitation kit, lubrication spray and a container of simulated stomach contents.
- Manufacturer must conform to the International Quality Certification i.e. ISO /CE must be provided.
- The price and list of accessories to be quoted separately .
- Should be European CE approved/ USFDA approved.
- Electrical safety norms: should be compatible with Indian electricity supply.
- Warranty of 5 years followed by CAMC for 5 years.
- The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.
- Shall meet IEC-60601-1-2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
- Demonstration of equipment is must.
- After sales service should be available locally.

## **2. Paediatric Intubation Trainer**

The Paediatric Intubation Trainer is a life-like reproduction of a six-year-old child's torso designed to teach paediatric airway management skills.

Features:

- Realistic life-size intubation trainer with a flexible tongue, arytenoid cartilage, epiglottis, vallecula, vocal cords, trachea, esophagus, and simulated lungs
- Head can be tilted forward, backward, or rotated 90 degrees to either side
- Anatomically accurate airway allows sizing and insertion of various airway adjuncts
- The following skills can be practiced:
  - Oral Intubation
  - Nasal Intubation
  - Digital Intubation
  - Oropharyngeal Airway
  - Nasopharyngeal Airway
  - Basic Airway Management
  - Suctioning Techniques
  - Bag-Valve Mask Ventilation
  - Realistic rise and fall of the chest
  - Closed chest compressions
- The price and list of accessories to be quoted separately.
- Should be European CE approved/ USFDA approved.
- Electrical safety norms: should be compatible with Indian electricity supply.
- Warranty of 5 years followed by CAMC for 5 years.
- The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.
- Shall meet IEC-60601-1-2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
- Demonstration of equipment is must.
- After sales service should be available locally.
- 

## **3. Infant Airway Management Trainer**

The Infant Airway Management Trainer should provide the realistic anatomy of a 3-month-old infant for teaching and practicing basic and advanced airway management skills. Following features must be present -

1. Realistic anatomy of the tongue, oropharynx, epiglottis, larynx, vocal cords and trachea
  2. Bag-Valve Mask ventilation
  3. Sellick Maneuver
  4. Intubation (oral and nasal)
  5. Laryngeal Mask Airway (LMA)
  6. Realistic tissue simulation
  7. Correct tube placement can be checked by practical inflation test
  8. Simulated stomach inflation
- The price and list of accessories to be quoted separately.
  - Should be European CE approved/ USFDA approved.
  - Electrical safety norms: should be compatible with Indian electricity supply.
  - Warranty of 5 years followed by CAMC for 5 years.
  - The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.
  - Shall meet IEC-60601-1-2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
  - Demonstration of equipment is must.

- After sales service should be available locally.

#### **4. Cricothyrotomy Trainer**

Needle and surgical cricothyrotomy skills can be practiced on this model with interchangeable rigid and soft tracheas. And should have following features -

- Anatomically accurate landmarks for site training
- Interchangeable tracheas facilitate realistic simulation of needle and surgical cricothyrotomy procedures
  - Rigid trachea with simulated lung
  - Soft trachea with simulated lung
- Replaceable neck skin allows repeated practice
- Mounted on a base
- Should be ISO/CE certified

Manikin should be supplied with:

Head, Rigid Trachea with Simulated Lung, Soft Trachea with Simulated Lung,

Replaceable Neck Skin, Base, and Directions for Use

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

#### **5. Chest Tube & Pneumothorax Trainer**

It should be used for training in surgical or guidewire assisted thoracostomy, and thoracentesis.

It should be complete with interchangeable modules, allows for a variety of chest drain insertion techniques to be performed including ultrasound-guided techniques.

Skills

- Needle decompression of tension pneumothorax
- Ultrasound-guided chest drain insertion (Seldinger-type), including insertion of needle under direct vision, and ultrasonic recognition of chest structures
- Open, or cut-down chest drain insertion: recognition of correct position, surgical incision, blunt dissection through chest wall, perforation of pleura, and finger sweep
- Suture of tube to chest wall
- Representation of adult male thorax with arms raised
- Suitable for supine, sitting, or leaning forwards positions
- Bony and soft tissue landmarks: manubriosternal joint, clavicles, ribs, pectoralis major and latissimus dorsi
- Bilateral chest drain and needle decompression pads
- Internal ultrasound anatomy: diaphragmatic structures and collapsed lung
- Can give the impression of breathing under ultrasound when using the Advanced Pad
- Works with thoracic seals when using the Standard Pad

- Reservoirs can be filled with fluid or mock blood to represent pleural effusion
- Affordable replaceable pads:
  - Advanced Chest Drain Pads

### **Ultrasound-able(optional)**

- For use with liquids – e.g. effusion, or haemothorax
- Needle, guide-wire, dilator, and drain-tube can all be realistically inserted
- Guidewire insertions will self-seal allowing multiple uses
- For open/surgical techniques where effusion or haemothorax are required
- Open/surgical incisions will not self-seal
- Can be sutured
- Pleural layer, providing realistic give, or “pop”, on puncture with forceps or finger
- Improved respiratory swing
- Recommend usage of 12 FG catheter
- The price and list of accessories to be quoted separately .
- Should be European CE approved/ USFDA approved.
- Electrical safety norms: should be compatible with Indian electricity supply.
- Warranty of 5 years followed by CAMC for 5 years.
- The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.
- Shall meet IEC-60601-1-2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
- Demonstration of equipment is must.
- After sales service should be available locally.
- 

## **6. Central Line Training Manikin**

- The central line training manikin should allow students practicing of intravenous access techniques for both advance cardiac life support and trauma situation.
- It should enable students to experience realistic procedures.
- The puncture areas for IV access should be simulated by soft pads which should be covered by a realistic skin and should simulate the feel of human skin as closely as possible
- Manikins veins inside the pads should provide a natural resistance during puncture and a natural flashback of blood.
- Manikins veins and skin will self-seal so that the site of puncture is not visible to student.
- The Manikins pads must pre-filled with simulated blood
- It should enables the practice of IV access to the:
  - External jugular vein
  - Internal jugular vein via the anterior, central and posterior approach
  - Subclavian vein
  - Femoral vein
- It should have a pulse bulb to enables the trainer to create a palpable pulse in the manikin’s arteries
- It should allow long catheters can be placed into the manikin.
- It should have realistic tissue feel.
- The neck pad and femoral pad should be replaceable without use of any tool
- It should be supplied with 01neck pad, 01 femoral pad, 250 ml bottle of simulated blood, User manual and carrying case.
- The price and list of accessories to be quoted separately .
- Should be European CE approved/ USFDA approved.
- Electrical safety norms: should be compatible with Indian electricity supply.
- Warranty of 5 years followed by CAMC for 5 years.



- The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.
- Shall meet IEC-60601-1-2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
- Demonstration of equipment is must.
- After sales service should be available locally.

## **7. Infant Intraosseous Trainer**

1. Designed for training in infant intraosseous infusion techniques.
  2. Should be mounted on a board
  3. Should allow Intraosseous needle insertion
  4. Should have Simulated tibia and anatomical landmarks at the tibial tuberosity and medial malleolus
  5. Fluid may be infused for realistic flashback
  6. Should be supplied with - with one Leg and five Intraosseous Pads
- The price and list of accessories to be quoted separately .
  - Should be European CE approved/ USFDA approved.
  - Electrical safety norms: should be compatible with Indian electricity supply.
  - Warranty of 5 years followed by CAMC for 5 years.
  - The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.
  - Shall meet IEC-60601-1-2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
  - Demonstration of equipment is must.
  - After sales service should be available locally.

## **8. IV Arm Trainer**

The Male IV Training Arm Kit should include a full-size right arm with replaceable skin and veins designed for peripheral intravenous therapy.

- Anatomically accurate full arm model
- Rotation at deltoid for easier anterior and posterior vein access
- Multiple injection sites for IV insertion
- Dorsal veins of hand (3)
- Median Vein
- Basilic Vein
- Cephalic Vein
- Realism of the human arm in appearance, feel and resistance at puncture sites
- Palpable veins enable site selection and preparation
- Subcutaneous and intramuscular injections may be performed in the deltoid

- Infusible veins allow peripheral therapy with IV bolus or push injection
- Replaceable skin and vein system ensure longevity of model
- Will articulate to other adult manikins

Male Multi-Venous IV Training Arm Kit should include:

Male Multi-Venous IV Arm, 01 Replacement skin and multi-vein system, 01Blood concentrate, 01Blood Bag with Tubing and Connector, 01 Clamp and Hook in the carry case, 5 Syringes, 01Manikin Lubricant, 01Carry Case

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

## **9. Adult quality CPR Manikin**

**The manikin should fulfil following standards Teaching Goals –**

- 1) Should compile with AHA 2015 recommendations.
- 2) The manikin should provide feedback on all 5 key points of CPR that is depth, chest recoil & rate of the compressions; interruption time and ventilation volume.
- 3) The manikin should be able to provide overall CPR performance score and performance de-briefing.
- 4) Should provide visual graphical user-friendly feedback.
- 5) Should allow instructor to monitor multiple students' performance at one time through smartphones.

**Anatomy -**

1. Should be a half body manikin with accurate anatomical landmark resembling an adult.
2. Should have nose, eyes, ear canal, articulating mandible to teach the students C-E technique for mask holding.
3. Should allow nose pinch technique for mouth to mouth resuscitation.
4. Should have naturally obstructed and the airway to be cleared only when head/tilt or jaw thrust is performed.
5. Should have collar bones to identify shoulder allowing to teach tap and shout.
6. Should have nipples, sternal notch, belly button and ribs to teach hand placement for chest compression.

**Hygiene -**

- 1) Should have removable face skin and one additional face skin to be provided.
- 2) Should have one-way non-rebreathing lungs and to be provided with one extra airways

**Technical –**

- 1) Should be portable and light weight
- 2) Should be able to connect to feedback devices wirelesses.

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

## **10. Child Quality CPR**

The manikin should fulfill following standards

### **Teaching Goals –**

- 1) Should compile with AHA 2015 recommendations.
- 2) The manikin should provide feedback on all 5 key points of CPR that is depth, chest recoil & rate of the compressions; interruption time and ventilation volume.
- 3) The manikin should be able to provide overall CPR performance score and performance de-briefing.
- 4) Should provide visual graphical user-friendly feedback.
- 5) Should allow instructor to monitor multiple students' performance at one time through smartphones.

### **Anatomy -**

- 1) Should be a half body manikin with accurate anatomical landmark resembling an Child.
- 2) Should have nose, eyes, ear canal, articulating mandible to teach the students C-E technique for mask holding.
- 3) Should have naturally obstructed and the airway to be cleared only when head/tilt or jaw thrust is performed.
- 4) Should have collar bones to identify shoulder allowing to teach tap and shout.
- 5) Should have nipples, sternal notch, belly button and ribs to teach hand placement for chest compression.

### **Hygiene -**

- 1) Should have removable face skin and one additional face skin to be provided.
- 2) Should have one-way non-rebreathing lungs and to be provided with one extra airways

### **Technical –**

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

## **11. Infant Quality CPR**

The manikin should fulfill following standards

### **Teaching Goals –**

- 1) Should comply with AHA 2015 recommendations.
- 2) The manikin should provide feedback on all 5 key points of CPR that is depth, chest recoil & rate of the compressions; interruption time and ventilation volume.
- 3) The manikin should be able to provide overall CPR performance score and performance de-briefing.
- 4) Should provide visual feedback user-friendly feedback.

### **Anatomy -**

- 5) Should be a full body manikin with accurate anatomical landmark resembling an infant.
- 6) Should have nose, eyes, ear canal, articulating mandible to teach the students C-E technique for mask holding.
- 7) Should have naturally obstructed and the airway to be cleared only when head/tilt or jaw thrust is performed.
- 8) Should have collar bones to identify shoulder allowing to teach tap and shout.
- 9) Should have nipples, sternal notch, belly button and ribs to teach hand placement for chest compression.

### **Hygiene -**

- 1) Should have removable face skin and one additional face skin to be provided.
- 2) Should have one-way non-rebreathing lungs and to be provided with one extra airways

### **Technical –**

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

## **12. AED Trainer**

- It should be able to teach and educate a layperson and healthcare provider in the effective use of an automated external defibrillator
- It should be AHA Guidelines-compliant.
- It should be controlled and operated through optional remote control device.
- It should have flexible configuration and scenario builder program that allows the additional creation of custom training scenarios.

- Should be able to run on C-cell batteries.
- It should have Ten pre-configured sudden cardiac arrest scenarios compatible with training programs developed by internationally recognized responder programs
- Should allow manual scenario selection pause/resume function, volume control, motion artifact, low battery or replace battery, loose electrodes connection, shockable or nonshockable rhythms, and error conditions that simulate the red X in the display window
- It should be able to work with manikin by providing student feedback as to proper pad placement on the manikins
- Should have a Pull-tab status indicator simulates the status window for maintenance training.
- Should be supplied with quality soft pack with protocol card for added training realism and durable storage of the equipment.
- Bidder should demonstrate the product.
- Manufacturer must conform to the International Quality Certification i.e. ISO certificate
- CE must be provided.
- The price and list of accessories to be quoted separately .
- Should be European CE approved/ USFDA approved.
- Electrical safety norms: should be compatible with Indian electricity supply.
- Warranty of 5 years followed by CAMC for 5 years.
- The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.
- Shall meet IEC-60601-1-2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
- Demonstration of equipment is must.
- After sales service should be available locally.

### **13. Trauma and Advance Cardiac Life Support Simulator**

It should be a realistic manikin for training a wide range of advanced cardiac life support skills in prehospital traumatic emergencies with wireless instructor control

#### Head & Airway Features

- Realistic life-size intubation trainer with a flexible tongue, arytenoid cartilage, epiglottis, vallecula, vocal cords, trachea, esophagus, and simulated lungs
- Head has neck opening and replaceable skin for practicing cricothyrotomy techniques
- Should be able to show different clinical conditions of pupils (normal, constricted, blown)
- Head has manually inflatable tongue to simulate an obstructed airway
- Head can be tilted forward, backward or rotated 90 degrees to either side
- The following airway skills can be practiced:
  - Sellick maneuver
  - Endotracheal intubation
  - Nasotracheal intubation
  - Digital intubation
  - Oral and nasal fiberoptic intubation
  - Oropharyngeal airway insertion
  - Nasopharyngeal airway insertion
  - Bag Valve Mask Ventilation
  - Right mainstem intubation
  - Retrograde intubation
  - Lightwand intubation

- Laryngeal Mask Airway insertion
- Combitube insertion
- Trans-Tracheal Jet Ventilation
- Surgical cricothyrotomy
- Needle cricothyrotomy
- Suctioning techniques
- Stomach auscultation to verify proper airway positioning

#### Circulatory Skills and IV Drug Administration

- Articulating IV Arm with replaceable skin and infusible vein system allows peripheral intravenous therapy and site care
  - Venipuncture possible in the antecubital fossa and dorsum of the hand
  - Accessible veins include median, basilic and cephalic
  - Bilateral deltoid, bilateral thigh, ventrogluteal and gluteal subcutaneous and intramuscular injection sites

#### Tension Pneumothorax Decompression and Chest Tube Insertion

- Bilateral mid-clavicular sites for needle decompression
- Right side mid-axillary site for needle decompression
- Chest tube insertion left mid-axillary

#### - Cardiac Related Skills

- 1100+ Cardiac rhythm variations
- Manual chest compressions
- Programmable waiting rhythms
- Programmable scenario base algorithms for instructor control
- 3- or 4- lead ECG using standard clinical monitor/ defibrillator.
- Pacing with programmable capture
- Defibrillation (25 – 360j)

#### - Sounds

- Heart sounds synchronized with programmable ECG
- Auscultated lung sounds synchronized with breathing rate, 0 - 60 BPM
- Individual lung or bilateral sound selection
- Normal or abnormal bowel sounds
- Vocal sounds – computer-generated sounds, mixed with voice input via microphone

#### - Heart Sounds

- Synchronized with programmable ECG
- Aortic Stenosis
- Friction Rub
- Austin Flint Murmur
- Diastolic Murmur Mi Stenosis
- Systolic Murmur
- Mitral Valve Prolapse
- Normal Heart Sounds – Apex
- Opening Snap Msec
- Ventricular Septal Defect
- Atrial Septal Defect
- Pulmonary Stenosis
- Stills Murmur
- Normal Heart Sounds

#### - Lung Sounds

- Synchronized with breathing rate, 0 – 60 bpm
  - Individual lung or bilateral sound selection
  - Coarse Crackles
  - Fine Crackles
  - Normal Breath Sounds
  - Pneumonia
  - Stridor
  - Wheeze
  - Pleural Rub
  - Rhonchi
- Bowel Sounds
    - Normal and abnormal bowel sounds
    - Borborygmus
    - Fetal Tones
    - Hyperactive Bowel
    - Hypoactive Bowel
    - Normal Bowel
- Vocal Sounds
    - Computer-generated sounds
      - Cough
      - Vomit
      - Moan
      - Scream
      - SOB Breathing
      - Yes/No
      - Live voice feed via microphone,
- Blood Pressure / Pulses
    - Articulating blood pressure arm can be auscultated or palpated for measurement of non-invasive blood pressure
    - Korotkoff sounds synchronized with ECG
    - Korotkoff sounds volume control in 10 steps, 0-9
    - Systolic and diastolic pressure may be set individually in steps of 2mmHG
    - Systolic 0-200mmHG, Diastolic 0-200 mmHG
    - Auscultative Gap, with on/off feature
    - Bilateral carotid pulses, brachial and radial pulse on BP arm.
    - Pulses synchronized with programmable ECG
    - Pulse strengths dependent on Blood Pressure
- Logging / Scenario Function
    - Standard and Customizable Events
    - PC scenario editor can be used to create or modify user defined and pre-programmed scenarios.
    - Control unit can be connected to PC using USB cable for:
      - Uploading and running of scenarios
      - Downloading of student logs for “after action” review/debriefing
- Patient Monitor
    - Should provide concise clinical feedback and simulates physiological parameters including HR, ECG, SpO2, BP, RR, Temperature, etCO2.
- The price and list of accessories to be quoted separately .
  - Should be European CE approved/ USFDA approved.
  - Electrical safety norms: should be compatible with Indian electricity supply.
  - Warranty of 5 years followed by CAMC for 5 years.
  - The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90%.

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

#### **14. High end ICU Ventilator**

- 1) Advanced technology ventilator for use in ICU, suitable for ventilating all categories of patients from pediatric to adults.
- 2) Microprocessor controlled system with individual selection of various ventilation parameters and PEEP.
- 3) System should have the facility for both Pressure triggering & Flow triggering.
- 4) It should have following modes of ventilation:
  - a) Volume control
  - b) Pressure control
  - c) Pressure regulated volume control with on demand flow (PRVC).
  - d) Pressure support with back up ventilation.
  - e) CPAP.
  - f) SIMV (Volume Control) + Pressure support.
  - g) SIMV (Pressure control) + Pressure support.
  - h) Should have facility for BiPAP with non-invasive ventilation with same breathing circuit.
  - i) Should be upgradable to NAVA( Neurally Adjusted Ventilatory Assist)
- 5) The system should have the following parameters:
 

a) Tidal volume	20 ml to 2000 ml.
b) CMV frequency	5 to 100 breaths per minute.
c) SIMV frequency	1 to 40 breaths per minute.
d) Inspiratory time	10% to 80% of breath cycle time.
e) Pause time	5 to 30% of breath cycle time.
f) Pressure level	0-100 cm H <sub>2</sub> O.
g) PEEP	0-40 cm H <sub>2</sub> O.
h) Trigger	Flow trigger.
i) Inspiratory rise time	0-20% of breath cycle
j) I:E ratio	1:10-4:1
- 6) Should have the following audio-visual alarms:
  - a) Airway pressure
  - b) High continuous pressure
  - c) FiO<sub>2</sub>
  - d) Expired minute volume
  - e) Apnea
  - f) End expiratory pressure
  - g) Respiratory rate
  - h) Gas Failure
  - i) Battery
- 7) It should have separate user interface & ventilation unit for flexible positioning around the patient.
- 8) It should have External Compressor (US-FDA) from same manufacturer.
- 9) It should have in built battery backup for Aprox 60 min or more.
- 10) Unit should be supplied with suitable heated humidifier (F &P) & two ultrasonic nebulizer (less than 3 microns particles) for effective uninterrupted nebulization during mechanical ventilation.



- 11) Oxygen sensor should be covered during warranty period as well as during CMC period within the same quoted amount .
- 12) 10 inches or more of colour touch screen TFT user interface screen.
  - a) It should be possible to display at least 3 types of loops for each breath:
    - Volume- pressure
    - Flow- volume.
    - Flow- Pressure.
  - b) Screen should display following waveforms:
    - Flow time.
    - Pressure time.
    - Volume time.
  - c) Access through touch screen & main rotary dial.
  - d) Direct access to vital settings: PEEP, O2 concentration, respiratory rate & volume (or Pressure).
  - e) Can be rotated and tilted for maximum flexibility.
  - f) 24 hour trend display for up to 24 parameters.
  - g) Scroll/ Zoom functions
- 13) It should have the gas flow from 0 to 3 liters per second.
- 14) It should have 2 autoclavable interchangeable expiratory cassettes or valve for complete disinfection capability.
- 15) It should have facility for ventilation data transfer and network connection.
- 16) It should be user friendly and have study design.
- 17) It should be supplied with trolley made of non corrosive material and with air and O2 hose.
- 18) System should be US-FDA and CE (Conformité European) certified
- 19) System Configuration Accessories, spares and consumables
  - a) ventilator - 01
  - b) Adult and Pediatric autoclavable silicone breathing circuits – 02 each
  - c) Reusable Masks (Small, Medium, Large) with each machine. - 02 sets each
  - d) All Accessories for non invasive ventilation – 2 sets.
  - e) Disposable circuit – 10 Nos.
  - f) Medical Air Compressor. - 01
  - g) Oxygen sensor - 01
  - h) Humidifier -Servo controlled with digital monitoring of inspired gas temperature complete with heating wire – 02
  - i) Suitable online UPS with Aprox 30 minutes backup.
  - j) If any quote Separately
- 20) **Warranty / after sale service: -**
  1. 3 years comprehensive onsite warranty of entire system (Spares and labour) including all accessories and consumables. This will be followed by 7 years CMC.
  2. During warranty period as well as during Comprehensive Annual Maintenance Contract Period, firm will maintain the system with all spares, accessories and consumables. During warranty period, no additional amount is to be paid towards supply of any accessories. During Comprehensive Annual Maintenance Contract Period, it will be maintained within the quoted CAMC rate. No additional cost is applicable.
  3. Physical damages will not cover under warranty period as well as during CAMC period. To procure the accessories, in case of physical damages, bidders are required to quote unit price of

each accessories. List of consumable with price should be quoted separately, applicable for physical damages.

## 15. High End Multi Para-Monitor

### MULTI-PARAMETER PATIENT MONITOR FEATURES

- minimum 15- 19 inch high resolution colour TFT screen / Touch Screen
- Standard configuration of ECG, RESP SpO2, NiBP, etco2 monitoring & Temperature monitoring
- Selectable multiple user interfaces
- Minimum 9 waveforms simultaneously display
- Max 720 hours trend review, 2880 sets NIBP data storage
- Multi-level visual and audible alarm indicator
- Arrhythmia ST & OXY-CRG analysis: monitoring and diagnostic & OT modes of monitoring.
- Nurse call function & pulse pitch modulation
- Built-in rechargeable Li-ion battery with back up time of 120 minute
- Networking Capability
- Optional parameters- Dual TEMP, ETCO2, Single/Dual IBP, AGM, Nellcor / Masimo SpO2

### Specifications NIBP

- Method : Oscillometry
- Modes: Manual/Auto/Continuous
- Auto measure time: Adjustable
- Measurement rang : 10-270mmHg
- measurement & display of systolic as well as diastolic blood pressure of adult/ infant/ neonates
- Suitable range of measurements for adult/ infant/ neonates

### ECG

- Lead mode : 5-lead
- Lead selection : I;II;III;avR;avL;avF;V
- Heart rate range : Adult:15-300bpm; Pediatric/Neonatal:15-300bpm
- ECG waveform: 2 channels
- Accuracy :  $\pm 1$  bpm or  $\pm 1\%$
- ST segment detection Measurement rang : -0.2mv~2.0mv
- ST Segment analysis 12 lead
- Alarm: Yes, audible and visual alarm, alarm events review
- High resolution : minimum 15" color TFT display
- Lightweight, compact and portable
- ECG, sPO2, NIBP, RESP, 2-TEMP, PR
- Optional : 2-IBP, ETCO2,
- Built-in rechargeable lithium battery
- ECG waveforms of minimum 7-leads display on the same screen
- 72-hours graphic and tabular trends of all parameters
- 72 alarm events of all parameters recall
- 32 seconds full-disclosure waveform review
- 500 NIBP measurement date can be storage and recall
- Date and waveforms color be adjustable
- Arrhythmia analysis and ST segment analysis
- Suitable for adult, pediatric and neonatal patient

### SPO2

- Measurement range : 0-100%**
- Accuracy : 70-100%,  $\pm 2\%$  0-69%, unspecified**
- display of plethysmography , pulse strength , spo2 values, perfusion index

### Pulse rate

- Range : 20-254bpm**
- Accuracy :  $\pm 3$ bpm**

### Respiration

- Method : RA-LL impedance**
- Range : Adult:0-120rpm; pediatric/neonatal:0-150rpm**

- Apnea alarm**
- sourced through either ecg cable or co2

**Temperature**

- Range : 0-50**
- Apnca : 0.1**
- Channel: Dual : Channel**

**Others:**

- Defibrillator and Cautery protection should be available
- should have facility of usb connectivity

**Accessories**

- ECG leads with clips– **2 Sets**
- Nibp cuffs (separate for adult/infant/ neonates **2 Each**)
- EtcO2 module with all accessories
- skin/ esophageal / rectal temperature probe
- reusable Spo<sub>2</sub> probes adult / Pediatric / neonatal **2 each**

**Optional**

**Etco2/Gas analyser**

- should be main stream/ side stream/ micro stream capnography with display of digital values
- Flow rates– minimum 50 ml/min
  - Should analyse inhalational agent with their MAC values
  - The monitor should be upgradeable to a) Multi Gas measurements including CO<sub>2</sub>, N<sub>2</sub>O, O<sub>2</sub>, and Anesthetic Agents including inspiratory & expiratory values, b) BIS, c) NMT, d) PICCO, e) ICP, f) 4 channel EEG etc. (price to be quoted as optional).

**System should be US-FDA and CE (Conformité European) certified**

**Warranty / after sale service: -**

1. 3 year comprehensive onsite warranty of entire system (Spares and labour) including all accessories and consumables. This will be followed by 7 years CMC.
2. During warranty period as well as during Comprehensive Annual Maintenance Contract Period, firm will maintain the system with all spares, accessories and consumables. During warranty period, no additional amount is to be paid towards supply of any accessories. During Comprehensive Annual Maintenance Contract Period, it will be maintained within the quoted CAMC rate. No additional cost is applicable.
3. Physical damages will not cover under warranty period as well as during CAMC period. To procure the accessories, in case of physical damages, bidders are required to quote unit price of each accessories. List of consumable with price should be quoted separately, applicable for physical damages.

**16. ANESTHESIA WORKSTATION**

- 1 The complete unit should monitor the vital signs and ventilates the patient from neonatal to adult.
- 2 Anesthesia Workstation should be complete with Anesthesia gas delivery system, Circle absorber system, Precision vaporizer for Isoflurane, Desflurane and Sevoflurane, Anesthesia ventilator and Monitoring system to monitor Anesthetic gases, ECG, EtCO<sub>2</sub>, Pulse Oximeter and airway pressure, NIBP, dual IBP, dual temperature.
- 3 Anaesthesia machine and all the attached devices must be of same manufacturer.

**4** Anaesthesia Workstation must have in built battery backup.

**5 Flow management:**

- a) Should be Compact, ergonomic & easy to use.
- b) Multi-color display of at least 10" size, with cascaded flow meters for O<sub>2</sub>, N<sub>2</sub>O & Air.
- c) Should have back-up O<sub>2</sub> control, which provides an independent fresh gas source, and flow meter control in case of electronic failure.
- d) Gas regulators shall be of modular design/ graphic display.
- e) One no. yoke each for Oxygen & Nitrous Oxide. Separate Pipeline inlet for Oxygen, Nitrous -Oxide and Air.
- f) Hypoxic Guard to ensure minimum 25% O<sub>2</sub> across all O<sub>2</sub>-N<sub>2</sub>O mixtures and Oxygen Failure warning.
- g) Fresh gas flow range should be from 0- 10 L/min each for air, N<sub>2</sub>O & O<sub>2</sub> (minimal flow capable).
- h) In the event of complete power loss and battery failure it shall be possible to manually ventilate at 100% O<sub>2</sub> and deliver anaesthetic agents.
- i) In case of O<sub>2</sub>, failure machine should automatically switch over to ambient air.
- j) Should have Desflurane compensation.

**6 Breathing system**

- a) Latex free fully autoclavable does not require tool to dismantle the breathing system.
- b) Sensor connections shall be internal to help prevent disconnect.
- c) Sensor should not require daily maintenance.
- d) Bag to vent switch shall be bi-stable and begins mechanicalventilation in the ventilator position.
- e) Adjustable pressure limiting valve.
- f) Compact breathing system should be supplied with CO<sub>2</sub> absorbent canister of capacity more than 800 Gms and should be reusable and autoclavable.
- g) Fresh gas decoupled/ compensated breathing heating system should be available.
- h) Should have facility for automatic moisture removal.
- i) Optional CO<sub>2</sub> bypass facility should be available.

**7. Vaporizers**

- a) New generation Vaporizer must be isolated from the gas flow in the off position and prevent the simultaneous activation of more than one vaporizer.
- b) Vaporizer should mount to a Selectatec/ Quick mount manifold of 2 vaporizers, which allows easy exchangebetween agents. Temperature, pressure and flow compensated vaporizers and Maintenance free forIsoflurane,Desflurane and Sevoflurane with proper calibration certificate.
- c) The vaporizer should be maintenance free and should not require any calibration.

**8. Ventilation**

- a) The workstation should have integrated Anesthesia Ventilator system.

- b) Ventilator should have Volume Control and Pressure Controlled and SIMV with PS & Pressure Control, Pressure support with Apnea Back up ventilation modes.
- c) Ventilator should have a tidal volume compensation capability to adjust for losses due to compression, compliance and leaks; and compensation for fresh gas flow.
- d) The workstation should be capable of delivery of low/ minimal flow anesthesia.
- e) Ventilator should be capable of up to 75 L/min peak flow to facilitate rapid movement through physiologic —dead space in the Pressure Control mode.
- f) Tidal volume: 20 ml-1400ml.
- g) Monitoring of Volume, Pressure & Oxygen.
- h) Should monitor patient compliance.
- i) Trending for alarms and measured values with graphic trend display.
- j) Ventilator should have direct setting of Tip, Ti in order to achieve desired plateau.
- k) It should be electronically driven and electronically controlled to save a lot on driving gas cost and also making it minimal flow capable.

#### **9. Anesthesia Monitoring Specifications:**

- a) Advanced high end patient monitor having integrated non-invasive, invasive measurements & features suitable for neonate, pediatrics & adult patients.
- b) Monitor must have bright, highly visible minimum 19" or more Color TFT display (Medical Grade—must attach proof/ evidence for the same).
- c) The control should be from rotary knob & touch screen.
- d) It should have the capability to display minimum 15 real time waveforms along with related numerical parameters on a single screen.
- e) Monitors must be able to monitor ECG (5/12 lead display with reduced lead sets), SpO<sub>2</sub>, NIBP, Respiration, dual temp, dual IBP, ETCO<sub>2</sub> and Continuous Cardiac Output.
- f) The monitor should be upgradeable to a) Multi Gas measurements including CO<sub>2</sub>, N<sub>2</sub>O, O<sub>2</sub>, and Anesthetic Agents including inspiratory & expiratory values, b) BIS, c) NMT, d) PICCO, e) ICP, f) 4 channel EEG etc. (price to be quoted as optional).
- g) Monitor must have advanced arrhythmia detection including life threatening arrhythmias as standard feature. Also must have inbuilt and automatic facility to eliminate false arrhythmia alarms & must have ST segment analysis with ST trend.
- h) The SpO<sub>2</sub> probes must be of Massimo / Nellcor or equivalent for signal extraction technology to monitor SpO<sub>2</sub> during poor perfusion (must attach proof/ evidence for the same).
- i) Must have minimum 72 hours review data including graphical and tabular trends, arrhythmia event recalls, alarms etc.
- j) Must have mainstream EtCO<sub>2</sub> sensor can be used on both intubated and non-intubated patients.
- k) Should have inbuilt rechargeable battery for uninterrupted operation at least 120 minutes.
- l) Should have minimum up to 100 events, graphical and tabular trends, alarm log, drug dose calculations, Oxy CRG, Oxygen/ Ventilation and hemodynamic calculations as standard features.

- m) All Monitors should be able to communicate with each other and can display other patient monitor data without the need of central monitor.
- n) Monitor must be US FDA approved for all parameters.
- o) Monitor should provide easy to use spirometric monitoring for continuous analysis of respiratory flow, pressure & volume parameters during anaesthesia & intensive care of ventilated patients.
- p) Monitor must be ready for web browsing and all necessary documents must be provided (Integratable with HL7 compliant HIS system).
- q) Monitor to monitor overview must be there.
- r) Monitor should be upgradable to import Lab data.
- s) Bidder should have a digital charting solution of same make in case if ask in future.
- t) Each monitor to be supplied with following essential accessories:
  - i. 5/6 Lead ECG electrode cable 02 No each.
  - ii. Adult/ Paediatric/ Neonatal Spo2 probe - 02 No.
  - iii. NIBP cuffs for Adult& Pediatrics/ Pediatrics& Neonates - 2 No each
  - iv. (Of different sizes).
  - v. Temp Probe - 02 Nos. (Skin & esophageal/ rectal one each).
  - vi. IBP connection cable – 02 Nos.
  - vii. IBP Disposable Pressure Transducers – 10 Nos.
  - viii. Mainstream ETCO2 set –with accessories- 01.
  - ix. Continuous Cardiac Output (thermo dilution method) cable (01) and transducer (05).
- u) The price of central nursing station (12 bedded & 16 bedded) with complete networking, 23-inch display and laser printer to be quoted separately.
- v) Manufacturer should quote to ensure proper after sale services & company should provide the service directly not by channel partner to ensure maximum uptime of the equipment by local service center.
- w) Bidder should quote e charting of the same make as an option for future upgradation.

**Essential Criteria:**

1. In case of technical snag/ failure/ breakdown, the response time for Inspection should be within 24 Hour and repair within 5 days, otherwise provide a service machine until the period of recovery of breakdown of the unit. Failing which will attract penal action as per the decision of the University (Uptime guarantee of 95%).

**Warranty / after sale service: -**

1. 3 year comprehensive onsite warranty of entire system (Spares and labour) including all accessories and consumables. This will be followed by 7 years CMC.
2. During warranty period as well as during Comprehensive Annual Maintenance Contract Period, firm will maintain the system with all spares, accessories and consumables. During warranty period, no additional amount is to be paid towards supply of any accessories. During Comprehensive Annual Maintenance Contract Period, it will be maintained within the quoted CAMC rate. No additional cost is applicable.

- Physical damages will not cover under warranty period as well as during CAMC period. To procure the accessories, in case of physical damages, bidders are required to quote unit price of each accessories. List of consumable with price should be quoted separately, applicable for physical damages.

### **17. Blood Gas analyzer Machine**

- Fully automatic, upgradeable, fast electrolyte combi analyzer.  
**( Fully automatic upgradable , fast electrolyte combi analyser)**
- Essential Measured parameters; pH, pCO<sub>2</sub>, pO<sub>2</sub>, SaO<sub>2</sub>, tHb, Barometric Pressure, Na<sup>+</sup>, K<sup>+</sup>, Ca<sup>++</sup>, Cl<sup>-</sup>, Bl urea & Blood sugar. All these parameters should be measured simultaneously  
**( measured parameters, pH,pco2,pO2,SaO2,tHB,Barometric pressure, Na+ K+ Ca++,Cl-BI urea & Blood sugar .All these parameter s should be measured simultaneously )**
- Calculated parameters should include BE, BE ecf, HCO<sub>3</sub>, Lactate, Anion Gap etc  
**.( calculated parameters include Be,BE,ecf,HCO3,Lactate,Anion Gap etc.**
- Sample volume-less than 100ul  
.( 120ul)
- Fast analysis time – less than 60 sec.**( Depending on parameters selected results are available in 60 sec.)**
- Maintenance free electrodes with individual electrodes ON/OFF facility.
- Fully automatic liquid calibration of all parameters at user-defined intervals without the use of Gas calibrated reagents, external gases, tanks or regulators.**( Fully automatic liquid calibration of all parameters every 2 hours without the use of Gas calibrated, reagents,external gases, tanks or regulator.)**
- Continuous reagent level monitoring with graphic display.
- Data display on well-illuminated, adequate size LCD colour touch screen display.
- Data print out on built in graphic printer.
- Built in auto Quality control facility.
- Suitable UPS with 30 min backup.
- Reagents for one year@ 20 samples/day will be provided along with the machine.
- Cost of reagents to be quoted for comparative evaluation.
- Stand by blood gas cum electrolyte analyzer in case of breakdown.
- Should have local service facility ( Have local service facility)
- Back to back warranty to be taken by the supplier from the principal, to supply spares for minimum 5 years. ( Back to Back warrantee given from the principal, to supply spares for minimum 5 years
- Must submit user list and performance report within last 3 years from major hospitals( user list and performance report within last 3 year from major hospital)
- Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/Para number of original catalogue/data sheet
- Demonstration is required.
- European CE and USFDA approved.

#### **Warranty / after sale service: -**

- 3 year comprehensive onsite warranty of entire system (Spares and labour) including all accessories and consumables. This will be followed by 7 years CMC.

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