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

(A Super specialty Autonomous Institute of Govt. of Bihar)

Tel.: 0612 – 2297631, 2297099, Fax: 0612 – 2297225, Website:

www.igims.org

Notice Inviting Tender

***E-tendering mode only on website-* www.eproc.bihar.gov.in)**

NIT No 03 /2015-2016/Bio Medical Equipt /IGIMS/Store

01	Name & address of advertiser:	:	Director, IGIMS, Sheikhpura, Patna -14 P.O.-B.V. College, Patna 800014
0.2	Date of issue of e- tender notice.	:	28/05/2015
0.3	Period for download of tender document	:	From . 30 /05/2015 to 08 /07//2015 up to 12.00 hours through above website
0.4	Date, Time & Place of pre bid meeting:	:	08/06/2015 at 12.00 Noon at IGIMS Conference hall, Patna.For group-A,B,C &D 15/6/2015 at 12.00 Noon at IGIMS Conference hall, Patna. For group-E,F,G&H I
0.5	Last date & Time for uploading tender:	:	0 8 / 07 /2015 upto 17.00 Hours
0.6	Last date, time and place for submission of Technical bid by Speed/Registered post/ Courier only	:	10/07//2015 upto 11.00 Hours, at Director IGIMS,- Patna-800014. P/O-. B. V. College Patna
0.7	Date, Time and Place of opening of Techno Commercial bid	:	10/07/2015 at 15.00 hours on **www.eproc.bihar.gov.in**
0.8	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**

Sl. No	*Group*	*Name of Equipment*	.	*Cost of tender document*	*Earnest money to be Rs) deposited 2% of Bid value*	*Bid processing fees to be paid on – line (non-refundable in Rs.)*	*Completion period*
1	A **An aesthesia**	a:An aesthesia Work Station with Monitor- 2 No.		Rs.2000	2% of quoted bid value	1124	8-12 week
		b: O T Light with LED-3no					
		c: Ventilator-6 no					
		d: Multipara Monitor-18no					

		e: O T Table -3 no					
2	**B GS/RB/GIS/ Obs& Gyne.**	Laparoscopy Surgery Set with all Std. Accessories-04 no		RS.2000	Do	1124	8-12 week
3	C Trauma Centre ,Emergency & Orthopedics	a:- C-Arm with Image Intensifier -03 b Power Drill (Battery- operated) -03no c:-:- Electro surgical unit-03 d; LED OT ceiling Light -03 e; O T Table -03 (General and ortho attachment)		Rs.2000	Do	1124	8-12 week
4	D T B & Chest	Adult Video Bronchoscope set with std. accessories.-01		Rs.2000	Do	1124	8-12 week
5	**E Radiology**	OPG Dental machine-01		Rs.2000	Do	1124	8-12 week
6	**F ENT**	a:Operating Microscope -01 b: c: ENT work station-01 c; Endoscopic Image Processor-01 d:- Endoscopic Sinus Micro Debrider & high speed drill system-01		Rs.2000	Do	1124	8-12 week
7	G Cardiology (Cardiac Cath Lab.)	a:Cath Lab.(Mechanised Single Plane System)-01 b:-High End ECHO Machine -1no c:- TMT Machine .-01 d: 2-D Color Doppler Echo machine-03 e. IABP(Intra Aortic Ball one Pump)-01		Rs.2000	Do	1124	8-12 week
8	H RIO	Vitrectomy Machine with LIO		Rs.2000	Do	1124	8-12 week
9	I Neuro Surgery	Drill System,Neuro Endoscope System-01		Rs.2000	Do	1124	8-12 week

10.0 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 so that the user ID, Password and Digital signatures are issued to them**.**

11.0 Detailed NIT can be seen on website **www.eproc.bihar.gov.in** and on www.igims.org.

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

Pro.(Dr.) N R Biswas
Director, IGIMS, Patna

BIDDING DOCUMENT

TENDER NOTICE No.: 03 / 2015 - 2016 / Biomedical Equipt./ IGIMS / Store

Supply, Installation & Commissioning of Bio-Medical Equipments / Instruments

TENDER NOTICE No 03 /2015 – 2016/ Biomedical Equ / IGIMS / Store IGIMS / Store

Issued to:

Cost of Document: Rs.

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

Last date for Purchase of Bidding Document	Can be downloaded from Institute website
Last date for submission of Technical bid.(Hard copy)	10 /7/2015 up to 11.00 A.M. by registered/speed post/ Courier only
Date of opening of technical bid	10/7/2015 at 3:00 P.M. in conference hall IGIMS, Patna.
Date of demonstration of equipment	To be informed to the qualified bidders qualifying after opening of technical bids.

INDIRA GANDHI INSTITUTE OF MEDICAL SCIENCES,

SHEIKHPURA, PATNA -800014 (Bihar, India)

Sl. No. OF TENDER: _____

FILE NO. : Tender No.: _____

Tender form issued in favour of:

_____

_____

Dear Sir,

1. I/We hereby submit our tender for the
   _____
   _____

2. I/WE are enclosing herewith the Demand Draft No…… dated……. for **Rs. /-** drawn in favour of **Director I.G.I.M.S. - Patna (payable at Patna)** towards **EMD / Bid Security.**

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

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

Yours faithfully,

(Signature of Bidder with full name and address)

CHECK LIST FOR TERMS AND CONDITIONS

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

Sl. No.	Terms & Conditions as per Bidding Document	Page No.	Remarks
1.	**Status of Bidder:** • Manufacturer or Authorized Agent of the Manufacturer • Whether Public Undertaking, Public Ltd., Private Ltd. Company or Proprietary Firm/partnership firm • (Please attach Notary certified **MANUFACTURER'S AUTHORISATION FORM as per FORMAT placed at Annexure – III)**		
2.	**Power of Attorney as per Annexure - V** in favour of person to sign, submit and negotiate the bid.		
3.	Certificate towards market standing of minimum 05 years in the area of supply and or maintenance of bio-medical equipments.		
4.	Certificate for sole ownership / partnership		
5.	Statement of financial standing from bankers		
6.	Statements of turnover per year for last three successive years duly certified by the Chartered Accountants.		
7.	**Notary certified User List** (List of Govt. /Semi Govt., Reputed Pvt. Hospital) where quoted model of the items has been supplied and installed.		
8.	**Notary certified Supply** order copy (Minimum 3nos. or more) issued by Govt./Semi Govt.//Reputed Pvt. Institutions/organization for the quoted items. (same model)		
9.	**Notary certified Performance certificate** of the same supplied machine (of quoted make and Model) issued by **Head of the deptt. or Institution** after a minimum period of six months of installation		
10.	Prerequisite (if any) for installation of the Machine, if any, to be provided by the Institute.		
11.	Whether rates quoted are inclusive of all taxes or not.		
12.	Whether rates are quoted as per format mentioned in the Bidding Document or not.		
13.	Affidavit to the effect that the bidder is not blacklisted by any Govt. agency or have no		

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

24.	Duly attested copy of sales tax/Vat registration certificate.		

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

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

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

(Name of the Bidder with signature & seal)

ELIGIBILITY CRITERIA

01	Manufacturers or their authorized dealers/Indian subsidiaries/direct importers having a place of business in any of the States of India are eligible to participate in this tender.	Mentioned Page no.
02	The bidder and manufacturer of the equipment offered should be in the business of the supply and installation of same / similar equipment for the last five calendar years.	
03	(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.	
04	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.	
05	The Bidder (manufacturer or their authorized agent) should have had average annual financial turnover of Rs. 50 Lakh during the last three years ending s 31st March 2015.	
06	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.)	
07	Bidders are not offering the equipment of a firm /company that has been blacklisted by Indira Gandhi Institute of Medical Sciences – Patna or blacklisted/debarred by any other State / Central Government's organization.	

Note:

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

INSTRUCTION TO BIDDER

GENERAL INSTRUCTIONS T0 BIDDERS

1. **Tendering System**

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

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

PART - II titled as PRICE BID shall be submitted in the E- tender mode only

2. The tender offers, duly filled, shall be submitted in sealed covers for **technical**. Such covers shall be super scribed as **"Tender No……. (here mention the tender no as specified) TECHNICAL BID for supply of ……..... (here mention the name of the equipment**

3. Quantity of items may increase or decrease. Director, I.G.I.M.S. - Patna reserves the rights to purchase different sub items/ components of items from different bidders.

This rate Contract will be valid for one FY and repeat Supply Order will be placed as per requirement of the deptt. of all the quoted and approved items.

4. The "Bidding Document" along with terms and conditions, technical specification can be obtained from the office of the Store Officer, IGIMS, Patna on payment of Rs. 2000/-(Rs. Two thousand only) Non –refundable for each Group either by cash or demand draft favouring Director , IGIMS, Patna payable at Patna.

5. The " Bidding Document" can also be downloaded from institute website www.igims. Org.. In case, downloaded bidding document is used ,Bidder(s) have to submit the cost of the Tender Document alongwith 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 seprate D D for the same in a seprate 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 purchase of bidding document is ……..

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

Earnest Money2% 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 favoring Director, I.G.I.M.S. – Patna (payable at Patna). No interest is payable on EMD/ Bid security.

b. Bidder may quote more than one/several models. In such a situation EMD will be payable on the basis of highest priced model.

c. EMD of the unsuccessful bidders will be returned to them at the earliest after expiry of final bid validity and latest on or before the 30th day after the award of the contract without any interest.

d. 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.

e. 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**.**

f. Cheque, Cash payment, Money Order, Fixed deposit etc will not be accepted as EMD.

g. 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.

h. 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 locted in India, in the form prisecrived in the tender document as Annexure- IV (valid up to one year from the date of technical bids opening) Bank Guarantee in any other format will not be acceptable and render the bid non-responsive.

iii. The successful Bidder's EMD will be discharged upon the Bidders signing the contract and furnishing the performance security. The EMD deposited in the form of DD of the successful Bidder can be adjusted towards the security deposit payable.

9. Bidder(s) should mention the DGS & D registration, if registered, and attach photocopy of DGS &D registration certificate Photocopy of Income tax & sales tax clearance certificate should be enclosed.

10. For Imported Goods, Indian Agency Commission must be declared in financial bid.

11. The Bidder's shall have to submit the following documents (Certified by Notary) in technical bid: -

a. User List (List of Govt. / Semi Govt., Reputed Pvt. Hospital) where quoted model of the items has been supplied and installed.

b. 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.

c. Prerequisite (if any) for installation of the Machine if any to be provided by the Institute.

d. 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.

e. Bidder must submit a compliance checklist along with the technical bid itself.

f. (Any tender offer without submission of above mentioned document (i.e. a to e) shall be rejected during technical scrutiny**.)**

g. 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.

12. <u>Installation & site plan</u>:-

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?

13. <u>After Sales Service Conditions</u>:

a. The Institute is in the pursuit of ensuring excellent after sales service for every user in respect of the equipments 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 endeavor to provide trouble free operation/performance of the equipments 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 equipments 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

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 equipments or to provide stand by equipment if the fault/down time exceeds the stipulated period or to ensure the stipulated up-time in an year shall lead to forfeiture of the performance security and/or may lead to blacklisting/debarring of the defaulting Bidder.

xi. The equipment which requires quality assurance test shall be done at free of cost immediately after installation, during the comprehensive warranty period, during the CMC/AMC period, by the demand of User and also when major spares are replaced.

xii. Any mandatory approval required for installation shall be obtained by the successful Bidder in liaison with the respective authorities.

xiii. The Bidder shall submit the parameters which require calibration and the frequency of calibration required.

xiv. The Bidder shall undertake on-site calibration of the equipment every year as part of the after sales service during the period of comprehensive warranty, CMC/AMC or on demand from the user.

xv. The Bidders shall also have to submit whether periodic replacements of consumable items are required for proper functioning of their quoted machine/Equipment? If yes they should submit the list of such consumables along with price list and frequency of replacement per year, if the same is not replaced free of cost during warranty / guarantee period.

xvi. An undertaking of the principal regarding continuity of after sales and services (CAMC) @ the agreement rate even in case of changes of Indian agent during the life span of the equipment, must be enclosed in the technical bid. Further, it will be the responsibility of the manufacturer Indian agent to get counter signature on the agreement to be executed with them by the principal.

Xvii;- The offered warranty includes:

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

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

- The decision to enter into CMC or AMC will be determined on the basis of cost and complexity of the equipment by the Tender Inviting Authority, at its discretion, prior to the expiration of warranty period.

- The Comprehensive Maintenance Contract (CMC) is otherwise an extended warranty. All the terms and conditions agreed by the successful Bidder for executing the comprehensive warranty of the equipment shall be extended during the period of CMC, only difference being the payment of CMC charges is absent during the period of comprehensive warranty.

- The cost of CMC, accessories and spares, reagents 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 equipments 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.

14. Time Limits prescribed

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

15. 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.

16. While calculating the total unit price of the item / system to be procured, expenditure to be incurred in maintenance of the quoted item / system including all spare parts for a total period of seven years after expiry of the warranty period of three years shall also be taken into consideration. Accordingly, it is mandatory for the bidders to submit the rate for Comprehensive Annual Maintenance Contract (with spares) for a minimum period of seven years after the expiry of warranty period of three years.

17. Supplier will submit undertaking for ensuring uninterrupted supply of spares during the total life span of the equipments.

18. Indian agency commission and Installation charge if any will be paid in Indian rupees after successful installation and demonstration of the equipments.

19. Principal's Invoice of the quoted items must be submitted with the quotations.

20. Proof of the official Indian agent certificate of the firm must be attached. (Notary Certified Photocopy)

21. 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).

22. Bidder(s) have to submit an affidavit to the effect that they have not supplied the offered item(s) to any Govt., semi Govt. / Pvt. Organization, Institution, Nursing Home etc. at the price lower than the price offered to I.G.I.M.S. – Patna.

23. 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.

24. Bidder might be required to demonstrate the system at the discretion of the institute.

25. Notification of Award/Letter of Intent (LOI)

a. Before expiry of the tender validity period, the Institute will notify the successful Bidder(s) in writing, by registered / speed post or by fax or by email (to be confirmed by registered / speed post immediately afterwards) that its tender for equipment(s), which have been selected by the Institute, has been accepted, also briefly indicating there in the essential details like description, specification and quantity of the goods & services and corresponding prices accepted. This notification is undertaken by issuing a Letter of Intent (LOI) by the Institute.

b. The successful bidder, upon receipt of the LOI, shall furnish the required performance security and submit an agreement in the prescribed format within ten days, failing which the EMD will forfeited and the award will be cancelled.

c. The Notification of Award shall constitute the conclusion of the Contract.

26. **Signing of Contract**

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

27. The Director reserves the right to accept or reject any or all tenders without assigning reasons.

28. The Director reserves the right to modify, add or delete any terms & conditions of the contract as and when required.

29. **Amendment of tender documents**:

a. At any time prior to the dead line for submission of Tender, the Institute may, for any reason, modify the tender document by amendment.

b. The amendment shall be notified and uploaded on the institute website www.igims.org only and such amendments shall be binding on them thereafter.

c. The Institute shall not be responsible for failure to inform the prospective bidders. Purchasers of tender documents are requested to browse the website of the Institute for information/general notices/amendments to tender document etc on a day to day basis till the tender is concluded.

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

Director,
I.G.I.M.S. - Patna

CONDITIONS OF THE CONTRACT

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

Clearance charges at point of Entry / Air Port and on ward transportation charges with Insurance upto I.G.I.M.S. - Patna will be borne by supplier's Indian Agent for which this Institute will not pay the charges.

02. Demurrage. Taxes & Octroi:

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

03. Warranty Period:

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

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

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

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

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

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

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

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

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

04. **After Sales Services**: -

a. After expiry of the warrantee/Guarantee period of the equipment, the Indian agent will have to undertake the Comprehensive Annual Maintenance contract (with spare parts, accessories, consumables etc.) of the Complete System for the further life span of equipment. The life span of the equipment shall not be less than ten years. In special circumstances the total life span of the Equipment/ items may be reduced by the Institute.

b. The Complete System should include the basic unit and allied supporting components like UPS, Stabilizer, Computer System, Printer, De-ionizer, Dehumidifier etc to be supplied by the bidder along with basic unit.

c. During Comprehensive Annual Maintenance Contract, bidder shall provide at least **four maintenance visits per year** at regular interval for usual maintenance and supervision. If bidder fails to provide these maintenance visits at regular interval per year, a proportionate deduction in the form of penalty at the rate of 25% of contract amount per year will be deducted.

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

e. During Comprehensive Annual Maintenance Contract, **bidder** shall maintain and keep **95% uptime** per year of the "**Complete System**" as per calculation given below:-.

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

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

g. During Comprehensive Annual Maintenance Contract, **bidder** will keep the "**Complete System**" in satisfactory working condition. In case, any spare parts, accessories, PCB, all type of consumables etc. needs replacement due to normal wear and tear, **bidder** will supply and install the same for which no additional payment is to be made. .**If any spares / consumables / accessories etc. are not covered under Comprehensive Annual Maintenance Contract charges, it should be clearly mentioned with frequency of replacement and with rate. The validity of rate of such items should also be mentioned clearly. What will be the rate of**

escalation on the quoted rate after expiry of the validity of rate of such item must be mentioned.

h. The payment of Comprehensive Annual Maintenance Contract will be made on half yearly basis after submission of satisfactory functioning report of the Complete System by the officials authorized by the Institute.

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

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

05. **Performance Security**

a. There will be a performance security deposit amounting to 10 % of the total value of the equipment excluding taxes, which shall be submitted by the successful bidder within 10 days from the date of issuance of "Letter of Intent".

b. The contract duly signed and returned to the Institute shall be accompanied by a demand Draft or Bank Guarantee in the prescribed format.

c. Upon receipt of such contract and the performance security, the Institute shall issue the Supply Orders containing the terms and conditions for the execution of the order.

d. Failure of the successful bidder in providing performance security as mentioned above and / or in returning contract copy duly signed in time shall make the bidder liable for forfeiture of its EMD.

e. The Performance security shall be denominated in Indian Rupees or in the currency of the contract as detailed below:

i. It shall be in any one of the forms namely Account Payee Demand Draft or Bank Guarantee issued by a Scheduled bank in India, in the prescribed form as provided in this document endorsed in favour of the Institute.

ii. Institute will release the Performance Security without any interest to the successful bidder on completion of the successful bidder's all contractual obligations including the warranty obligations & after receipt of certificates confirming that all the contractual obligations have been successfully complied with.

06. Delivery period/Liquidated Damage: -

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

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

ii. 2nd extension for an additional month or a part thereof @ 3% per month of C.I.F. value subject to maximum Limit of 20% of the order items. All

expenses incurred for extension of L.C. will be borne by supplier/his Indian agent.

iii. Cancellation.- If delivery is not done even after 2nd extension Institute shall have the right of cancellation of Supply order at its discretion..

07. Payment: -

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

a. In case, the equipment is purchased in Indian Currency then the payment will be made as per following scheduled.

b. 90% payment will be released against delivery and successful installation of the equipment & balance 10% will be released on submission of 10 % Bank Guarantee of the total cost of ordered value. This Bank Guarantee will be released after expiry of guarantee period.

c. L. C. will be opened only after receipt of the 10% bank Guarantee of the total cost of equipment (with a minimum validity to cover up the warranty / guarantee period), confirmation letter of all our terms and condition, submission of agency certificate in favour of Indian agent whohave submitted and quoted the price, name of the Bankers abroad; intimation about country of origin and 10 copies of Performa invoice of the ordered item. Indian Agency commission will be paid in Indian currency only to Indian agent, if any. No extra charges will be paid for installation/demonstration and training to personnel.

08. **Validity of Price:-**

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

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

10. **Packing & Marking:-**

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

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

12. Insurance: -

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

13. Installation & site plan:

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

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

14. The bidder should also quote for supply of "Un-Interrupted Power Supply" (UPS) with a battery back up of at least 30 minutes, **"**Constant Voltage Transformer (CVT)" of reputed manufacturer of required capacity along with Spike Suppressor or "Servo Voltage Stabilizer" as per requirement of the System. Bidder may quote the prices for all the above items (UPS/CVT/SERVO VOLTAGE STABILIZER) and the decision will be taken during technical evaluation of the item whether UPS is suitable or CVT / Servo Voltage Stabilizer will serve the purpose.

15. Responsibility:-

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

16. The bidder is required to provide list of persons (along with their permanent and correspondence address) owing more than 1% share ownership in the company/firm (both principle and Indian Agent).

17. The bidder is required to submit compliance sheet, which should reflect details of clause-by-clause compliance of technical specifications as well as general terms & conditions failing which their offer shall be rejected.

18. In order to fully and optimally utilize the equipment, training to paramedical staff and Doctors should be provided. In continuation to this training a separate maintenance training for the machine and the sub system should also be given to the Equipment Maintenance Engineer and Maintenance Technicians of the Institute. All the financial commitment in this regard shall be met by the firm/Principal.

19. Penalties for non-performance

The penalties to be imposed, at any stage ,under this tender are;

a. imposition of liquidated damages,
b. forfeiture of EMD/performance security,
c. termination of the contract,
d. Blacklisting/debarring of the bidder.

20. **Termination of Contract**

a. Termination for default:- The Institute, without prejudice to any other contractual rights and remedies available to it (the Institute), may, by written notice of default sent to the successful bidder, terminate the contract in whole or in part, if the successful Bidder fails to deliver any or all of the goods or fails to perform any other contractual obligation(s) within the time period specified in the contract, or within any extension thereof granted by the Institute.

b. In the event of the Institute terminates the contract in whole or in part, the Institute may procure goods and/or services similar to those cancelled, with such terms and conditions and in such manner as it deems fit and the successful bidder shall be liable to the Institute for the extra expenditure, if any, incurred by the Institute for arranging such procurement.

c. Unless otherwise instructed by the Institute, the successful bidder shall continue to perform the contract to the extent not terminated.

d. Termination for insolvency: If the successful bidder becomes bankrupt or otherwise insolvent, the Institute reserves the right to terminate the contract at any time, by serving written notice to the successful bidder without any compensation, whatsoever, to the successful Bidder, subject to further condition that such termination will not prejudice or affect the rights and remedies which have accrued and / or will accrue thereafter to the Institute.

e. Termination for convenience: - The Institute reserves the right to terminate the contract, in whole or in part for its (Institute) convenience, by serving written notice on the successful bidder at any time during the currency of the contract. The notice shall specify that the termination is for the convenience of the Institute. The notice shall also indicate interalia, the extent to which the successful bidder's performance under the contract is terminated, and the date with effect from which such termination will become effective.

21. **Fall Clause**:

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

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

a. The contract shall be governed by and interpreted in accordance with the laws of India for the time being in force.

b. All disputes arising out of this tender will be subject to the jurisdiction of courts of law in Patna (Bihar, India).

Director,
IGIMS - Patna
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Schedule of the Requirement.

SCHEDULE OF THE REQUIREMENT

Sl No	Name of the Department	Name of the equipment
Group	Name of Department	Name of Machine Equipments
A		**As mentioned in the NIT**

ANNEXURES

Annexure - I (a)

PRICE SCHEDULED FOR DOMESTIC GOODS OR GOODS OF FOREIGN ORIGIN

LOCATED WITHIN INDIA.

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

				(a)	(b)	(C)	(d)	cost till consignee site. (e)	ation and training) at the consignee site. (f)	a + b + c + d+ e + f	

Total quoted price in Rs. ……..
In Words: ……
Note:

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

Place: Name:
Date: Business Address;-

Signature of Bidder;-

Seal of the Bidder;-

Annexure: I (b)

PRICE SCHEDULED FOR GOODS TO BE IMPORTED FROM ABROAD

1	2	3	4	5					6
				Price per unit (CURRENCY)					
scheduled	Brief description of goods Make: Model:	Country of origin	Qty. nos.	FOB price at port/ Airport of lading	Carriage & Insurance (port of loading to port of entry) and other incidental cost .	Incidental Services (Including Installation & Commissioning, supervision, Demonstration	Extended Insurance (Local transportation and storage) from port of entry to the consignee site for a period including 3 month beyond date of delivery	Unit Price on CIP Named port of Destination + Extended Insurance (Local Transportation and storage)	Total Price on CIP Named Port of Destination + Insurance (Local Transportation and storage)

				(a)	(b)	And Training) at the consignee ’s site. (C)	. (d)	(e_)	4x5(e)

To be paid in Indian Currency (Rs) : ……..
Total Tender Price in Foreign Currency:……
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.

3. The Bidder will be fully responsible for the safe arrival of the goods at the named port of entry in goods condition as per terms of CIP as per INCOTERMS, if applicable

Indian Agent;-
Indian agency commission: % of FOB

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

Place;-
Date

Annexure - II

COMPREHINSIVE ANNUAL MAINTENANCE CONTRACT PRICES SCHEDULE

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

1.	Name of the Equipment: Make: Model: Qty.:								
2.	Name of the Equipment: Make: Model: Qty.:								

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

a) The rate of Comprehensive Annual Maintenance Contract as mentioned above should cover the Complete System. Complete System should include the basic unit and allied supporting components like UPS, Stabilizer, Computer System, Printer, De-ionizer, Dehumidifier etc to be supplied by the bidder along with basic unit.

b) **Preventive maintenance visit:** Four Maintenance visits at regular interval for usual maintenance & supervision failing which 25% of the contract amount per visit would be deducted as penalty.

c) **Break down maintenance visit:** As & when required

d) **Response Time:** within 48 Hours.

e) Uptime Guarantee: 95% of 365 days

f) The above-mentioned charges should includes labour charges for maintenance and breakdown visits per year, spares, accessories and all type of consumables required for the maintenance of the supplied items. If any spares / consumables /accessories etc. are not covered under above-mentioned charges; it should be clearly mentioned with frequency of replacement and with rate. The validity of rate of such items should also be mentioned clearly. What will be the rate of escalation on the quoted rate after expiry of the validity of rate of such item must be mentioned.

g) Payment of Comprehensive Annual Maintenance Contract would be made on half yearly basis after completion of work and satisfactory working report. In no case, advance payment is to be considered.

Seal and Signature of the bidder

ANNEXURE – III

MANUFACTURER'S AUTHORISATION FORM

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

No.

Dated:

To

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

Dear Sir,

Tender No :
Equipment Name :

1. We …… (name of the OEM) are the original manufacturers of the above equipment having registered office at …….. (full address with telephone number/fax number & email ID and website), having factories at _____ and _____ , do hereby authorize M/s._____ (Name and address of bidder) to submit tenders, and subsequently negotiate and sign the contract with you against the above tender no..

2. No company or firm or individual other than M/s._____ are authorized to bid, negotiate and conclude the contract in regard to this business against this specific tender.

3. We also hereby undertake to provide full guarantee/warrantee /Comprehensive Annual Maintenance Contract as agreed by the bidder in the event the bidder is changed as the dealers or the bidder fails to provide satisfactory after sales and service during such period of Comprehensive Warranty / Comprehensive Annual Maintenance Contract and to supply all the spares/ accessories / consumables etc. during the said period.

4. We also hereby declare that we have the capacity to manufacture and supply, install and commission the quantity of the equipments 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 scopet;

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 herebyconstitute,appointandauthoriseSri/Smt ----------……(name and address) who is

presently employed with us and holding the position of …… as our attorney, to act and sign on my/our behalf to participate in the tender no…… for …… (Equipment name).

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

Dated this the ___day of 201_ For_____

(Name, Designation and Address)

Accepted

_____

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

Date : _____

SPECIFICTION AND ALLIED TECHNICAL DETAILS

±

Group-A (Anaesthesia)

(a) Anaesthesia Work Station with Monitor- Qty.02

Sl. NO.	Specification of Advanced Anaesthesia Work Station with Monitor
A	**Gas Management:**
1	Three Gas system : Oxygen Air, Nitrous Oxide
2	Oxygen cylinder yoke and Nitrous Oxide cylinder Yoke
3	Pipeline inlet for Oxygen, Air, Nitrous Oxide
4	Oxygen Concentration: 25% to 100%
5	Electronic Gas Mixing measurement and display for accurate gas flows and mixing.
6	Pneumatic Oxygen Backup flowmeter
7	Auxillary Oxygen Flowmeter
8	Oxygen Flush between 35 lpm -70 lpm
9	
10	Will have an additional optional receptacle for accepting/ integrating Anesthesia Gas monitoring module.
11	Colour coded high pressure tubings 5 meter long for oxygen, nitrous oxide and air with suitable pipeline connectors.
12	Hypoxic guard to ensure minimum 25% oxygen across all O2-N2O mixtures.
13	Oxygen failure warning device. All alarms to be audio as well as visual.
14	Should have 3 gas back up mechanical flow control in case of failure of electronics
B	**Vaporizers:**
1	Vaporizer must be isolated from the gas flow in the off position and prevent the simultaneous activation of more than one vaporizer.
2	Voprizer shall mount to a Selectatec® manifold which allows easy exchange between agents.
3	Supplier must offer total vaporizer manufacturing capability- Sevoflurane, and Isoflurane. Isoflurane and Sevoflurane vaporizers to be standard accessories. Other vaporizers to be optional and price for each to be quoted.
4	Back bar to accept two selectratec vaporizers
C	**Breathing System:**
1	Breathing system shall be fully autoclavable to 134° C and natural latex free. It should he compact.
2	Total circuit volume shall not exceed2.7 L. including Absorber volume.
3	Breathing system shall have integrated Volume sensing and shall be of a type that does not require daily maintenance.
4	Ventilator bellows shall be integrally mounted to the breathing system. Should have Ascending Bellows design.
5	Bag to vent switch shall be bi-stable and automatically begins mechanical ventilation in the ventilator position.
6	Adjustable pressure limiting valve shall be flow and pressure compensated .
7	Machine shall provide circle mode breathing circuits.
8	Components coming in contact with patient gas shall be disposable or autoclavable.
9	FIO2 monitoring should be available.
10	Common Gas outlet Should be standard supply for connecting open circuit.
11	AGSS ready to be connected to hospital installed active system

D	**Ventilation**
1	The workstation should have integrated Anesthesia Ventilator system.
2	Ventilator based on flow valve technology with ICU features and modes of ventilation
3	Visible bellows for visual indication of leaks in the systems.
4	Ventilator shall have Volume Centrol and Pressure Controlled modes.
5	Dual Mode — PCV, VCV and PS needed for difficult lung ventilation, Obese patients laproscopy , beating heart , and neonatal.
6	Ventilator shall have a tidal volume compensation capability to adjust for losses due to compression, compliance and leaks, and compensation for fresh gas flow
7	The workstation should be capable of delivery of low flow and minimal flow anaesthesia
8	Ventilator shall be capable of atleast 120 L/min peak flow to facilitate rapid movement through physiologic "dead space' in the Pressure Control mode
9	SIMV and Pressure Support Ventilation with Apnea Back Up Ventilation should be offered
10	It should have a cardiac bypass mode. during cardiac bypass procedure to stop the system from alarming, and turns off automatically, when the ventilator is turned back on
11	Compliance Measurement and Trending (Preferable):Measures and displays the patient's compliance to offer an view of the patient's lung condition.
12	Vital Capacity & Cycling procedures (Preferable) : to automate the procedures for optimal Peep setting to recruit the lungs .
a	Tidal Volume: 20ml to 1500ml in VCV .TV = min 5 ml in PCV mode.
b	Rate : 4 to 100bpm
c	Electronic Peep : Off, 4 to 30cms H2O
d	Settable I:E ratios, Pause, Trigger (0.2-10 L/min). lnsp Pressure from 5 up to 50cms H2O
e	Ventilator shall be capable of 120 L/min peak flow .
f	Ventilator shall have a tidal volume compensation. Operates on a breath-by-breath basis and does not require special calibration.
E	**Inspiratory pressure (Pinspired)**
1	5 - 60 cm H2O
F	**Pressure limit (Plimit)**
1	12 to 100 cm H2O
2	Machine should have atleast 60 mins battery backup
3	Shall have integrated LED light strip that provides bi-level work surface illumination
4	Handle on side for easy positioning.
5	Machine should have mounting capability of one O2 and one N2O pin-indexed cylinder.
G	**Display:**
1	Around 12-16 " Color TFT Display with High visibility and highly visible alarm light mounted on the Anesthesia Workstation
2	Monitor should be Modular and flexible.
3	Colour touch screen display Up to 8 waveforms / 4 digit fields, 7 optimized user modes, Standard Adult, Pediatric & Neonate mode with OxyCRG
4	Trend up to 72 hours of graphic and numerical data
5	Should have an individual Battery backup, minimum of 2 hrs
6	ECG and IBP analog output. Should have arrhythmia and ST segment Analysis with ST Trend
7	Monitor should have Simultaneous Monitoring facility for 2xIBP & 2xTernp for all monitors
8	Basic Patient side module for Measuring Parameters like 5 lead ECG, NIBP, SPO2, RESP, 2xIBP, 2xTemp, EtCo2 (side stream), Anaesthesia Gas monitoring, Level of Depth of Anaesthesia monitoring and NM monitoring

9	Accessories - Standard use for ECG (2 in no.), SpO2 probes (2 each for adult & pediatric). NIBP(2 cuffs each for adult and pediatric & I for neonate), Temperature probes (1 for core and 1 for skin), IBP cables (2 in no with 10 pressure transducers and their one holder), EtCO2- 5 filter assemblies and 10 tubings, for anaesthesia gas monitoring, depth of anaesthesia monitoring(with 25 disposable leads),NM Monitoring cables Recorder option for printing the up to 4 waveforms and alphanumeric data, and trends etc .
H	**Power:**
1	Will work on electric mains
2	Anaesthesia workstation should have an individual battery backup of minimum up to 45mins on fully charged battery .
3	Should have integrated lighting for vaporizers and working table (optional)
I	**Braking Mechanism**
1	Front caster wheel should have a central baking mechanism
J	**Following upgrades should be offered as options — (Quote unit prices in price bid)**
1	Mainstream EtCO2 monitoring should be possible
2	Cardiac Output module for measuring the cardiac output using the thermo-dilution technique with four Invasive pressure channels.
3	Module for monitoring Cardiac Output with the help of PiCCO technique
4	Facility for Microstream EtCO2 with dedicated accessories for Adult, Paediatric & Neonates (25 each)
5	Anaesthesia workstation and monitor should US FDA/CE Approved.
6	

2:_

SI. NO.	(b) Ventilator-Qty.06
1	Advanced technology ventilator for use in ICU/PICU/CCU, suitable for ventilating all categories of patients from infants to pediatrics to adults.
2	**Quoted Ventilator with humidifier should be US FDA and European CE Approved.**
3	Ventilator should have inbuilt or external compressor from the same make as that of the ventilator. External compressor if quoted, should be US FDA approved for Medical Air grade.
4	External Medical Air Compressor if quoted should have automatic switchover facility.
5	Ventilator should have two stage filtering process for delivering medical grade air, First stage dust filters and second stage microscopic bacteria filter.
6	Ventilator should have integrated minimum 12" or more color TFT Touch screen for advanced ventilation monitoring.
7	The system should have the facility for Flow triggering up to 15 LPM.
8	Should have the following modes of ventilation :
a	Volume control/Assist control
b	Pressure control
c)	Pressure support with back up ventilation
d)	CPAP + Pressure support
e)	BIPAP/BIVENT
f)	SIVM + Pressure support
g)	PRVC/Auto Flow/APV. Also patient should be able to breathe spontaneously in this mode.
9	Ventilator should display lung mechanics such resistance and compliance.
10	Maximum flow for pressure support /spontaneous breathing: 180 LPM
11	The ventilator should have emergency value which automatically enables spontaneous breathing with filtered ambient air if oxyzen and air supply fails.
12	Tidal Valume: 50 ml to 2000ml in Volume control & up to 20ml in pressure Control
13	Respiratory Rate : 2 to 80 BPM
14	Inspiration Time : 0.2 to 10 Sec or above
15	PEEP : 0 to 35 cm H2O
16	PIP : 0 to 80 cm H2O
17	FiO2 : 21 to 100%
18	Controlling principal - time cycled, volume constant, pressure control.
19	Should be possible to display at least three types of waveforms and loop for each breath, 24 hour trend display of lung function parameters:
a	Flow Vs time, pressure, Flow - Volume Vs time
b	Loops: Volume- pressure, Flow - Volume, Flow - Pressure

20	Should be provided with 10 reusable Flow sensors and 30 each disposable adult & pediatric circuit with 30 each adult & pediatric HME filter of same make as that of ventilator.
21	Should have audio- visual alarms for virtal functions.
22	Should have built- in battery back-up min 60 min.
23	Should have single - piece Autoclavable interchangeable expiratory cassette/ Reusable valves for complete dis- infection capability the same make as of the ventilator.
24	To be supplied with 10 disposable expiratory cassctte /expiration valves for highly infectious patients of same make as that of ventilator.
25	Machine should be supplied with 10 reusable flow sensor preferably with heated wire technology for better accuracy.
26	Should have facility for ventilation data transfer & network connection.
27	Should have Imported Reusable Medicament/ Ultrasonic Nebulizer.
28	Proof of satisfactory performance of last three years should be furnished for a minimum numbers of 05-10 users (premium Govt. institute) along with the technical bid failing which the tender is liable to be rejected .
29	Ventilator should also be supplied with follwing accessories:
A)	Reusable flow sensors (for adult, pediatric patients- 10 each
b)	Trolly/card-01
c)	Test lung -01
d)	Disposable adult and pediatric ventilator circuits-30 each
e)	HME filter for adults and pediatric patients-30 each
f)	Autoclavable expiratory valve -01
g)	Disposable expiratory valve/cassett -10 for highly infectious patients.
h)	Oxyzen connecting hose-01
i)	Hinged arm for supporting patient circuit -01
j)	Oxyzen sensor -02
k)	Standard accessories of humidifier
l)	Spare diaphragm for expiratory valve-04.

(C) ;-O T Light with LED- Qty.3no

Sr. No.	Specification of LED O. T. Light
1	It has a set of main and satellite dome on state of art LED technolgy
2	Illumination for the main dome is 1,60,000 lux and for the satellite dome is 1,20,000 lux
3	Homogenuous light, free of color shadows
4	Focuses exactly on the tissue region
5	Develops minimal heat to prevent tissue desiccation
6	Color temperature for both the domes should be in the range of 3800-5000K
7	Lamp life of 30,000 hours or more
8	The handle of the light is sterilizable
9	Illumination field diameter is adjusted with up ward & down ward by the handle
10	The light should have the unique function that enables light field adjustment to the surgical fields
11	Slould have compact design with the sigficantly smaller high-performance LEDs of the second generation
12	There should be no cast white light shadows and the same applies to contour shadows, due to the complete absence of different colors in the surgical field
13	Max Illuminance - Main Dome : 160,000 lux / Satellite Dome : 120,000 lux
14	Light field diameter : Main Dome - 22-32 cm/Satellite Dome : 20-30 cm(Options Circular or oval)
15	Color Temperature : Main Dome - 3800-5000 K, variable / Satellite Dome - 3800-5000 K, fix
16	Color Rendering Index(CRI) : Main Dome - 85±10 and CRI for Satellite Dome - 95±10
17	Dimming Range (2-29% Back Lite Operation) : Main & Satellite Dome - 30-100%
18	Light Sources - Main & Satellite Dome - High-performane LEDs
19	LED Service Life fo main Dome (30000 hr or more) for Sattelite Dome (30000 hr or more)
20	Light Head Suspension : Main & Satellite Dome - Fully Cardanic
21	**It should be CE Certified and US FDA**

(d):-;-**<u>Multiparameter Monitor-18 no.</u>**

MULTI PARAMETER MONITOR	• Patient monitor system should be of modular type and capable of monitoring adult, pediatric neonatal patients. • Monitor should have 15" or more independent flat panel display. • Touch screen user interface. • Module rack / housing should be independent and shall be able to be placed near to the patientt. • Should be capable of 8 traces display. • Monitor must be capable of simultaneously monitoring the following parameters which should be present as standard: ECG, NIBP, SpO2, invasive pressures (4), temperatures (2), and Capnography. • Should be compatible with Cardiac output, EEG, and BIS. • ECG should have capability for 3, 5 and / or 10 lead monitoring and should have built in arrhythmia monitoring on all leads. • Inbuilt ST segment analysis and arrhythmia detection for all the leads should be possible. • Haemodynamic and drug dose calculations should be available. • Arrhythmia should be grouped based on classifications – and should show no of arrhythmias occurred. • Respiration should be available with Cardio Vascular Artifact filter. • OCRG should be available for monitoring neonates. • ICP monitoring should be possible. • 24 hours trend data should be displayed. • All monitors including central station should have similar user interface for easy usage among all clinicians. • Monitor shall provide the capability to interact with alarms at remote bedsides. • Monitor shall provide the capability to receive and display real-time waveforms, trended data and alarm status from other bedside or telemetry units on the patient monitoring network. • Monitor shall provide the capability enter patient information at the bedside or central monitor. • On-screen keyboard for entering this data is preferable. Should have USB ports to connect mouse, key board, bar code scanner. • Alarm limit status (ON/OFF) must be indicated on-screen for each parameter and actual parameter alarm settings must be displayed on-screen when alarms are on. • Position of the displayed waveforms must be user configurable. • Waveform color changing should be user configurable. • Monitor shall permit the optional ability to receive and display information from other patient devices such as ventilators, infusion pumps and other standalone devices. • All modules should be compatible with all monitors quoted. • Bed to bed communication between the monitors should be possible with out a central station. • Networking to central station should be possible. • Patient monitoring network shall use standard TCP/IP protocol and be capable of residing on hospital's network infra-structure. • Should be compatible with HIS and should be HL7 compliant. • Monitor should have capability to accommodate remote viewing of real time waveforms through internet. • Patient monitoring network shall be able to support up to 1,000 monitoring nodes. • Should be supplied with necessary accessories for adult, pediatric and neonatal accessories. • **Should have European CE and / or US FDA certifications**. **Accessories and spares**

	Accessories and spares 1. ECG / respiration: 5 lead ECG cable and lead wire set and 10 lead ECG cable and lead wire set per monitor 2. NIBP: Adult: 2 sizes and Pediatric 2 sizes and neonatal, 1 size per monitor 3. SPo2 Sensor: Adult sensor with cable, pediatric sensor with cable and neonatal sensor with cable per monitor 4. IBP: Include 10 nos of disposable pressure transducer with bracket and interface cable per monitor 5. Temperature: Skin and nasopharyngeal probes per monitor. **Central Monitoring Station for Multi Para Monitor** • System should have minimum 16 beds capability. • Central station should have 17"/or more color display. • Should have drug dose and hemodynamic calculations. • It should have possible to view information such as vital signs, alarm status, arrhythmia analysis, trended parameters, patient data etc for any selected bed from the central station. • Should have separate computer keyboard and 4 channel thermal array recorder. • Should have default alarm limits and customizable parameter settings. • Central station should have full bed review capability. • Central station should be able to be configured as a bedside monitor if required. • Should have 24 hours trends. • **All system should have European CE and /or US FDA certifications**. • Should be supplied with a On-line suitable UPS

(e):-Specification of O T Table – 03 Nos.

SI. NO.	Specification of O.T. Table
1	Electro-Hydraullic Operating Table.
2	Made of rust proof and acid proff Stainless steel.
3	Modular or Multisectional Table Top with exchangeable Suctions.
4	Should have all the functional movements provided by reliable electrohydraulic system,Like vertical movement ,Lateral tilts,Head and front end raising etc.
5	Should be C-Arm comaptible
6	Designed to support the patient during all surgical procedure and operation related to Genral surgery,Neurosurgery, urology, G.I. Surgery, orthopaedic Surgery and cardiothoracic surgery.
7	Should be European CE and USA FDA Certified

Group-B.GS/RB/GIS/Obs& Gyne.

Tender Technical Specification of Operating Laparoscopic Surgery with Accessories.- Qty.04 set.

USFDA & EUROPEAN CE APPROVED

For GS/RB/GIS/Obs& Gyne

Item with Specification :		Qty
1.	**Telescope :** Straight forward telescope, 0 degree enlarged view, size: 10 MM High definition, Length:30- 31 cms or more, Autoclavable, Fiber optic light transmission incorporated.	01
2.	**Telescope :** Forward Oblique telescope, 30 degree enlarged view, size: 10 MM High definition , Length:30- 31 cms or more, Autoclavable, Fiber optic light transmission incorporated.	01
3.	**Telescope :** Forward Oblique Telescope, 30 degree enlarged view, size: 5.0 MM High definition , Length:29-30 cms or more, Auto clavable, Fiber Optic Light Transmission Incorporated.	01
4.	**Trocar & Cannula :** Cannula size : **11-12 mm diameter;** should have multifunctional valve and automatic valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It 52hould have stopcock for CO2 insufflation. Trocar should have pyramidal tip with pin holes near the tip for safety outlet of CO2 gas.The working length of the canula should be 100-110 mm.	02+ 02
5.	**Trocar & Cannula :** Cannula size : **5.5 - 6mm diameter**; should have multifunctional valve and automatic valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It 52hould have stopcock for CO2 insufflation. Trocar should have pyramidal tip with pin holes near the tip forsafety outlet of CO2 gas.The working length of the canula should be 100-110 mm.	01
6.	**Veress Needle :** Veress needle of working length 12&15 cm with luer lock{One each}.	03+ 03
7.	**Grasping Forcep Fenestrated(Johans) :** Atraumatic serration, fenestrated, grasping forcep with unipolar connection, insulated sheath, handle without ratchet. Should be dismantable into three parts namely, outer tube, handle and inserts. Length between 35-36cm, size: 5.0mm.	01
8.	**Grasping Forcep Fenestrated with DeBakey serration :** Atraumatic, fenestrated, grasping forcep with unipolar connection, insulated sheath, handle without ratchet. Should be dismantable into three parts namely, outer tube, handle and inserts. Length between 35-36cm, size: 5.0mm.	02
9.	**Bowel Grasping Forcep :** Bowel Grasper fenestrated, size: 5.0mm, length 35-36cm, handle with ratchet, insulated shaft.Dismountable into three parts.	02
10.	**Bipolar Forcep :** Bipolar Grasping Forceps size: 5mm, robust type, take apart in nature that it can be dismountable into three parts, handle, insert grasper and working tube; with movable inner sheath and non-retracting jaws. Working length 32-33cm Handle should be power grip type.	02

11.		**02**
Item with Specification :		**Qty**
12.	**Bipolar Insert Only :** Bipolar grasping insert only, robust type to fit with main bipolar forceps.	**02**
13.	**Inner Sheath :** Inner sheath with HF insulation to fit with main bipolar forceps.	**02**
14.	**Bipolar HF Cable :** Bipolar HF cable compatible to connect with main bipolar forceps.	**02**
15.	**Unipolar Curved Kelly Dissecting and Grasping Forcep :** Kelly curved dissecting and grasping forceps insulated, atraumatic, working length 35-36 cm, size: 5mm,dismountable into handle, insert and working tube. Handle without ratchet.	**02**
16.	**Insert Forcep Unipolar :** Insert forcep Kelly type curved atraumatic jaw compartible with main Kelley curved dissecting forceps.	**02**
17.	**Unipolar Tooth Grasping Gorcep :** Cobra tooth Jaw 2x4 teeth insulated. Dismantable into different parts, insert, handle and working tube, Working length of 35-36 cm, size: 5mm. Handle with ratchet.	**02**
18.	**Scissor Curved Unipolar :** METZENBAUM curved scissor, length of blade 12mm, connection for unipolar HF cable, dismountable into insert, tube and handle. Working length 35-36 cm, size: 5mm, handle without ratchet.	**02**
19.	**Insert Curved Scissor :** Scissor curved inset to fit with main curved scissor.	**02**
20.	**Reducer from 11mm to 5mm.**	**02**
21.	**L-shaped hook dissector with unipolar HF connection.**	**02**
22.	**Spatula / Blunt dissector with unipolar HF connection.**	**02**
23.	**Claw Forcep :** 10 mm claw forcep 2x3 teeth short with ratchet. With suitable length between 33-36cm, dismountable into handle, insert & outer tube.	**02**
24.	**Spoon Forcep :** Retrieval of foreign body/stones forcep, size 10mm without ratchet. With suitable length between 33-36cm, dismountable into handle, insert & outer tube.	**02**
25.	High Frequency Needle, insulated with connector pin for unipolar coagulation.	**02**
26.	Needle Holder , diamond coated jaws, straight handle with ratchet, size 5 mm, length 33 cm, for use with suture material 2/0-4/0, needle size SH (Ethicon), EN-S (Ski), V 20 (USSC).	**02**
27.	Assistant Needle Holder TC tip, straight, handle, with ratchet, size 5 mm, length for use with suture material 4/0-6/0, needle size RB (Ethicon), CV-23 (USSC).	**02**
28.	Speculum for Gall Bladder Extraction, length 6 cm.	**02**
29.	Fascial Closure Instrument for subcutaneous ligature of trocar incisions, size 2.0 mm, length 14 cm or more.	**02**
30.	**Mayoma Fixation Instruments** 5mm as well as 10mm one each.	**02**
31.	**Heavy Duty Roburst Bipolar Forcep** length: between 35- 36cm, rotating dismantable handle, preferably wide jaw with spare insert and handle.	**01**
32.		**01**

Item with Specification :		Qty
33.	**Clip Applicator :** Medium Large clip applicator dismantable rotating size: 10mm, length 36cm, for Titanium clips with ratchet to lock the jaw holding the clip.	**02**
34.	**Titanium Clips :** Titanium clips medium large, box with 16 sterile cartridges, 10 clips each for use with clip applicator.	**20**
35.	**Two Way Suction Irrigation Cannula**, size : 5mm &10mm each with trumpet control for irrigation and suction with silicon tubing.	**01**
36.	**SUCTION & IRRIGATION DEVICE :** Compact suction and irrigation unit having Irrigation pressure not less than 400mmHg & Suction pressure not less than (-0.75mmHg). The irrigation and suction flow should not be less than 2.5L/M. The unit should be supplied with 1.5 Litre glass bottle with bottle cap and stand; The unit should be supplied with 1.0 Litre irrigation bottle sterilizable in autoclave with bottle cap attachment to connect tubing. The unit should be supplied with reusable irrigation and suction silicon tubing set 2 Nos. each & spare micro filter Should be IEC 601-1, CE according to MDD.	**02**
37.	**Puncture Needle, size: 5mm, length 33cm or more.**	**01**
38.	**Needle Holder :** Macro needle holder with tungsten carbide insert, ergonomic pistol handle, jaw curved to left, size: 5mm, length : 32-33cm for use with suture material size: 0/0 to 7/0.	
39.	**HF Needle Electrode :** High Frequency Needle for splitting and coagulation, insulated, with connection pin for unipolar coagulation, working length 31-33cm.	**01**
40.	**HF Needle Only :** Needle insert only suitable to insert with HF needle electrode.	**01**
41.	**Unipolar HF Cable :** Unipolar HF cable suitable to connect with forcep and electrosurgical unit.	**02**
42.	**High Resolution Video medical grade Monitor :** 26 inches Medical grade LED Monitor, resolution 1920 X 1200 with DVI-D, RGB input, option for wall mounting and desktop in same unit. Fast Response Time : (5-12ms). Number of Colors : 16.8 million. Luminance : 400cd / m2. Contrast ratio : 1000:1. Vertical / Horizontal Viewing Angle : 178 degree.	**02**
43.	**Fiber Optic Light Cable :** Fiber Optic light cable of actual bundle size: 4.5-4.8mm, length : 250-275cm.	**01**
		02

Item with Specification :	Qty
44. CO2 Electronic Insufflator : Electronic CO2 insufflators with pin index connection. Should have an adjustable flow rate of 0 to 40 ltr. Per minute and a pressure range adjustable between 0-30 mm Hg. Preset and actual value for Pressure and flow should be displayed together on the front panel in digital display. Constant monitoring of intra-abdominal pressure; any overpressure is released immediately with back flow with acoustic alarm. Unit should have in-built heater to warm up and preheat the CO2 gas. Should be able to select either central supply (4.5Kg/cm2) input pressure from central supply as well as direct connection to high pressure CO2 cylinder and should indicate the right inlet pressure of CO2 gas supply by bar graph on front panel of machine. Unit should produce immediately acoustic alarm in case of sudden blockage in the gas outlet tube or wrongly placed Veress Needle. Provided with Silicon autoclave tubing with luer attachment. Instrument should work on a universal power supply of 100-240 V, with a frequency of 50 Hz single phase. Electrical Safety certification – IEC-601-1 and CE acc to MDD. .	**01**
45. HP Hose : Suitable high pressure hose pin index to connect the gas to insufflator, length : 1.0 meter.	**01**
46. CO2 Cylinder : 5 Kg. Carbon Dioxide bottle with pin index connection with wrench.	**02**
47. Electro Surgical Unit with vessel sealing function : Microcontroller based Digital Electrosurgical Unit/Cautery having peak power of minimum of 300 Watts, with Digital Display/LCD display Push Switch/touch Control Provides Consistent Performance for General Surgical Procedures & delivers its Optimum & Reliable Power by using latest & Advance Technology, Convenient for all Surgical Application. Unipolar as well as Bipolar facility having operating frequency between 450-700 KHz. Must have Mono-polar & Bipolar & vessel sealing Facility on the unit. Must have Return electrode Application Monitoring system - With This the contact quality between Silicon neutral electrode, and the patient skin the moment the contact between Plate & Patient reduces it stops the HF delivery with an audio visual indications. Facility for pure cut adjustable from 0-300 watts, blend/hemostatic effects variable up to 0-250 watts, endocut/lapro/gastro cut upto 200 watts, Bipolar cut and coagulation variable up to minimum of 100 & 120 watts respectively. Spray & Forced coagulation facility should be there up to 120 watts with vessel sealing up to 5 MM In Accordance with IEC 60601-1 and IEC 60601-2-2; CE certified.	**01**

Item with Specification :	Qty
CF output for maximum patient safety. Unit should be supplied with three paddle footswitch, patient plate, patient cable, hand control pencil with standard accessories.	
48. Video Trolley : Suitable Medical Grade video trolley to be supplied for mounting 56equipments having minimum three self in addition to with one drawer, with antistatic wheel casters, front lockable, high grade of electrical insulation and earth protection. 5 Ampere socket, 10Nos, inbuilt with trolley to connect all electronic devices. CO2 bottle stand should be integrated with trolley. Potential equalization connection to be provided at least 8 points.	**01**
49. Sterlization / Disinfection Tray: Disinfection / Sterlization tray with sieve, tray to lift. Size : 27" x 7" x 5" (L x B x D)	**02**
50. Formaline Chamber : Formaline Chamber made of Virgin Acrylic 4.5mm thickness; size : 26" x 8" x 8" (L x B x H) with three tray, for sterilizing the laparoscope, preferably with three tray.	**02**
51. Suitable Autoclavable plastic tray double tray for sterilization and storage for hand instruments of minimum 20 hand instruments.	**02**
Suitable **UPS** with One hour backup time with SMF Batteries. Should be able to work on wide input range between 160-270 VAC at frequency between 50Hz ± 2Hz, Should use PWM technology with power consumption with single transformer arrangements with an output of 220VAC ± 5%, protection of overload, short circuit and low battery. Should have indication on front panel for mains load/battery load/ battery overload-low and MCB protection in case of short circuit. ISI/CE approved good quality product.	**01**

The system should be truly Digital HDTV endoscopic video camera. The system should have the maximum Resolution of 1920 X 1080 pixels, progressive scan and the consistent use of 16: 9 formats for Input & Output to guarantee genuine HDTV.

The system should have Special Features:

- **Visibly Improved Imaging:3** CCD/ CMOS sensing chip should optimizes image quality & Digital Source Sampling thus maximizing hi-fidelity image transmission.
- **Optimizes to Any Size: The system should have** Optical Zoom with 2x parfocal zoom lens to enhance the quality of Image size & cross specialty standardization of the camera system, regardless of the telescope used.
- **Plug and Go:** The system should automatically optimize all settings. The system should be ready- to- use as soon as it is connected to the camera control unit.
- **USB Port for Capturing FULL HD Videos/ HDStill Pictures**: Captured digital images in format 16:9 can be displayed on WideView monitors in the same full HD format without being converted. This prevents a loss if image quality caused by image stretching .Alternatively a suitable recording device should be offered if camera does not have USB port

- Integrated digital imaging processing module for a 5 level brightness regulation and electronic anti-moirée filter for fiberscopes.
- Parallel live display of visualization modes besides white light mode (picture-in-picture).
- Changes in visualization modes, device control, digital zoom, brightness, video capture, still image capture, white balance can be performed in sterile area via camera head buttons.

Technical Specifications:

Image sensor: 3X1/3'' CCD-Chip.

Pixels	1920 x 1080
AGC:	Microprocessor controlled
Lens:	Integrated Zoom Lens f = 15-31 mm (2x optical zoom)
Minimum light sensitivity:	1.17 Lux (f = 1.4 mm).
Control buttons:	min 3 (2 of them freely programmable).

Video output:
preferably 2 x DVI-D output, 1 x 3G-SDI output, 3 x camera input for communication with compatible camera modules, LAN onnection, 4 x USB connection (2 x front, 2 x back).Min. 2×DVI output with a back up s-video output

Power Supply:-	100-240 VAC 50/60 Hz
Certified to :	IEC 601-1, 601-2-18, CSA 22.2 No. 601, UL 2601 and CE according to MDD, protection class1/CF

HDTV 16: 9 widescreen Monitor LED- 26/27 Inches

The monitor should have:

HDTV display in original 16: 9 HDTV format.

1080 p/ 50 & 1080 p/60 displays possible.

LED crystal display.

Max. Resolution of 1920X1080.

Screen diagonal – 26" / 27"

Desk top with pedestal.

Should have the facility of PIP mode.

Specifications

HD TFT Flat Screen Monitor with stand size 26",

Aspect Ratio 16:9 HD format

Maximum viewing angle : 178° vertical

Contrast ratio: 1400 : 1

Video Inputs : 2* DVI-D , 2* 3G SDI, 1* S Video , Composite 1* RGB/VGA , 1* RS 232 , 1* RJ 45 Interface.

Accessories External 24VDC Power Supply, Mains Cord, Pedestal.

Certified to : EN 60601-1, protection class IPX 1

1. **LED Light Source :**

Cold Light Fountain LED Light Source :

175Watts.

Color Temperatures :

6400K.

Compact, Light weight construction : -

Light Outlets :

1

Light Adjustment :

20

Steps.

Lamp life of Approx. :

30,000hrs.

Low Noise level :

-

2. **Environmental factors :**
    1. Shall meet IEC-60601-1-2 :2000. General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive.
    2. The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%.
    3. The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%.
3. **Power Supply :**
    1. Power input to be 220-240VAC, 50Hz fitted with Indian plug.
    2. UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.

3. **Standards, Safety and Training :**

1. **Should be USFDA, European CE listed product**
2. Manufacturer should have ISO 13485 certification for quality standards.
3. Comprehensive training for lab staff and support services till familiarity with the system.
4. Comprehensive warranty for 5 years with no fault warranty in the first year and 5 years CMC after warranty including UPS.
5. Shall be certified to be meeting safety standard IEC 60601-2-18 part 2 Particular requirements for the safety of endoscopic equipment.
6. The core Operating laparoscope for surgery like Telescopes, Endovision Three chip camera, light source, CO2 Insufflator, Suction Irrigation Device, fiber optic cable, Video monitor & complete video trolley should be from single manufacturer for system compatibility.

4. **Documentation :**

1. User/Technical/Maintenance manuals to be supplied in English.
2. List of important spare parts and accessories with their part number and costing.
3. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.
4. Certificate of calibration and inspection.
5. List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.
6. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

Group-C

Trauma Centre Emergency & Orthopaedics

(a)- Technical Specification

C-Arm with Image Intensifier Qty.03

The system should have the following essential features:

1. Generator and X-ray Tube:

Generator should be **with power output of 2.5KW or more** with the following modes**:**

1. Continuous boost Fluoroscopy.
2. Pulsed Fluoroscopy.
3. Digital Radiography mode.

The range of KV should be at least 40-110 KV for each mode.

Give details of:

1. mA for each mode.
2. Pulse width.
3. Pulse rate.

The Generator should be capable of providing Pulse Fluoroscopy with Pulse rates up to 20 frames/sec or more.

- Foot switch for fluoroscopic control should be provided
- Automated dose regulation and manual mode of fluoroscopy should be available
- X-ray tube should have a:

Stationary anode with dual focal spot /rotating anode power (specify the focal spot sizes)

2. Focal spot of nominal value suitable for Fluoroscopy and Radiography.
3. Nominal X-ray tube voltage 100 KV.
4. Please mention filters available.
5. Automatic Dose Control.
6. Heat storage capacity should be 35 KJ or more. Minimum of 20 minutes of continuous fluoroscopy should be possible.
7. Mention thermal protection device of the tube available

- Collimator unit:

1. Shutters/Diaphragm for radiation free collimation and 360° rotation.

- Grid details to be provided

2. C-Arm:

- Fully counterbalanced C-Arm movement with integrated cables and electromagnetic brakes

Give details of:

- Angulation and orbital movement
- Horizontal movement
- Longitudinal movement
- Swivel range
- Source to detector distance
- The system should have a minimum of 68 cm free space within the C-Arc to provide a large imaging space.
- The C-Arm depth should be 60 cm or deeper to provide a large imaging space and C-Arm clearance around the patient and the imaging table.
- The C-Arm should have a manual rotation of +/- 180^0 to allow the imaging chain to accomplish angled projections.

3. X-ray image intensifier

- At least dual field X-ray image intensifier with field sizes of 23 cm (9”) or more should be

available
- Specify the make, model and name of the manufacturer
- Minimum resolution should be 1lp/mm
- The II entrance should have a grid of minimum of 40lp/mm; 8:1 or more
- Unit should be provided with cassette holder
- It should have a CCD based camera of reputed make (atleast 1Kx1K pixels). Specify the make, model and name of manufacturer.
- Image rotation and top/bottom and left/ right reversal should be possible

4. Image viewing

- Two Medical grade monitors of 17" size or more (medical grade) mounted on a trolley should be provided. Specify the make, model and name of the manufacturer
- The display system should have a minimum brightness of 550cd/m2
- Standard 4 frame image memory at the control console and last image hold capability should be available
- Cine image acquisition and long cine loop visualization in real time should be available through either control console or separate add-on image viewing system

Storage and transfer pen drive should be available.

5. Essential Accessories:

- Online UPS for least 30 minutes back up for the system.
- Zero Lead Aprons (light weight): 8 Nos.
- Sterile covers (100 disposables) for C-Arm, X-ray tube and Flat Panel Detector.
- Integrated dose measuring chamber displaying the dose at the end of the study must be available.

6. Other features:

- Quoted equipment should meet European CE or USA FDA approval standards.
- The system offered should have AERB type approval / NOC for installation and use in India.

7. IMPORTANT INSTRUCTIONS:

i). All information in the tender document must be supported by original product data sheets. Computer generated data sheet shall not be accepted.

ii). All information asked for must be provided in the compliance statement under the headings given above.

iii). Supplier must ensure the availability of 'expertise service' and maintenance Spare parts and repair for the next 10 years must be ensured.

iv). Application Specialist should be available for on-site training

8. INSTALLATION:

Installation, including networking, shall be free of cost and shall be the responsibility of the supplier. All accessories like cables, ports and spares etc as necessary for complete, smooth and breakdown-free functioning of the entire system shall be the responsibility of the supplier.

9. AFTER INSTALLATION WARRANTY:

After installation, five years comprehensive onsite warranty of the equipment, inclusive of all parts/components including X-ray tube, batteries of UPS, should be provided by the Principals, with free up gradation with newer software technology, as and when evolved. The supplier shall separately quote annual CMC rates (inclusive all parts as above) in continuity after the warranty period with year wise break up.

10. The supplier shall give a commitment for 98% up time of the equipment.

11. The C-Arm should be matched with the existing OT Table

(b):- POWER DRILL(Battery Operated)Qty. Qty-03

Technical specifications for POWER DRILL(Battery Operated)

Drill and Reamer Hand piece:

- Selection of Drilling and Reaming with the built in Switch option DRILL/REAM in same hand piece
- Selection of the drilling and reaming with the same attachment
- Should have dual trigger for forward/ reverse and oscillation mode
- Maximum speed of 1200 rpm in drilling, 270 RPM in reaming
- Should have variable speed control on the hand piece
- Should deliver maximum torque of 150 in/lbs
- Drill torque should be 35 in/lbs
- Should have DC brush less motor for low maintenance
- With appropriate adaptors for drilling, reaming and pin placement and wire placement
- Future up gradation compatible for Navigation interface for Joint replacement surgeries
- Micro processor controlled Hand piece Can be calibrate for the consistence performance
- Weight of hand piece with battery should be not more then 3.5
- Fully Cannulated 4.0 mm hand piece
- Should have Pistol grip Hand piece
- Tool less 360 degree attachments insertion
- Should be autoclavable
- Dedicated Forward and Reveres switch with safe mode
- Can be calibrating for the consistence performance

Sagital Saw Hand piece:

- Should have two speed controls with standard and fast mode. Free speed of 10000 - 12000 cycles per minute
- Micro processor controlled Hand piece Can be calibrate for the consistence performance
- Saw Noise level should not more than 89db
- Weight of hand piece with battery should be not more than 3.5 lbs
- Blade mount should be adjustable to different angles with 360 degree rotation
- Should have tool less mounting of accessories
- Should have DC brush less motor
- Should be autoclavable
- Should have safe mode

Reciprocating Saw Hand piece:

- Should have Safe Mode
- Should have minimum 13500 CPM
- Weight of hand piece with battery should be not more than 3.5 lbs
- Micro processor controlled Hand piece Can be calibrate for the consistence performance
- Should have DC brush less motor for low maintenance.
- Should have Pistol grip Hand piece
- Should have tool less mounting of accessories for all blades or attachments. .
- Saw noise level should not more than 93db
- Should be autoclavable.
- With different blades it should have maximum speed of 13500CPM

Drill and reaming Attachments:

- 1/4 inch Jacobs Drill Attachment with key
- Keyless Chuck

• Quick Connect attachment
• Reamer Attachment
• Hudson Modified Trinkle attachment
• Pin Collet Attachment
• K Wire Collet Attachment

Battery Charger:

• 220-240 volts charger and should have the feature to count the charging cycle for a particular
battery,
• Should have capability to identify the worn out battery
• Should have to charge four batteries at a time
• Should have an indicator to provide battery status for charging.
• Should be able to check over autoclaved battery cycles (Number of Time and Total time)

Battery Kit:

• NiMh/Ni Cd batteries - 4
• Should have a run time of minimum 17 minutes
• Should include Autoclavable outer housing
• Shield to protect battery from the housing
• Opening of battery housing for easy insertion of battery
• Should have option for autoclavable batteries

Sterilization Case:

• Should be accommodate all hand piece, attachment and accessories for autoclave

System should be USFDA Certified or European CE Certified

3:-

Technical Specification of ELECTROSURGICAL-CAUTERY-Qty. 03

Description and Specification: -

1. System should **US FDA Certified OR European CE Certified,** Certificate should be attached with Tender.
2. Micro controller based isolated Electrosurgical Generator having both Monopolar and Bipolar outputs designed for all surgical procedures.
3. Smart generator should be able to monitor changes in tissue impedance continuously and adjusts power.
4. Monopolar outputs should have three cutting modes: -
   a) Low Cut for delicate tissue or Laparoscopic cases having maximum power of 300 W.
   b) Pure cut for clean, precise cut in general surgery having maximum power of 300 W.
   c) Blend mode for cutting with homeostasis having maximum power of 200 W. All cut modes should be able to adjust output power depending on tissue density by less than 15% or 5W, Whichever is greater?
5. It should have three Coag Modes with maximum power of 120 W
   a) Desiccate mode for low voltage contact coagulation suitable for Laparoscopic and delicate tissue work.
   b) Fulgurate mode for efficient non-contact coagulation in most applications.
   c) Spray mode should have randomized spray effect of varying amplitude and frequency for coagulating large tissue areas with minimum depth of necrosis.
6. It should have three bipolar modes with maximum power of 70 W
   a) Precise mode to have fine control of desiccation in delicate tissue.

b) Standard mode for applications at low voltage to prevent sparking.
c) Macro mode for applications on tissue with high resistance.

7. It should have patient plate monitoring facility and should give audiovisual alarm and deactivate output if contact between patient and patient plate is not proper to eliminate the risk of patient burns.
8. The unit should have two hand switching and two Foot switching Monopolar outputs and one hand switching and foot switching bipolar output.
9. It should have membrane keyboard for power settings.
10. The unit should have individual digital display of power for Bipolar, Monopolar cut and Monopolar Coag.
11. The unit should have temperature sensing cooling fan, which should operate automatically to protect generator from thermal damage.
12. It should have RS232 serial port to interface with computer to reduce the time and effort in problem diagnostics.
13. The unit should be software upgradeable.
14. The unit should be compatible with Argon beam Coagulator and Ultrasonic Surgical Aspirator & Smoke evacuation System.
15. The unit should have RF activation port to tell other Equipment like ECG or EEG that RF current is being generated.
16. The unit should not have RF Leakage current more than 150 mA.
17. It should be Compact and light weight, weighing less than 10 Kg.
18. The unit should be operational between 170V AC to 260V AC, 50 Hz. (should not require stabilizer)
19. It should have safety standard of UL, CUL, and IEC 601-2-2.
20. It should be compatible with Tissue Select.
21. It should be compatible with Robotics arm.
22. It should be compatible with Cook' s Lead Extraction system.
23. Accessories
    a. Monopolar Footswitch-1no.
    b. Bipolar footswitch-1no.
    c. Reusable Hand switching Pencil- 2nos.
    d. Disposable Patient Plate Monitoring System-50 nos.
    e. Bipolar Forceps-2no.
    f. Forceps Cord-2nos
    g. Universal Adapter-1no.

(c):-Technical Specification of LED O. T. Light: "Double Dom"-Qty-03

a. Should be LED based microprocessor control technology.

b. One major dome and one satellite dome.

c.Intensity at 1 meter distance 1, 50,000 to 1, 60,000 lux for satellite dome.

d. Colour Temperature: 4500-5000 K.

e.Having on off switch and light intensity control.

f. Homogenous luminous field with lowest possible amount of shadow.

g. The contrast between the lighted area and the surrounding should not cause stress to the surgeon's eye.

h. Depth of illumination should be 120-140 cms. or more.

i. Illuminated field diameter should be approx. 20-30 cms.

j. Increase in temperature near head should be specified and should not be more than 1^{0}C.

k. Colour rendering index (CRI) should be 93-98.

l. Height adjustment by sterilisable handle.

m. LED life span 50000 or more Hrs.

n. Light field adjustment by sterilisable handle.

o. Control panels on the light assembly as well as away from it for adjustment of light intensity, illuminated area and for switching on and off, focusing etc.

p. The light head should be so constructed as to provide optimum conditions for laminar flow.

q. Provision for attachment of Camera Head.

r. It should have provision for using it during minimally invasive surgery maintaining the correct vision of the screen.

s. **System should be USFDA Certified OR European CE Certified**

e:-Technical Specification of Orthopedics O T Table-Qty.03(Ortho and General attachment)

Description of Function:

1. Operating tables provide an elevated surface that supports the patient's body during surgical procedures, stabilizing the patient's position and providing optimal exposure of the surgical field.

2. C-arm compatibility with electro-hydraulic operation table.

3. **Essential Technical Specifications**:

- The Electro-Mechanical driving mechanism assures smooth and quiet movements of the table top.
- Radio - Translucent Table Top for use with "C" Arm image intensifier.
- All the movements of the table including Height, Trendelenberg, Reverse Trendelenberg, Lateral Tilt, Height Adjustment, Back Section Adjustment are precisely and smoothly controlled by Portable Hand Control Unit / Remote with feather touch symbolic buttons.
- Built-in Kidney Bridge.
- Head and Leg section are detachable and manually operated by means of Ratchet system.
- Base and Column covers are made of Stainless Steel for easy cleaning and hygiene.

- Stainless steel side rails with clamps accept all standard accessories.
- Patient load capacity minimum 270 kg.

4. Slandered Accessories

L-shaped Anesthetic Frame	1PC
Shoulder Support with pad:	1Pair
Adjustable Arm Support with cushion	1Pair
Arm board with S.S. Top:	2PC
Lateral Support with pad:	1Pair
Wrist Strap:	1Pair
Knee Crutches Goepel type	1Pair
Water proof Rubber Mattress	1 set

5. Orthopaedics Accessories

Orthopaedic Leg Traction Device
Orthopaedic Hand Traction Device
Hip Nailing Support (INNER THIGH REST WITH PAD)

Tibia Support L-Shaped Knee Rest with pad
Steinman Pin Holding Clamp
Raised Arm Rest with pad

Hand Operating table with Mattress

6. Neuro-Surgery Accessories

Neuro-Surgical Attachment for Prone/Sitting Up-position Head-Rest

S.S. Skull-Clamp for micro-neurosurgery
Neuro-surgery Head Rests

Sugita Head Clamp

'M' type face Head Rest

Spine Surgery using Spinal Bridge.

7. Manufacturer should have ISO certification for quality standards

Group--D;- T B & Chest

Adult Video Bronchoscope set with Std. Accessories.

Adult Video Bronchoscope :

1. It should have Superior HDTV image quality with crisp, clear images and true –to life color.
2. Should have facility for leakage testing.
3. Scope should have minimum three user programmable remote switches to improve operability
4. Should have Narrow Band/ I-SCAN /FICE imaging facility.
5. Insertion outer Diameter should be 6.0mm or less.
6. Channel diameter should be 2.8mm or more.
7. Insertion tube length should be 600mm or more
8. Field of view should be 120 degree or more
9. Depth of field should be 3-50mm or better.
10. Angulation-UP-180 degree, down-130 degree or better.
11. Minimum Visible distance should be 3mm or less.
12. Should be compatible with laser and electrocautery.
13. Should have Scope ID function.
14. **The equipment/ System should be USFDA approved**
15. It should beSupplied with the slandered accessories which must include the following:

A- Video Processor:

- Should be Compatible with Analog, HD-SDI and DVI output & 16:9&16:10 output for a HDTV monitor should be available
- Should contain the electronics to operate dual focus for clear visibility of near &far objects
- Equipment with high resolution HDTV imaging capacity.
- Compact,light weight (10-11) and ergonomically designed.
- NBI/FICE or I-scane capacity for compatibility with NBI/FICE or I-scan video scopes.
- Recording of both still &moving images
- In built/ Portable memory &USB slot for image recording
- Automatic IRIS control & automatic white balance
- Picture in Picture display &index function ability
- Electronic zoom atleast upto 1.5x
- Equipment withMemory backup.
- Should have preFreeze function for image stabilization
- It should be Compatible with EBUS (Endobronchial ultrasound) scope.

B. Light source (xenon short arc ozone free 300 watt lamp);

-Xenon light with scope compatibility having lamp life of at least 500 hours.
Eemergency halogen/LED light for backup.

©High definition LCD monitor

-At least 21 inch full HD LCD monitor with high resolution 1920*1080 (WXGA)
-Lower power consumption
-Aspect ratio 16:10
-Should have picture-in-picture and picture-out-picture for viewing side-by-side split screen images.

(D)Compact trolley

-Should be made of stainless steel capable of carrying the weight of all the equipment's - should have multiple shelves to keep accessories mentioned.

(E)Essential Accessories FORCEPS

(Reusable)

-Foreign body forceps

-RubberTip	2
-Alligator jaw/crocodile	2
-Retrieval Basket	1
ii. Biopsy Forceps	8
B) Cytology brushes with sheath-10	
C- TBNA needle with sheath- 2 sets	
D- Biopsy valves (Reusable) -2	
E) Suction valves ((Reusable)2	
F. Cleaning brushe (reusable)	2
G. Bite Block (reusable)	2
H. Leakge Tester	1
I. Cleaning and Maintenance kit	1

(F) Computer and accessories – atleast 3rd generation Intel core 17 proccesor,8 GB ,20"TFT color monitor DVD r/w, keyboard ,mouse, windows 7/8 , disc drive (at least 500 GB)and laser color printer ,trolley &1 KVA online to be supplied.

(G)Software for image capture

(H)Voltage stabilizer /UPS

(1) **Terms And conditions:**

Company should give a certificate that the model quoted is the latest and spares will be available for next 10 years.

The bronchoscope and all the accessories mentioned above should be by the same manufacturer.

In case of Essential accessories as mentioned in the section E . they should be manufactured as that of the bronchoscope or USFDA certified if being provided from a company other than the bronchoscope.

Group - E- Radiology (OPG Dental Machine)- Qty. 01

EQUIPMENT	SPECIFICATIONS	QUANTITY	
DENTAL OPG MACHINE UNIT WITH CEPHALOMETRIC FACILITIES AND DIGITAL FILM PROCESSOR	• The machine mode must be type approved by AERB (Atomic Energy Regulatory Board) • Corrosion free construction • Should have laser beam / bright beam for accurate alignments of reference anatomical Land marks. • Should have provisions for programming depending on the patient male, female and Child. • Should have high frequency X-ray generator machine. • Should have constant magnification for the whole length and width of the image. • Central touch screen console for easy operation of the equipment preferable. • Should have provision for sitting and standing imaging positioning • Voltage 60-80 kv adjustable • Line voltage 230 V 50Hz (voltage stabilizer of required capacity should be provided for OPG machine & digital film processor) • Anode current up to 12 mA or more. • X-ray tube should confirm to the latest radiation safety standards. • Should possess Automatic soft tissue filtration. • Should have functional and easy to use head positioned which guarantees accurate Positioning for all Cephalometric projections. • The ear posts and nasal positioners of durable quality, hygienic and fully transparent to Radiation should be provided. • Automatic collimation for Cephalostat or OPG • Aperture selection should be automatic. • Should include, (lateral Ceph, frontal Ceph, all lateral and multi-angle TMJ views etc.) • Exposure time should be variable from 0.2 to 5 sec. • It should have panaromic X-ray imaging. • Should have movement technology, multi – motor with motorized carriage Movement. • Should have up/down movement.	**1**	

	• Should have panoramic examination programs for high resolution panaromic imaging. • Exposure time should vary according o the anatomical landmarks • X-ray system generator should have high frequency, constant potential, microprocessor Controlled tube voltage-40-80 KV, tube current 2-10mA, or more. • **X-ray tube**: • It should have focal spot: 0.5 mm or less • It should have total filtration 205 mm AL eq. • Standard accessories: • Chin support. • Temple clamps. • X-ray exposure switch with extensible cable. • Hand grips. • Disposable bags • Bite blocks with supporters. • Accessory trays. • **Electrical requirements**: • Power supply voltage AC 230 V ± 10% • Frequency 50Hz • Power low power rating • The unit must be supported with a digital film processor • Lead apron, thyroid collar and Gonadal shield and Dosimetry badges must be provided with complete unit. **Make**: **IMPORTED PREFFERED EXCEPT CHINESE MAKE** ▪ Equipment with latest specifications will be Preferred ▪ 5 years warranty is must ▪ Must comply with rules and regulations of national & international radiation safety. ▪ Cost of entire unit should include the cost of transportation, installation with required size lead screen fixation. ▪ (inclusive of all taxes) **The equipment Should have a US FDA/ European CE approved & AERB compliant.**		

Group-F- ENT Deptt-

1:- Operating Microscope-Qty.01

Motorized focus;With working distance 200mm (+-25) to 500mm(+-25), Motorized zoom; 1:6 zoom ratio, 10x/12.5x magnetic widefield eyepieces with integrated eyecups, Apocromatic Optics.
light source with 300 W xenon preferable or less, Automatic Iris Control for adjusting the illumination to the field of view, Individual light threshold setting, Focus Light Link: working distance controlled light intensity, Display of remaining lamp life time
Multifunctional programmable handgrips, Magnetic clutches for all system axes, Central user interface XY robotic movement in 3 axes (variable speed)
Auto Balance/Sensor Aided Balance.The Microscope Should Have Electromagnetic floor Stand.
22" HD video mounted on main microscope stand. Integrated 3-CMOS/External SD video camera, Integrated /External video still image capturing on HDD and USB-media
Video-in for external SD video sources,Interface for micromanipulator,
Stereo co-observation tube with minimum two joints. Wired foot control panel.
Should be European CE/US FDA approved product Comprehensive training for lab staff and support services till familiarity with the system.Electrical Power: AC 220V, 240V, 50/60 Hz

Operating microscope drapes -100

Spare bulbe-2 no.USB power back up for min.30 min.

II- Endoscopic Sinus Surgery

1	Nasal rigid Endoscope	One	0 degree, Ø4mm×175mm
2	Nasal rigid Endoscope	One	30 degree, Ø4mm×175mm
3	Nasal rigid Endoscope	One	75 degree, Ø4mm×175mm
4	Holder	One	Holder-Ø4mm×86mm
5	Laryngoscope(with handle)-	One	70°, Ø6mm×190mm
6	High definition endoscopic camera	One	Digital 3-CCD, automatic and manual white balance, Vertical Mounted Camera Control Buttons, Digital integrated camera system , Superior visualisation , One-hand control
7	Endoscopic image processor	One	Full HD quality, ICM modul, Capture Full HD still images (1920 x 1080), Record videos in SD (MPEG4-format), Intuitive and easy to use, Suitable to connect a USB printer (Plug & Play), Functions controllable via camera head buttons
8	Monitor	One	17”
9	light source	One	Xenon of 300W
10	Fiberoptic cable	One	3 meter

11	FESS Devise carrying trolley	One	Compactable with FESS set

III-ENDOSCOPIC SINUS MICRODEBRIDER & HIGH SPEED DRILL SYSTEM-Qty.01

ENDOSCOPIC SINUS MICRODEBRIDER & HIGH SPEED DRILL SYSTEM	01	**Console & Footpedal** • Should be a versatile powered ENT system, that lets to choose just the power required • for various ENT and Aesthetic related surgeries • The system should be suitable for wide variety of procedures ranging from • Rhinology, Transnasal procedures, Otologic procedures, Nasopharyngeal / Laryngeal / tracheal and Bronchial applications. • Console should have in-built, user friendly interactive menu and illustrative help guide • • Should have a Touch screen monitor for better visibility of Speed and Modes. • Should be able to adjust the irrigation levels and bur/blade speed with the touch • screen control. • The various parameters should be able to adjust either from touch screen panel or • from the multifunction foot switch. • Should be able to connect multiple hand pieces at a time like Debrider hand pieces • (Upto 5000 RPM in Oscillating mode & 12000 RPM in Forward mode), Low • speed Stapes drill (Upto 16000 RPM) ,High speed Otologic drills (Upto 80000 RPM) • and Microsaws. • Console should recognize various hand pieces and automatically adjust the settings. • Should have in-built pumps for Irrigation (5cc / Min to 100cc / Max) . • Should have multifunction ergonomically designed foot control with light emission • for easy identification. • Should be able to control Speed, Forward and Oscillation modes from Foot Pedal. • Should be able to toggle between active hand pieces from the Foot control itself. • Should have option for remote control Irrigation to operate from sterile area. • Should have in-built Lens cleaning system for intra-operative cleaning of • various Endoscope lens. • Should have the provision to mount the console on various sizes of IV

		pole. **Debrider Handpiece :** • Should be able work up to the speed of 12000 RPM in forward rotation and 5000RPM • in oscillation mode. • Should have finger tip control to rotate only the tip of the blade up to 360 deg. • Should have straight suction path to reduce clogging and allow efficient tissue removal. • Should have integrated blade locking system to lock the blade tip rotation. • Should have integrated side grooves and cable clips to provide better tubing • management. • Should have Titanium body to avoid rusting. • Should be light in weight and ergonomically designed. • Should have different varieties of debrider Blades like Straight and Curved blades • range starting from 12 degree and available upto 120 degree. • Should have rota table laryngeal blades from 2.9 mm – 3.5 mm & 4 mm. Length from • 18 cm, 22 cm. 22.5 cm, 27 cm & 27.5 cm. • Should have Tonsillectomy , Adenoidectomy , Inferior Turbinoplasty blades. • Should have Tip-rotatable subglottic, tracheal, bronchial blades. • Should have frontal sinus straight & curved burs, DCR burs. **Stapes / Middle Ear advance surgery Handpiece :** • Handpiece weight should not be more than 2 OZ. • Should have variable speed footswitch control. • Should be able to vary the speed up to 12000 RPM. • Should be able work as an independent self-powered system and also have the option • to work with the console. • Oto-Flex burs should have color coding. • Should have the application in Middle ear or Stapes footplate surgery. **Drill Handpiece :** • Should be ergonomically designed electrical Drill System with high Torque up to • 38 mN-m and Power up to 120W • Speed should be variable from 10,000 to 75,000rpm. • Weight of the drill should not be more than 90gms and length should be less than • 8.0 Cm with a diameter not exceeding 1.70cm • Should have integrated cable to connect to console • No Lubrication or seal should be required to run the motor • Should have quick release and lock system for tools and attachments

		• Should be suitable for Mastoid, Skull base and Neuro Otology applications • Otology attachment of 7.5 cm length with straight & angled and attachment 7.0cm straight design for right balance in cutting efficiency, control, handling, and smoothness. • An extensive selection of dissecting tools should be available in cutting and diamond surface in various diameters 0.6mm to 8mm • In built irrigation should be available. • There should be option to connect to skull base burs to access through • endonasal approach **Trans Nasal Skull Base Burs / bipolar forcep :** • Should have burs enhance visualization with an endoscope and can help protect critical anatomy from a spinning bur shaft. • Fully sheathed bur shaft to help protect surrounding tissue from spinning shaft • 15° distal bend to enhance visualization when using an endoscope • 13 cm length with slender hub and long tube for head and neck procedures • Fully integrated irrigation to help cool bone and bur tube • Inbuilt Suction should be available in Bipolar forcep • Bipolar forcep should be available in straight sizes of 105mm & 170mm • Up curve Bipolar forcep should also be available in 170mm • Disposable suction tip should be available separately • Bipolar cable should be universal in nature

IV - ENT work Station.Qty-01

Main Unit

 Durable steel casing, non rusting, long lasting

 Large instrument surface made of stainless steel with dividers and heating system to heat the instruments, laryngeal mirrors and endoscopes.

 Device to Heat the laryngeal mirrors

 Compressed air system continuously adjustable from 0.1 to 4 bars for spray and politzering, spray liquid
with autoclavable nozzle for cleaning

 Handle for compressed air should be having a regulation valve

 Medication reservoir be made of stainless steel, should be detachable and suitable for all type of medications.

 Stainless steel tank for compressed air of capacity of 1.5 or more

 Compressor unit should be completely separate from suction unit

 Inbuilt motor suction unit with capacity of 35 liters per minute with maximum 92% vacuum.

 Should have a vacuum gauge, bacterial filters, 1.5 liters liquid container and effective device to prevent
overflow.

 Suction tube should have automatic on off switch and small ear rinse funnel

 Warm water rinsing Device with autoclavable stainless steel handle with snap closure system and fine

spray regulation valve
 Separate stainless steel tank to prevent mineral build up and heat up to 38 degree temp
 Cold water irrigation through existing water connection
 Automatic liquid container discharge system should be provided
 Suction tube cleaner with exchangeable re-usable adapter.
 X-ray viewer integrated in a writing draw with automatic on /off switch(Optional)
 Dispenser for cotton and paper
 provision for attachment of microscope
 Equip with waste container
 Endoscopy centre with cold light source with two outlets with 300 LED/XENON/HALOGEN light bulb
 Head light with fibro-optic cable to be used with above light source for examination
 Head light rest made of stainless steel
 Two warming quivers for rigid endoscope- should be removable for autoclaving and cleaning
 automatic on/off switch for single light outlet with light barrier
 Large writing surface
 Draw for computer key board along with swivel support for computer monitor(Optional)
 Power supply 220-240 volts/50 Hz
 Integrated Mono and Bipolar cautery system with all cables & probes/forceps

ENT EXAMINATION MICROSCOPE:

The ENT examination microscope with integrated, fanless high transmission, high performance LED illumination in
the microscope head.
 Integrated, fanlesshigh performance white-light-LED Luminescence: min. 120 klux (200 mm), 30 klux (400 mm)
 Color temperature: 5.500 K
 Optimized stereo effect by 24 mm stereo basis
 In built LED light source with SD camera OR HD camera with a facility to take images, video & transfer the same
to any smart phone via the wi fi card(Optional),
 Mechanical support arm for the microscope
 Expandable with scale projection at the image plane with a option of green filter Objective: 200 mm, (fine
focusing)
 Objectives with manual fine focusing Visualization:
 HD-camera with facility to record, take images and transmit the same through the wi-fi card to smart phone/
PC/ Laptop.(Optional)
wide-field eyepiece 10X to16x magnification
 Colour filter green, with pivot mechanism(Optional)
 The ENT microscope should be on castors with locking system-
 Monitor holder,HD monitor,lateral double hand grip

ENT PATIENT EXAMINATION CHAIR

 Should be motorized and ergonomically designed examination and treatment chair facilitating the posture
of both doctor and patient
 Heavy base casing
 All elements of chair should be anatomically shaped
 Seat should have motorized lifting device. Chair up and down ad recline up to 180
 Seat should have height adjustment for children
 Integrated foot switch for easy adjustment of height
 Should have complete rotation 360 degree with locking device
 Should be comfortably padded and folded back for enabling easy sitting of overweight and handicapped patient
 Head rest-15cm with adjustable height.

 Backrest adjustable and can be made to incline 10 degree forward to vertical position and backward completely to a horizontal position and can be rolled back
 Movement of armrest and footrest should be synchronized with backrest movement
 Chair should confirm to CE mark
 Power supply:220-240Volts/ 50Hz

DOCTORS EXAMINATION CHAIR

 Wide base, should have rolling casters for easy movement
 Should have back rest
 Easy height adjustment of hydraulic nature
 Comfortably cushioned seat with movement up and down

RIGID ENDOSCOPES

 4mm/0 & 30 degree nasal endoscope-1 in number
 2.7mm/0 & 30 degree nasal endoscope-1 in number
 Magnifying 90 degree/70 degree Laryngoscope with facility to focus manually - 1 in number

Flexible High resolution nasopharyngoscope, diameter 3.2 mm, working length: 300 mm 0°, angle of view 80°, depth of
focus: 5 mm infinite, bending 125 degree/125 degree 1 in number (Optional)

STROBOSCOPY (INTEGRATED- same manufacture)

 The LED stroboscope should be noiseless with flash light & pilot light for vocal cord diagnostics based on LED technology
 The LED stroboscope should have the variable phasing & slow motion mode, adjustablewith the footswitch.
Should display voice frequency, sound pressure level, audio output for archiving the voice signal including
attachable laryngoscope microphone also should have a body sound adapter for voice asthenic patient (
stethoscope adapter for clip microphone for a better connection of the microphone signal to the stroboscope control .
 The flash frequency should be 70 -1000 Hz, without reduction, sound level metering range 70-125 dB + / -
1 dB, operating modes , continuous light, slow motion 0.5 – 2 Hz, frozen image 0 degree – 400 degree,
hunting over the footswitch adjustable, light durable approx.., 50,000 hrs.
 The system should have a integrated LED light source, light durable approx., 50,000 hrs, brightness 220
kLux / 175 Lumen, length of the cable 1.9m
 The system should indicate the status of light- pilot light, flicker & slow motion.

Display and recording system

1. High resolving 1/3" CCD camera with high light sensitivity with Medical grade HD-LED/LCD monitor (min. 17-21”).

SOFTWARE:

- 1 no. Acoustic analysis/Recording of the voice signal software, archiving and recording the voice, and taking
report. Should have editing facility, annotations like arrow, text marker ,lines, circle can be done on images,
Should have audio as well as video capture facility

 1 no. P.C.(Personal Computer) should consist of a CPU, Keyboard and Mouse for installation for software.

The Principal Manufacturer Must Have Direct Presence In India For Direct Service Support.

Local Representative For After Sales Service Must Also Be there.

Training For Two Doctors Must Be Provided Locally.

List of Installation in India

All standard certificates required should have International CE/ FDA approval certification

Group -G- Cardiology

CATH LAB

a:- NEW CATH LAB (MECHANISED CPR SYSTEM) SPECIFICATIONS FOR NEW CATHLAB (MECHANISED BIPLANE SYSTEM)

1	**State of the art single plane cardiovascular system with flat detector technology digital imaging system for diagnostic procedures and interventional cardiovascular procedures, valvuloplasty , vascular Angiography, pediatric interventional cardiology and online DSA. The system must include all package for Cardiac applications.**
	1.0 Single Plane Gantry system
	1.1 The system should have slim design ‗C' arm gantries: one ceiling suspended providing full body coverage. Both gantry movements should be rapid, motorized & collision proof. Manual override by the operator should be possible.
	1.2 It should be possible to pre-programme the gantry and table for multiple/several user defined examination positions
	1.3 Gantry should have fast speed for angulations and positioning. The frontal system should have a speed of at least 15 degree/sec. for all positions.
	1.4 Head to toe coverage with Single plane without repositioning the patient should be available.
2	2.0 Table
	2.1 Table should be floor mounted long table with carbon fiber table top with easy patient transportation capability.
	2.2 Table should have at least +/- 15 deg head up/down table tilt and table pivot/ rotation facility
	2.3 It should support patient load of min 160 kg or more
	2.4 Table should have a Radial procedure compatibility arm/accessories as part of standard.
3	3.0 X-Ray Generator:
	3.1 100 KW or more high frequency generator compatible with high resolution imaging
4	4.0 X-Ray Tube:
	4.1 X-Ray tube should be with fine focal spot (small & large) with high cooling rate to ensure continuous operation, capable of pulsed fluoroscopy on both focal spots. The large focus power output should be 80kW or more. The Pulsed Fluoroscopy should be offered with pulse rate of 3.75 frames /sec to 30 frames/sec.
	4.2 The X-Ray tube should have Anode heat storage capacity of at least 2.4 MHU or more to run continuously for 6-8 hours without shutting off.
	4.3 X-Ray tube must be capable of long fluro time of at least 2 min at one go as occurs in CTO case without getting heated.
5	5.0 Radiation protection:
	5.1 The system should have integrated computer controlled (preferably automatic) X-Ray Beam filtering with copper filters of various sizesfor soft radiation filteration in both fluoro and acquisition mode .
	5.2 The system should have positioning of collimator blades without radiation.
	5.3 The system should have monitoring and display of X-ray dose during the patient examination. It should be possible to create a DICOM based dose report of the patient.

	5.4 System should meet all National & International safety standards & comply with BARC & AERB guidelines.
6	6.0 Digital imaging System:
	6.1 It should have flat panel detectors 30 cm X 30 cm to max of 30cmX 40cm.Optimal for both coronary and peripheral work. Atleast one detector could be peripheral and one coronary].
	6.2 Option for 3-4 zoom fields with smallest of atleast 6‖ or 15-16 cm in diagnol in both planes.
	6.3 System should have acquisition and processing in 1024xl024 matrix up to 25/30 fps
	6.4 System should have cine loop replay facility & Last image hold facility during fluoroscopy
	6.5 System should have image storage capacity of at least 1,00,000 images in 1024 x 1024 matrix.
	6.6 System should have capability of ECG display on the live image monitor and archive the ECG display along with angio images on CD, during the acquisition.
	6.7 System should have on-line & off-line validated coronary analysis and ventricle analysis program. The software should have Auto calibration facility for stenosis measurement with geometrical and densitometry calculations. The analysis should be possible from table side in the examination room and from the control room and review station possibly.
	6.8 The system should have table side control operation with touch screen for complete acquisition and post processing capabilities.
	6.9 The system should have on-line DSA capabilities in 1024 x 1024 matrix with acquisition frame rate of 1 frame/sec to 7.5 frames/sec.
	6.10 It should be possible to have digital rotational angiography and rotational DSA facility
	6.11 The system should have facility for storage of fluoro loop scene of last fluro run (as long as the run).
	6.12 The system should have auto image transfer to PACS facility in background mode
	6.13 The system should be quoted with 3D modeling/analysis of coronary arteries.
	6.14 The latest complete software and hardware for visualizing stent with extra high-resolution from table side control.
	6.15 It should be possible to do angle and distance measurements.
7	7.0 Monitors / Display :
	7.1 The monitor display system in examination room should be ceiling suspended and it should be possible to position it on the left or right side of patient table. The monitor should be a single high resolution monitor of at least 56‖ and 8 megapixel resolution with PIP facility to display live and reference image from each plane, patient hemodynamic monitoring, 3D image and CT imaging or IVUS images.One medical grade back up monitor to be provided in console room and one in review station (outside the lab)
	7.2 High resolution medical grade TFT/LCD monitors for live image of both planes in control room and monitor to display 3D image
8	8.0 Digital Archiving
	8.1 System should have facility of image archiving on CD/DVD in 512X512 matrix.

	8.2 Networking for auto Image transfer during procedure from cathlab in background mode without affecting the system operation into distant review stations.[2 in no]. One in seminar room and one in HOD office.
	8.3 All review station to have high end medical grade monitors.
9	9.0 3D Acquisition and Cross-Sectional Imaging :
	9.1 The system should have cross-sectional CT like imaging based on rotational angiography.
	9.2 System should have software/hardware package for guidance of valve implantation in TAVI procedure from rotational angiography data
	9.3 It should be possible to have 3D image reconstruction of vascular structure , Left atrium of heart and aortic arch from rotational subtraction angiography data. The cross-sectional & 3D images should have processing capabilities in the examination room and control room with dynamic 3D roadmaping
	9.3 System should have facility of auto positioning of C Arm depending upon 3D image . It should be possible to differentiate between devices like stent and artery in 3D image .
	9.4 System should have 3D fusion of cardiac CT data on live fluro for optimized performance in Chronic total occlusion (CTO)cases.
10	**10.0 IVUS and FFR**
	10.1 IVUS and FFR system should be offered with Intravascular Ultrasound (IVUS) with virtual histology (VH-IVUS) with motorized pullback to be integrated to the main laboratory and be able to display in main monitors, It should have both online &offline analysis.
	10.2 IVUS coregistration with angio images simultaneously must be possible.
	10.3 FFR software and hardware must be integral part of the system (preferably cordless).
11	**11.0 CATHLAB RECORDING SYSTEM (Electro-Physiology and Hemodynamic Recorder)**
	11.1 The following features should be available in the recorder • 12 Lead ECG Amplifier with floating input • At least 2 pressures with floating inputs • Time and amplitude measurement with electronic calipers • Laser Printer with minimum 16 MB memory with minimum 1200 dpi
	11.2 The patient connection box should be easy to install at the patient table in the examination room
	11.3 18" color wave form monitor with programmable layout and digital monitoring readout – Two No in control room should be offered
	11.4 Display on large 56"display in exam room should be offered
12	**UPS**
	12.1 System should be offered with suitable online full back up UPSwithatleast 30 min. battery backup for complete Cath Lab including cine and fluoroscopy. Emergency lighting should also be on UPS
13	**ACCESSORIES to be supplied :**
	13.1 State of the art High Pressure Injector – One (table mounted)

	13.2 Lead Glass 150 x 120 cm. (as per international radiation protection standard)
	13.3 Good quality, light weight Lead Aprons skirt top types with hangers - 6nos and wrap around 12 nos. (as per FDA standard)
	13.4 Thyroid Guard - 12 nos. (as per international radiation protection system)
	13.5 Ceiling suspended radiation protection - 1 no. (as per international radiation protection system)
	13.6 Table mounted radiation protection - 1 no. (as per international radiation protection system)
	13.7 Integrated two way communication system between control room and examination room.
	13.8 Light music system in the lab.
14	**Latest model ROTABLATOR console to be supplied along with.**
15	**It should be CE & US FDA Approved**

(b) SPECIFICATION OF High END ECHO Machine.- Qty. 01

1)Latest generation high end & Technologically advanced Digital Live 3D Echocardiography system for all adult, pediatric, fetal and TEE cardiac applications.
2) System should have: X Matrix probes suitable for both 2D and 3D in the same probe.
3) System should have minimum 40 lakh digitally scalable channels for simultaneous formation, acquisition and processing of multiple ultrasound beams and has a system architecture to process an entire bandwidth of frequencies from l MHz to 18 MHz System should support pulse coding and pulse shaping technologies.
4) Please mention number of digital channels in technical bid and highlight same in specification sheet.
5) System should have a dynamic range of minimum 180 DB so that variety of patient sizes can be handled without compromise. Please mention dynamic range in the technical bid with supporting specification sheet.
6) System should have high Resolution 2D Imaging, Colour Flow Imaging, M Mode, PW Doppler, CW Doppler, and Duplex & Triplex Modes. The probe must support a minimum of 2200 elements for exceptional 4D (Liver 3D) image quality.
7) System Should have good Tissue Harmonic Imaging for improved Image quality.
8) System Should have the state of the art Transmit Real Time Compound Imaging Technology with Multiple transmitted lines of sight, wherein Mages from different viewing angles are obtained and combined into a single compound Image at real-time frame rates for improved visualization & better Image quality in Vascular Imaging & to virtually clean up the Image of artifacts.
9) System Should have advanced Image Processing algorithms to analyse between targets and artifacts so as to sharpen target anatomy and reduce the speckle & artifacts for improved Image quality.

10) System Should have extended field of view imaging of structures, by continuously scanning & moving the Probe over the area of Interest.
11) System Should have advanced Tissue Doppler Imaging with high frame rate acquisition
of more than 300 frames per second.
12) System Should be able to perform advanced quantification measurements like Strain &
Strain Rate Quantification.
7
13)Should Measure the myocardial velocity and derives the strain rate and strain along user
defined M-lines, Capable of drawing up to 3 M-lines at a time, Capable of sub-dividing each
m-line into 8 sub-regions or according to user-defined sub-region sizes, Point of Interest tool
obtains value from any point on the M-mode display.
14) 2D based directional strain feature, providing the ability to define unlimited directional
chords, track any area of the image and compute the percent of the wall deformation for
each corresponding chord. It should be an easy, quick and accurate Strain method-Off line.
15) System Should have great ergonomic design, with dual touch control panel, which is
comfortable and convenient to avoid user muscle strain & stress injuries. Preferably a lightweight system should have a minimum of 21-inch Monitor, preferably a Flat Panel type.
16) Should have on-board workstation for storage and review of all exams, 2D, 3D Images,
loops, etc. One offline workstation with similar capabilities of on-board analysis and quantification of 2D should be offered.
17)System should have DICOM 3.0 print and store features. Images (including cine loops)
should be in standard DICOM format, which is compatible for transfer and review in existing workstation.
18)System should have inbuilt Image Management facility with facility for direct storage of
Images and loops in the Hard Disk Drive and also thumbnail review to view & edit Images,
loops and also reports.
19) System should have storage facility of images, loops in the hard disk drive of 160 GB or
more.
20) System should be able to transfer Images & clips to CD & DVD media (cine loop, one at
a time as desired).
21) System should support Live 3D, X- Plane and Live 3D Colour capable of supporting
Live 3D matrix Transducer (adult, pediatric and Adult TEE)
22) All customized quantification and analysis package for M mode, 2 D, Doppler, Tissue
Doppler, Strain imaging, Speckle tracking and 3D distance, volume etc. Should be offered
with the following:
(a) Adult 2D Echo Doppler Transducer with frequency ranging from 1-5 MHz

(b) Live 3D X matrix probe preferably 1 to 5 MHz for both 2D and 3D application on same
probe.
(c) Live 3D Echo Matrix Transducer for pediatric 2D and LIVE 3D (One Probe) applications with frequency range from 2-7MHz. Paediatric 2 D Echo Doppler
8
Transducer with frequency ranging from 3-7 MHz
(d) Neonate infant Echo Transducer with frequency ranging from 5-12 MHz/8
(e) Live 3D Echo Matrix Transducer for TEE 2D, Live 3D, Live X Plane, Full Volume and
3D Colour (One Probe) applications with frequency range from 2-7MHz.
(f) State of the art Fetal echo Colour Doppler probe.
(g) Integrated Stress Echo.
(h) Latest Pentium PC (off-line workstation: 1 no) with software for analyzing and quantification of2D data sets, (Strain, Strain rate, Colour Kinesis etc) CD writer with Image Management Software and colour laser Printer. PC should be offered with a flat panel display monitor.
(i) 2MHz continuous wave Doppler probe
(j) Complete myocardial contrast perfusion and imaging software.
(k)Complete myocardial contrast echo package (Myocardial perfusion & LV vol. Assessment)
(l) TEE probe stand (with capacity for 3 probes).
Note: Any equivalent technology of validated, approved and proven quality will be considered
Any equivalent feature of proven quality, validated for clinical application will be considered.
ECHO Machine Must be US FDA and CE approved.

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© TMT Machine

1 Description of Function

Exercise stress testing systems offer a wide array of unique diagnostic software options to evaluate myocardial function. Automatic arrhythmia detection, ST-segment analysis, and T-wave alternans are a few examples. In conjunction with a treadmill or ergometer, these systems provide a controlled environment for the observation of the effects of increases in myocardial oxygen demand: exercise-induced systolic hypotension, exercise-induced angina, and/or the appearance of a heart murmur during exercise.

2 Operational Requirements 2.1 System complete with PC, Software, TMT and necessary cables is required with Bluetooth enabled wireless ECG transmission module.

3 Technical Specifications

3.1 System should acquire and analyze 12 leads.

3.2 System should be based on Windows platform with 17|| color monitor having minimum resolution 1280 x 1024. 80 GB HDD, CD-RW, Mouse, UPS for analyzer.

3.3 Should provide standard Full Interpretation of Supine ECG with reasoning.

3.4 Display of real time 12 lead diagnostic qualities ECG waveform, average complexes beat of all 12 leads with superimposed color comparison along with digital value of ST level and slope. Print the graph on the recording paper.
3.5 Automatic detection, display, Storage and review of arrhythmia, Heart Rate, Double Product and METS. It should have online HR METs and ST running trends available on the screen during exercise.
3.6 System should have ability to manual edit of J & Isoelectric point during exercise. Filters for line frequency and special filters to reduce noise and baseline artifacts without compromising the ECG frequency response.
3.7 System should have full disclosure play back, review and storage of patient ECG raw data for unlimited numbers depending upon size of the hard disk. The unit should have the ability to readjust —J-ST‖ interval measurement + 1 m sec points and generate a new report from stored raw ECG data.
3.8 System should provide multiple and customizable printing formats as per user‘s choice on A-4 size high resolution thermal printer for online real time printings. Compatible laser printer for printing reports on plain paper also to be supplied.
3.9 System must have ECG trigger output to interface with external automatic devices. 3.10 Heavy Duty Treadmill : Noise free TREADMILL with speed ranging from 0.5 to 20 kmph and grade of 0 – 22% with suitable servo stabilizer.
4 System Configuration Accessories, spares and consumables 4.1 System as specified 4.2 All consumables required for installation and standardization of system to be given free of cost.
5 Environmental factors None

6 Power Supply

6.1 Power input to be 220-240VAC, 50Hz 6.2 Suitable Servo controlledStabilizer/CVT

7 Standards, Safety and Training 7.1 **Should be FDA and CE approved product**

8 Documentation 8.1 User/Technical/Maintenance manuals to be supplied in English. 8.2 Certificate of calibration and inspection. 8.3 List of Equipments available for providing calibration and routine Preventive Maintenance Support as per manufacturer documentation in service/technical manual.

Holter System 1.

Holter system provides for 24/48 hours and **7 days** of continuous ECG recording and analyzing for detecting heart rate abnormalities which may otherwise go undetected.

2 Operational requirements

Should be able to record 24/48 hours and 7 days of 3 lead ECG waveforms on small Holter Recorders

Should automatically detect and quantify different ventricular and supraventricular events , including atrial events (atrial fibrillation , isolated prematures , pairs , bigeminy , trigeminy , runs, shorts pauses, long pauses, bradycardia and tachycardia) and ventricular events (isolated ectopics, premature ectopics, interpolated ectopics late ectopics, R on T, bigeminy, trigeminy, couplets, triplets, and runs).

3 Technical Specifications

3.1 The system should be PC based with PC Specifications (HP/Compaq / Dell) (1 no: Desk top ; 1 No Lap top – 15|| screen size min.) as following: Computer Processor: i5 core. Memory: 2 GB RAM, Network read facility. Hard Disk: 500GB hard disk CD-ROM / WRITER: 52x-speed drive or faster. USB: Universal Serial Bus port.Min.4 ports Monitor: Color Super VGA 22|| flat monitor capable of displaying 1280 x 1024 resolution. Printer: HP LaserJet 2300 or higher. Slot: Minimum one free PCI expansion for card reading. Software: Vista Ultimate or higher. Should be supplied with a desktop (1 No) and a lap top (1No).	
3.2 Should provide continuous 12 Lead ECG capability that allows viewing and printing of a 12 Lead ECG from three channel ECG recording at any time during the 24\48 hour recording. The same recorder should have the capability of having 3 lead ECG for 7 days	
3.3 Should employ multiple analysis modes, including prospective, paging and superimposition, retrospective and a combination of retrospective and prospective modes that analyses normal ECG and isolated abnormals automatically but stops on complex arrhythmia; Holter software should have HRV analysis, HRV time domain analysis, HRV spectral analysis, and QT	
3.4 Should analyse three leads of ST segments with ST episode reporting and Heart rate variability on time and frequency domain	
3.5	Should provide unlimited normal, abnormal, and artefact templates with automatic classification, template matching and ability to merge \ unmerge on any template.
3.6	Should automatically stop on and display arrhythmia patterns, patient diary entries , and ST episodes.
3.7	Should provide a histogram to view all R to R intervals, all normal to normal intervals, all normal to ventricular intervals, all ventricular to normal intervals, and all ventricular to ventricular intervals.
3.8	Should provide QT and Pacemaker analysis
3.9	Should create custom reports templates
3.10	Trend Graphs –HR, RR interval, RR variance, 12-lead ST, SVPB, VPB
3.11	**(III) Recorder specifications :** 1. Should weigh no more than 120 grams with battery and flash memory installed. 2. Should acquire simultaneous three channel ECG with software to convert three the scanning device. 3. Should come with pacemaker software that automatically removes pacing recording with pacing pulses. 4. Should Store 24 or 48 hours of ECGS with no data compression. 5. Should use only one no AAA alkaline battery to provide up to 48 hours of three 6. Should have a LCD display of the patient‘s ECG during hook up to verify proper 7. Should use only 3 leads to record a three channel ECG. 8. Should be water resistant.

	9. Should synchronize the recording start and end time with the recorder time clock 10. Should have voice recording to store patient ID 11. Recorder should be tamper proof – i.e., even if the battery or CF is removed ntinue normally after the battery or CF is replaced. 12. Low battery alarm facility (audio/ visual)
4	**System Configuration Accessories, spares and consumables**
Higher configuration computer and printer	
5	The system should contain all the above accessories in integrated or as separate accessories **Environmental factors** The unit shall be capable of operating continuously in ambient temperature of 10 -40° C and relative humidity of 15-90% The unit shall be capable of being stored continuously in ambient temperature of 0 -50° C and

d:-_ 2 D Color Doppler echocardiography-03

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1. State of the art, fully digital, 2D echocardiography color Doppler system for both adult and pediatric patients including all basic and specialized cardiac and vascular applications.
2. System should have following display modes, covering all basic and specialized cardiac and vascular applications.
    a. M-mode should also have angular / anatomical M-mode (any axis M-mode) facility, with up to 3 M-mode omnidirectional cursors. M-mode should also show quantitative segmental wall motion scanning facility.
    b. 2D with facility for real time contrast studies.
    c. Colour doppler, pulse wave Doppler, HPRF, fully steerable continuous wave Doppler.

d. Should have tissue harmonic imaging capability with quantification.

e. Contrast harmonic imaging with quantification facility should be present.

f. Should have ECG gating with possibility of online as well as offline TDI and myocardial velocity with protocol templates for WM scoring and reporting with segmental wall motion analysis software for quantification of endocardial segmental motion.

g. Color coded tissue doppler must be available with quantification for myocardial thickness, strain and strain rate imaging with facility for real time and off line calculation of velocity of myocardial segments. Should preferably be displayed after intracardiac cycle in one single image.

3. Transducers should have broadband harmonics and compound array probes. System to be offered with phased array cardiac probes for adult, pediatric and neonatal probes and a linear probe for peripheral vascular studies along with TEE probes for adult and pediatrics applications.

   a. All probes should be multi frequency.

   b. 1.5-5 MHz electronic phased array for adult cardiac study.

   c. 3.75-7.5 MHz electronic phased array for neonatal / pediatric applications.

4. Should have at least 19” high resolution LCD color display.

5. Should have Scanning depth of 30 cms or more.

6. Should have minimum 3 active ports.

7. Should have high frame rates of more than 500 FPS.

8. Comprehensive measurement and analysis packages and report pages for all routine and advanced cardiac application.

9. Cine loop memory of at least 10,000 frame / 200 sec.

10. 1000 patient data memory should be available.

11. System should have algorithms to improve 2D image quality including optimization for spatial and temporal resolution.
12. At least 60 GB onboard HDD for storage.
13. Should have integrated hard disk for image storage / recall with complete image management and post analysis on stored images.
14. Should have full Dicom support inbuilt, ready for connecting to remote server / laser camera.
15. Able to transfer images and clips to CD & DVD as AVI files.
16. Direct compatibility to attach inkjet / LaserJet printer along with a CD-RW must be available.
17. Should be quoted with B/W thermal printer with 100 rolls with facility for color print.
18. Image management system with latest computer-Pentium-IV dual core, 120GB, HDD, DVD writer, CDR W and colour laser.

Appropriate

Technical Specification for IABP (Intra Aortic Balloon Pump)

1) The system should be the latest generation of pumps used for hemodynamic stabilization of sick patients in cardiogenic shock.
2) The IABP system should be compact and easily transportable to places on castor wheels.
3) Fast pneumatics to provide accurate and reliable ventricular support enhancing augmentation and improved afterload reduction. Preferably compressor based system for better drive gas shuttle speed.
4) Should have three modes of operation
   i) Automatic
   ii) Semi-automatic
   iii) Manual
5) System should be capable of automatically selecting appropriate trigger of ECG, pressure, or pacing spike and also accurately select the inflation and deflation points in automatic mode.
6) In automatic and semiautomatic mode, single ECG trigger should able to track various ventricular and atrial arrhythmias including ventricular extra-systole, bigeminy, trigeminy, couplets etc. and atrial fibrillation without any user intervention and continues to give optimal performance.
7) System should be able to trigger on 3-7 mm Hg of pulse pressure when used in pressure trigger mode.
8) Single key start-up with auto zeroing on start-up. Capability of zeroing manually whenever required.
9) Should able to display at least three waveforms at a time (ECG, Invasive BP at balloon tip, and Balloon pressure waveforms are must).
10) System should have large TFT display for brighter and very good visibility from a distance in any lighting conditions. Preferably should have touch-screen display.
11) System should have on screen indicator for Helium level in the cylinder and battery level for timely intervention to ensure continuous pumping.
12) System should be compact in such a way that Helium cylinder and other tubing's and fittings are positioned inside the system so that it does not occupy enough space and easy to maneuver.
13) On screen indication of standby time and should give alarm after 10-20 minutes to draw attention of user on the system being on standby.
14) System should have optical bleed back detection for early indication of blood coming in to the balloon lumen due to balloon leak.
15) Should have battery backup for at least 3 hours.
16) Peripheral vascular Doppler probe should be attached with/tethered to the main equipment for checking limb ischemia.
17) System should be supplied with the following accessories
   i) ECG cable with lead wires: 1 set
   ii) Invasive blood pressure transducer: 1 no.
   iii) Refillable Helium cylinder compatible with the system: 3 no.

iv.Ballones of different sizes for patient use 10 no.

V. 7-8 Fr. Sensor catheter.

18. The same machine must have been installed in India earlier and its satisfactory working certificate has to be attached.

19. **System should be US FDA approved or CE marked**.

20. Manufacturing company has to give undertaking regarding maintenance of the system and avaibility of accessories and spare parts for next ten years.

21. Latest authorization certificate in original should be attached with the quotation, failing which their tender application will be rejected. Photocopy/Xerox copy of authorization certificate will not be accepted.

22. The machine should come with required electrical stabilizer and should be computable with standard India electrical sockets.

21. It should have standard electrical safety norms

24. The spare parts should be easily available and the technical staff should be available in Delhi.

25. Demonstration to the department staff at the site will be required.

26. The system should come with the required log book and user manual in English

27. Demonstration of the complete system is must if required in two weeks time.

28. Price of all accessories including ballones should be quoted separately and the price should freez for at least three year from the time of installation.

Group-.H-RIO-

Vitrectomy Machine with LIO-Qty-01

Phaco Equipment — Specifications

1. Phaco system with inbuilt vitrectomy and diathermy unit.

2. Venturi system with appropriately rated compressor.

3. Gravity fed irrigation system.

4. Aspiration flow rate from lcc/min to 40cc/m in.

5. Vacuum range from 5 to 500 mmHg.

6. The reflux should be continuous flow from irrigation source.

7. Fluid and air vents.

8. Linear and non-linear ultrasound power with 40 KHz power band width.

9. The ultrasound hand piece should be of 4 /6crystal, light weight piezoelectric all titanium type.

10. Continuous, pulse, micro pulse and burst ultrasound modes.

11. The irrigation/aspiration should have linear flow rate and vacuum control.

12. Bipolar wet field for coagulation.

13. At least 4 programmable user presets.

14. Dual linear foot switch to control phaco power and vacuum simultaneously.

15. LCD display(preferred touch).

16. To operate from 200 to 240 V AC, 50 Hz input supply.

Vitrectomy Specifications

7000 Cuts / Minute or more

Venturi pump

Vacuum :1. Facility to generate direct venture vacuum of up to 600 mmHg or more through cassette system .

Cutter :1. Ability to drive vertical guillotine pneumatic vitrectomy cutter to 7000 cuts/minute or more.

2. Linear control vacuum and cut-rate simultaneously in vitrectomy mode.

IOP Control : 1. The capacity to monitor infusion pressure constantly.

2. The capacity to compensate the infusion pressure constantly which results in a more stable I0P.

Illumination

1. The system should have at least dual port Xenon/LED illumination.

2. The color coding of different gauges should be there.

3. The system should show the probe connected and automatically load the settings.

MIVS

1. The capacity to support MIVS options like 23 G and 25 G.

2. A single entry system.

Laser Facility

1. 532 green laser facility with 2 filters.

Other Features

1. Automated Silicon Oil Injection Capability

2. Auto Fluid / Air Exchange.

3. Pre filled syringe (SF6,C2F6 and C3F8).

4. Fully programmable footswitch with the facility to change procedural modes through footswitch.

5. The facility to digitally control the infusion pressure and the facility to toggle between a regular infusion pressure and a higher alternate pressure (to achieve tamponade effect) with the help of footswitch.

6. Facility for the extrusion of sub-retinal fluid.

7. Facility of voice re-confirmation.

8. Programmability to store various parameters.

9. Facility of fragmentations with the help of 4 crystal ultrasound hand piece.

10. Phacofragmatome handle

Should have safety certificate from a competent authority European CE / FDA (US).

Additional Accessories / Consumables

1. Phaco probe — Two.

2. I/A probe — Two.

3. Phaco tips 30

4. Phaco sleves 60

5. Casettes with tubing (phaco pack) 150.

Group-- I. Neuro Surgery

Neuro Endoscope for Cranial and spinal use complete with all accessories.

INSTRUMENTATION SET FOR ENDOSCOPIC THIRD VENTRICULOSTOMY (TREATMENT FOR HYDROCEPHALUS PATIENTS TO AVOID USAGE OF SHUNTS), COLLOID CYST, MARSUPLISATION OF ARCHNOID CYST AND MULTIPLE BIOPSY FROM VENTRICULAR TUMORS AND CYSTIC FENESTRATION.

S.No	Product Description	Qty
1	Ventriculoscope with Wide Angle Straight Forward Telescope 6°, angled eyepiece, outer diameter 6.1 mm, length 18 cm, working channel diameter 2.9 mm, irrigation/suction channel diameter 1.6, autoclavable, fiber optic light transmission incorporated.	1
2	Operating sheath for ventriculoscope , outer diameter 6.8 mm, working length 13.3 cm.	1
3	Obturator for Operating sheath for ventriculoscope.	1
4	Obturator for Operating sheath for ventriculoscope. use with optic Telescope.	1
5	Forward Oblique- Telescope 0°, enlarged view, diameter 2 mm, length 26 cm, autoclavable, fiber optic light transmission incorporated.	1
6	Telescope 30°, enlarged view, ø 3.3 mm, length 25 cm, autoclavable, fiber optic light transmission incorporated.	1
7	Click Line Scissors, single action jaws, pointed, diameter 2 mm, working length 30 cm, consisting of: Metal Handle, without ratchet & Outer Tube with insert.	1
8	Click Line Biopsy Forceps, both jaw parts movable, Ø 2.0 mm, working length 30 cm, consisting of: Metal Handle, without ratchet ,Outer Tube with insert.	1
9	Click Line Ventriculostomy Forceps, diameter 2.0 mm, working length 30 cm, consisting of: Metal Handle, without ratchet & Outer Tube with insert.	1
10	Click Line Grasping Forceps with teeth, 2.0 mm, working length 30 cm, consisting of: Metal Handle, without ratchet & Outer Tube with insert.	1
11	Scissors, pointed, lightly curved jaws, double action jaws, diameter 1,7 mm, length 30 cm.	1
12	Ventriculostomy Forceps, diameter 1.0 mm, flexible, working length 30 cm.	1
13	Biopsy Forceps, double action jaws, flexible, diameter 1 mm, working length 30 cm.	1
14	Click Line Biopsy Forceps, single action jaw part, 2.7 mm ø, working length 30 cm, consisting of: Metal Handle, without ratchet & Outer Tube with insert.	1

15	Adaptor, autoclavable, facilitates changing of telescopes in sterile conditions.	1
16	Injection Needle, flexible, diameter 2.5 mm, working length 45 cm, disposable.	1
17	Puncture Needle.	1
18	Coagulating Electrode, bipolar, 5 Fr.	1
19	Unipolar Coagulating Electrode, semi-rigid, diameter 1.3 mm, working length 30 cm.	1
20	Baloon Catheter, O.D. 1.0 mm, length 40 cm, volume 0.20 ml, sterile, single use, 10 pieces.	1
21	TAKE-APART® Bipolar Forceps, long, flat jaws, outer diameter 2.4 mm, consisting of: Bipolar Ring Handle, Outer Sheath, Bipolar Insert, for single use, package of 5, for use with Ventriculoscope.	1
22	Articulated Stand, reinforced version, only, L-shaped, with one mechanical central clamp for all five joint functions, height 48 cm, operating range 52 cm, with fastener.	1
	Additional instrument for paediatric NEURO ENDOSCOPY	
23	Neuro-Endoscope, with detachable handle, for freehand operating maneuvers, consisting of: Operting sheath, graduated, size 2.6 mm x 4.0 mm ,working length 15cm, with three working channels for irrigation/suction and for instruments size 1.3 mm, for use with telescope Handle, for operating sheath	1
24	Scissors, single-action jaws, semi-rigid, diameter 1.3 mm, working length 30 cm.	1
25	Bipolar Coagulating Electrode, semi-rigid, diameter 1.3 mm, working length 30 cm.	1
	Instrument for performing Endoscopic Management of CSF Rhinorrhea Optic Nerve Decompression, Pituitary Macro and Micro Adenomas Transclival Cordomas and for extended approached for all lesions from Cyistic Glioma to CVJ Junction using Transclival, Transplanum , transcribriform and Transphenoidal approach	
27	Straight Forward Telescope 0°, enlarged view, diameter 4 mm, length 18 cm, autoclavable. Fiber optic light transmission incorporated.	1
28	Suction and Irrigation Sheath 0°, for endoscopic diagnosis and surgery of the paranasal sinuses and anterior scull base, oval, O.D. 4,8 mm x 6 mm, with separate channel for suction and irrigation, for use with handles , cleaning accessories and telescope.	1
29	Forward-Oblique Telescope 30°, enlarged view, diameter 4 mm, length 18 cm, autoclavable. Fiber optic light transmission incorporated.	1
30	Suction and Irrigation Sheath 30°, for endoscopic diagnosis and surgery of the par nasal sinuses and skull base, oval, O.D. 4,8 mm x 6 mm, with separate channel for suction and irrigation, for use with handles , cleaning accessories and telescope .	1
31	Cleaning tube long for sheaths.	1
32	Cleaning Adaptor for irrigation channel of suction and irrigation sheath , LUER-Lock, length 3.5 cm	1

33	Cleaning Tube for suction/telescope channel of suction and irrigation sheath. LUER-Lock, length 23 cm	1
34	Suction and Irrigation Handle, with Push-Button Pressure Valve, for use with suction and irrigation sheath and consisting of: Suction and Irrigation Handle, Push-Button Pressure Valve	1
35	Nasal Scissors, medium standard model, working lenght 9.5 cm	1
36	Nasal Forceps, 45°, upturned, working length 11 cm, size 1	1
37	Nasal Forceps straight, size 1, working length 11 cm	1
38	Punch, up biting 60° forward, size 1 mm, working length 17 cm	1
39	Suction Tube, angular, O.D. 2.4 mm, tip curved upwards, ball end, with grip plate and cut-off hole, LUER, working length 13 cm	1
40	Take-apart Bipolar Forceps, width 2 mm distally angled 45°, horizontal closing, outer diameter 3,4 mm, working length 20 cm, consisting of: Handle, Outer Tube , Inner Tube, Bipolar Insert.	1
41	Take-apart Bipolar Grasping Forceps, size 3,5 mm, length 20 cm, for use with trocar size 3,9mm, consisting of: Ring Handle , Outer Tube , Inner Tube, Forceps Insert.	1
42	scalpel, with telescopic blade, consisting of: Handle , outer tube ,Micro-knife, sickle-shaped.	1
43	Antrum Punch, backward cutting, sheath 360° rotatable, with fixing screw, working length 10 cm, take apart sheath, for use with cleaning adaptor	1
44	Punch, circular cutting, for sphenoid, ethmoid and choanal atresia, diameter 3.5 mm, with cleaning connector, working length 18 cm	1
45	Coagulation Ball Electrode, diameter 2 mm, laterally curved, working length 13 cm	1
46	Suction- Curette, with round wire, ID 5 mm, tip angled 45°, LUER, length 25 cm	1
47	Suction, Curette, basket-shape, round wire, size 5 mm, rotating tubing- connector, LUER, length 25 cm,	1
48	Scissors, 45°, delicate, Sheath 360° rotatable, working length 18 cm	1
49	Suction Tube, with cut-off hole, drop-shaped, with distance markings, LUER, conical distal end, 8 Fr., working length 15 cm	1
50	Ring- Curette, horizontal, round wire, ID 5 mm, long curved, with round handle, length 25 cm	1
51	Ring- Curette, round wire, ID 3 mm, tip angled 90°, with round handle, length 25 cm	1
52	Ring- Curette, round wire, ID 5 mm, vertical long curved, with round handle, length 25 cm	1
53	Elevator, double-ended semi-sharp and blunt, length 26 cm	1
54	Elevator,double-ended angulated semi-sharp shovel blade, blunt end slightly curved, length 26 cm.	1
55	Dissector, sharp, round spatula, tip angled 45°, size 2 mm, with round handle, length 25 cm.	1
56	Dissector, sharp, round spatula, tip angled 45°, size 3 mm, with round handle, length 25 cm.	1

57	Dissector, sharp, tip angled 15°, size 2 mm, with round handle, length 25 cm.	1
58	**End vision System**	
59	1-Chip Camera Control Unit (CCU), with integrated Image Processing Module, Color System: PAL/NTSC, Power Supply: 100-240 VAC, 50/60 Hz consisting of: Camera Control Unit , Mains Cord ,Connecting Cable, length 180 cm Video (Y/C) Connecting Cable, length 180 cm Connecting Cables, for remote control of Video-Printers Cable, length 500 cm, Keyboard w. Us-English character set.	1
60	Camera Head with 2 freely programmable Camera Head buttons, Color System PAL, with integrated Parfocal-Zoom, focal length f = 25 - 50mm (2x).	1
61	Cold Light Fountain with one 175 Watt XENON lamp and one light outlet Power Supply: 100-125/220-240 VAC, 50/60 Hz consisting of: Mains Cord.	1

High Speed Drill (Pneumatic and Electrical) Complete with all accessories- Qty.01

(1A)- Specifications for High Speed Pneumatic Drill Complete with all accessories.

The pneumatic drill should have a minimum rpm at least 75,000.
Straight and angled attachments of various lengths should available for Neuro and Spine Surgery.
Should have foot & hand control with variable speed
Sterlizable through Flash or regular steam autoclave
In line automatic lubrication and filtering during the operation through single cartridge. No, intra-operative oiling of motor should be necessary.
Sound level not more than 70dB @ 76000rpm @ 120psi / 8 bar
Attachments should have design for better visibility under microscope.
System should have quick connect but lockable attachments of various sizes.
Main motor unit should be detachable from air supply hose.
Motor should have a safety stop.
Single use and reusable burrs should be available.
Perforator driver with cutter, Straight, Curved and Hooded Telescopic attachments& Bone Mill Attachment and Cutters should be available
Irrigation pump should be available. Irrigation spray nozzle should be supplied with each attachment.
Should be able to use Saw hand piece with same system Should share tools and attachments with similar Electrical system.

System should have Following Attachments and Accessories:-

Various Telescopic, Straight ,angled & footed Attachments and their Dissecting Tools should be quoted
Various Dissecting Tools such as Acorn, Cylinder, Match head, Ball should be quoted.

Transversal saw, reciprocating saw & mini saggital saw should be supplied with this system along with blades for cranial & maxillofacial surgery.

Cranial Perforator should be supplied with reusable perforator.

Spare Cutter should be supplied with Cranial Perforator.

Single and reusable drill bits should be available.

All drill bits & accessories for Cranial & Spinal surgery should be quoted.

Should have acceleration and stopping characteristic adjustable.

<u>High Speed Electrical Drill with all accessories.</u>

Electrical Drill System with Power and High Speed (Variable from 0 to 80,000rpm).
Should have touch screen console to allow visible display and setting of maximum high speed.
Hand & Foot control for varying the speed and for reverse rotation.
System should give audible beeps / alerts while in reverse action.
No Lubrication or seal should be required to run the motor.
Motor should be supplied with irrigation system, Irrigation spray nozzle should be supplied with each attachment.
The Foot control and Motor cables should have identification marks and Cables should be lightweight, flexible and autoclavable.
Should have quick release and lock system for tools and attachments.
The system should have variety of footed attachments, small and large bore Straight and angled attachments.
Attachments should have design for better visibility under microscope.
Should share tools and attachments with similar Pneumatic system.

<u>System should have Following Attachments and Accessories:-</u>

Various Telescopic, Straight ,angled & footed Attachments and their Dissecting Tools should be quoted.

Various Dissecting Tools such as Acorn, Cylinder, Match head, Ball should be quoted.
Transversal saw, reciprocating saw & mini saggital saw should be supplied with this system along with blades for cranial & maxillofacial surgery.

Cranial Perforator should be supplied with reusable perforator.

Spare Cutter should be supplied with Cranial Perforator.
Single and reusable drill bits should be available.
All drill bits & accessories for Cranial & Spinal surgery should be quoted.
Should have acceleration and stopping characteristic adjustable.

Should have container for hand piece for storage and autoclaving.

Essential accessories must be quoted mentioning quantities .Minimum it should last for two years.
Running cost per patient should be mentioned.
Manufacturer/ supplier should have ISO certificate to quality standard.
Should be complaint with IEC 61010.1 (or any other international. equivalent egg. EN UI610 covering safety requirements for electrical equipment for measurement control and laboratory use.

Should be FDA, CE or BIS approved product.

Comprehensive training for lab. staff and support services till familiarity with the system
User technical maintenance manual in English.
Certificate of calibration and inspection.
List o equipment available for providing for calibration and routine maintenance support as per manufacturer documentation in service technical manual.
List of important spare parts and accessories with their part numbers and their costing.
Log book with instruction to daily, weekly, monthly and quartly maintenance checklist. The job description of hospital technician and company services engineer should be clearly spelt out.
Compliance report to be submitted in tabulated and point wise manner clearly mentioning the page/para nos. of original catelouge/data sheet .
any point if not substantiated with authenticated catalogue/ manual will not be considered.

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