

# **BIDDING DOCUMENT**

**TENDER NOTICE No.: 17 / 2015 - 2016 / Biomedical Equipt//IGIMS/ Store**



**Supply, Installation & Commissioning of Bio-Medical Equipments / IGIMS/ Store**

**TENDER NOTICE No. -17/ 2015 - 2016 /Bio Medical Equipment/IGIMS/Store**

Issued to:

Cost of Document: Rs. 2000 /- (Rs. Two Thousand Only)

Paid By:           Cash:           Receipt No.:

Demand Draft:    No.:

Issuing Bank:

**(Authorized Signatory)**

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

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## IMPORTANT DATES

|   |   |
|---|---|
| <b>Last date for Purchase of Bidding Document</b> | Can be downloaded from Institute website                                      |
| <b>Last date for submission of Technical bid</b>  | 22/01/2015 up to 4. 00 A.M.<br>by registered/speed post/ Courier only         |
| <b>Date of opening of technical bid</b>           | 23/01/2015 at 3.00PM in conference hall<br>IGIMS, Patna                       |
| <b>Date of demonstration of equipment</b>         | Will be informed to the qualified bidders<br>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 \_\_\_\_\_ drawn in favour of **Director I.G.I.M.S. - Patna (payable at Patna)** towards **EMD / Bid Security**. **NO Scane copy should be loaded on site**  
  
**(EMD AND COST OF BIDDING DOCUMENTS MUST BE SUBMITTED IN SEPRATE ENVELOP.TENDERS NOT ACCOMPANIED WITH EMD/BIDSECURITY ALONGWITH THE TECHNO-COMMERCIAL BID SHALL BE SUMMARILY REJECTED, DO NOT ATTACH SCAN COPY OF EMD WHILE UPLOADING THE TENDER AND ALSO DO NOT MENTION THE AMOUNT OF EMD).**
- 2.1 **TENDER FEE RS.2000 IS APLLICABLE FOR EACH GROUP.THE BIDDERS PARTICIPATING FOR MORE THAN ONE ITEM OF THE GROUP MAY UPLOADED THE SAME SCAN COPY OF TENDER FEE.**
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.      | <p><b>Status of Bidder:</b></p> <ul style="list-style-type: none"> <li>• Manufacturer or Authorized Agent of the Manufacturer</li> <li>• Whether Public Undertaking, Public Ltd., Private Ltd. Company or Proprietary Firm/partnership firm</li> <li>•</li> </ul> <p>(Please attach Notary certified <b>MANUFACTURER'S AUTHORISATION FORM</b> as per <b>FORMAT</b> placed at <b>Annexure – III</b>)</p> |          |         |
| 2.      | <b>Power of Attorney as per Annexure - V</b> in favour of person to sign, submit and negotiate the bid.   |          |         |
| 3.      | Certificate towards market standing of minimum 05 years in the area of supply and or maintenance of bio-medical 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.      | <b>Notary certified User List</b> (List of Govt. /Semi Govt., Reputed Pvt. Hospital) where quoted model of the items has been supplied and installed.   |          |         |
| 8.      | <b>Notary certified Supply</b> order copy (Minimum 3nos. or more) issued by Govt./Semi Govt./Reputed Pvt. Institutions/organization for the quoted items. ( same model)   |          |         |
| 9.      | <b>Notary certified Performance certificate</b> of the same supplied machine (of quoted make and Model) issued by <b>Head of the depts. or Institution</b> after a minimum period of six months of installation   |          |         |
| 10.     | Prerequisite (if any) for installation of the Machine, if any, to be provided by the Institute.   |          |         |
| 11.     | Whether rates quoted are inclusive of all taxes or not.   |          |         |
| 12.     | Whether rates are quoted as per format mentioned in the Bidding Document or not.  |          |         |
| 13.     | Affidavit to the effect that the bidder is not Blacklisted by any Govt. agency or have no pending case either Civil or Criminal against them.   |          |         |
| 14.     | Affidavit, to the effect that the bidder is not   |          |         |

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

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

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

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

(Name of the Bidder with signature & seal)

## ELIGIBILITY CRITERIA

|    |  |                    |
|----|--|--------------------|
| 01 | Manufacturers or their authorized dealers/Indian subsidiaries/direct importers having a place of business in any of the States of India are eligible to participate in this tender.  | Mentioned Page no. |
| 02 | The bidder and manufacturer of the equipment offered should be in the business of the supply and installation of same / similar equipment for the last five calendar years.  |                    |
| 03 | <p>(a) The manufacturer should have completed at least 05( Five ) nos. installations of the quoted items in Govt. /Pvt. Institutions /Hospitals in India. The installations mentioned by the manufacturer in their offer must be functional and performance certificate for the same issued by the user concerned also be attached with the offer.</p> <p>(b) The bids quoted as the authorized representative of the manufacturer meeting the above criteria 02 (a) should have also supplied and installed at least 03( Three) nos. installations of the quoted items in Govt. /Pvt. Institutions/ Hospitals in India in last five years from the last date of submission of tender. The installations mentioned by the authorized representative in their offer must be functional and performance certificate for the same issued by the user concerned also be attached with the offer.</p> |                    |
| 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 31 <sup>st</sup> 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 TO BIDDERS

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

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

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

**PART - II titled as PRICE BID** 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](http://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 submission of completed bidding documents is 22/01/2015 up to 4.00PM and will be opened on( technical bid only) 23/01/2015 at 3.00PM in conference hall IGIMS, Patna.

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

**a:- Earnest Money 2% of the cost of equipment required** to be submitted along with tender by Demand Draft from any scheduled Indian Bank ( valid up to one year from the date of technical bid opening.) only along with the tender 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 30<sup>th</sup> 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 located in India, in the form prescribed in the tender document as Annexure- IV (valid up to one year from the date of technical bids opening) Bank Guarantee in any other format will not be acceptable and render the bid non-responsive.
    - iii. The successful Bidder's EMD will be discharged upon the Bidders signing the contract and furnishing the performance security. The EMD deposited in the form of DD of the successful Bidder can be adjusted towards the security deposit payable.
8. 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.
9. For Imported Goods, Indian Agency Commission must be declared in financial bid.
10. The Bidder's shall have to submit the following documents (Certified by Notary) in technical bid: -
- a. User List (List of Govt. / Semi Govt., Reputed Pvt. Hospital) where quoted model of the items has been supplied and installed.
  - b. Supply order Minimum 03 nos. or more issued by Govt./Semi Govt./Reputed Pvt. Institutions/organization for the quoted items.( same model)
  - c. Performance certificate of the same supplied machine (of quoted make and Model) issued by **Head of the depts. or Institution** after a minimum period of six months of installation.
  - d. Prerequisite (if any) for installation of the Machine if any to be provided by the Institute.
  - e. If the manufacturing company and/or its Indian agent (for Foreign manufactured) have authorized some agency for participation in this tender for a limited period than in that case they (Manufacturer / Indian agent) shall have to submit an undertaking duly notarized by Public notary that if their tender is selected they shall be solely responsible for compliance of all the terms and conditions mentioned in the bilateral agreement for purchase and subsequent supply order even if their authorized agent is changed. Any tender offer without such certificate duly certified by public notary shall be rejected in technical scrutiny itself.
  - f. Bidder must submit a compliance checklist along with the technical bid itself.

- g. (Any tender offer without submission of above mentioned document (i.e. a to e) shall be rejected during technical scrutiny.)
- h. If any new System/ Latest model machine is a launched in the market and seller has not installed such quoted models they should submit an undertaking that he has not installed such models previously (Notarized by Public Notary). They may submit supply order / performance certificate of previous model, which was recently installed by them.
- i. For any technical assistance regarding **-tendering, bidder can contact below address :**  
**Director ,IGIMS, Patna ; 2 297225**

**11: Installation & site plan:-**

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

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

**12. After Sales Service Conditions:**

- a. The Institute is in the pursuit of ensuring excellent after sales service for every user in respect of the 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. Comprehensive Annual Maintenance Contract:**

- The decision to enter into CMC or AMC will be determined on the basis of cost and complexity of the equipment by the Tender Inviting Authority, at its discretion, prior to the expiration of warranty period.
- The Comprehensive Maintenance Contract (CMC) is otherwise an extended warranty. All the terms and conditions agreed by the successful Bidder for executing the comprehensive warranty of the equipment shall be extended during the period of CMC, only difference being the payment of CMC charges is absent during the period of comprehensive warranty.
- The cost of CMC, accessories 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.

### 13. Time Limits prescribed

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

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

not sufficient and any such quotations will be summarily rejected. Computer printed documents or Photostat copy or laser printouts will not be accepted as technical catalogues / brochures.

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

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

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

**25. Signing of Contract**

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

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

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

**28. Amendment of tender documents:**

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

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

## CONDITIONS OF THE CONTRACT

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

Clearance charges at point of Entry / Air Port and on ward transportation charges with Insurance 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**" :
- 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 binding on both the parties.

### **04. After Sales Services: -**

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

- b. The Complete System should include the basic unit and allied supporting components like UPS, Stabilizer, Computer System, Printer, De-ionizer, Dehumidifier etc to be supplied by the bidder along with basic unit.
- 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 .  
 1 year= 365 days  
 95% Of 365 days= 347 days per annum

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

## 05. Performance Security

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



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

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

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

**07. Payment: -**

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

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

**08. Validity of Price:-**

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

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

**10. Packing & Marking:-**

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

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

**12. Insurance: -**

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

**13. Installation & site plan:**

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

Specify the following points for installation of the System: -

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

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

**15. Responsibility:-**

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

16. The bidder is required to provide list of persons (along with their permanent and correspondence address) owing more than 1% share ownership in the company/firm (both principle and Indian Agent).
17. The bidder is required to submit compliance sheet, which should reflect details of clause-by-clause compliance of technical specifications as well as general terms & conditions failing which their offer shall be rejected.
18. In order to fully and optimally utilize the equipment, training to paramedical staff and Doctors should be provided. In continuation to this training a separate maintenance training for the machine and the sub system should also be given to the Equipment Maintenance Engineer and Maintenance Technicians of the Institute. All the financial commitment in this regard shall be met by the firm/Principal.

**19. Penalties for non-performance**

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

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

**20. Termination of Contract**

- a. Termination for default:- The Institute, without prejudice to any other contractual rights and remedies available to it (the Institute), may, by written notice of default sent to the successful bidder, terminate the contract in whole or in part, if the successful Bidder fails to deliver any or all of the goods or fails to perform any other contractual obligation(s) within the time period specified in the contract, or within any extension thereof granted by the Institute.
- b. In the event of the Institute terminates the contract in whole or in part, the Institute may procure goods and/or services similar to those cancelled, with such terms and conditions and in such manner as it deems fit and the successful bidder shall be liable to the Institute for the extra expenditure, if any, incurred by the Institute for arranging such procurement.
- c. Unless otherwise instructed by the Institute, the successful bidder shall continue to perform the contract to the extent not terminated.
- d. Termination for insolvency: If the successful bidder becomes bankrupt or otherwise insolvent, the Institute reserves the right to terminate the contract at any time, by serving written notice to the successful bidder without any compensation, whatsoever, to the successful Bidder, subject to further condition that such termination will not prejudice or affect the rights and remedies which have accrued and / or will accrue thereafter to the Institute.
- e. Termination for convenience: - The Institute reserves the right to terminate the contract, in whole or in part for its (Institute) convenience, by serving written notice on the successful bidder at any time during the currency of the contract. The notice shall specify that the termination is for the convenience of the Institute. The notice shall also indicate interalia, the extent to which the successful bidder's performance under the contract is terminated, and the date

with effect from which such termination will become effective.

21. **Fall Clause:**

The prices charged for the equipment supplies under the contract by successful bidder shall in no event exceed the lowest price at which the successful bidder sells the equipments of identical description to any other persons during the period of contract. If any time, during the contract, the bidder reduces the sales price chargeable under

the contract, he shall forth with notify such reduction to the Institute and the price payable under the contract of the equipments supplied after the date of coming into force of such reduction or sale shall stand correspondingly reduced.

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

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

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

**CHAPTER:**

**Schedule of the allied specification**

**ANNEXURE – III**  
**MANUFACTURER’S AUTHORISATION FORM**

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

No.

Dated:

To

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

Dear Sir,

Tender No : \_\_\_\_\_

Equipment Name : \_\_\_\_\_

1. We ..... (name of the OEM) are the original manufacturers of the above equipment having registered office at ..... (full address with telephone number/fax number & email ID and website), having factories at \_\_\_\_\_ and \_\_\_\_\_ , do hereby authorize M/s. \_\_\_\_\_ (Name and address of bidder) to submit tenders, and subsequently negotiate and sign the contract with you against the above tender no..
2. No company or firm or individual other than M/s. \_\_\_\_\_ are authorized to bid, negotiate and conclude the contract in regard to this business against this specific tender.
3. We also hereby undertake to provide full guarantee/warranty /Comprehensive Annual Maintenance Contract as agreed by the bidder in the event the bidder is changed as the dealers or the bidder fails to provide satisfactory after sales and service during such period of Comprehensive Warranty / Comprehensive Annual Maintenance Contract and to supply all the spares/ accessories / consumables etc. during the said period.
4. We also hereby declare that we have the capacity to manufacture and supply, install and commission the quantity of the 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 hereby constitute,  
appoint and authorise Sri/Smt .....(name and address) who is presently  
employed with us and holding the position of ..... as our attorney, to act and sign on my/our  
behalf to participate in the tender no..... for ..... (Equipment name).

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

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

(Name, Designation and Address)

Accepted

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

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

## **Group-A- Neurology**

### **1:- DIGITAL EEG SYSTEM WITH DIGITAL VIDEO MONITORING-Qty-01**

#### **Digital EEG System with digital Video Monitoring:**

Digital EEG system with digital video monitoring should have 32 Channels. The system should have facility for low light recording/ monitoring of patient with split screen display (i.e. simultaneous display of patient as well as EEG should be available)

#### **Computer / Printers:**

1. CPU: 13 Processor of better.
  2. Hard Disc Drive: 1 TB or better.
  3. DVD drive or better.
  4. RAM: 4 GB or better
  5. Multimedia Keyboard / Mouse
  6. Optical disc drive
  7. LED Monitor – 18.5 inch or better
- Equipment should be provided with suitable printers for A 4 paper. (Option for different printers should be quoted)
  - Review station with computer having similar configuration but with suitable Laser printer should be provided (different available Laser Printers should be quoted.)
  - Detail including number and type of channels, sensitivity, time constant, high pass filters, low pass filters, notch filters should be mentioned.
  - The whole system should be mounted on suitable cart.
  - It should be possible to record / back up the EEG and video data on the normal recordable CDs and it should be possible to play and see the EEG and Video on ANYPC without special reader software installed on the same. The EEG/Video data must have the facility to send through the internet and to read at a remote location without special software.

#### **Photic Stimulation:**

- Auto and manual with minimum five preset sequences should be available. In addition user definable/editable programmable photic stimulation should be available.

#### **Digitization:**

- The sampling rate, A/D Conversion rate/resolution, and voltage resolution accuracy should be mentioned.

#### **Amplifiers:**

- The system should have 32 channel. Maximum input range and noise level must be mentioned. The software control for Sensitivity, high filters, low filters, time constants, Notch filter, amplifier calibration signal, Display calibration should be mentioned.

#### **Video recording:**

- Integrated low light color camera with zoom facility for online digital recording synchronized with the EEG and to be able to record on the Hard disk for continuous epilepsy monitoring to be provided as standard.

#### **Display Unit:**

- LED Monitor – 18.5 inch or better (optional 21" monitor should also be quoted)
- System should have facility for displaying measuring conditions, high impedance sites, Montage patterns, and other technical parameters like sensitivity, filter, time constant, impedance etc.
- Different colors for different channels traces.
- Online note writing without losing data is desirable.
- Details of display conditions including sweep speed, number of traces should be mentioned.

#### **Software/ Facilities**



- The operating system software should be based on industry standard, Microsoft Windows 7 or Windows 8 for easy networking and data storage and integration with hospital network.
- Acquisition and review software should be with easy to use menus, flexible protocols with standard setting and user definable setting and should be integrated with integrated with a database, based on Doctor, Technician, Patient etc.
- There should be integrated report generation software with additional EEG hardware and software.
- Must have capability for EEG recording/ analysis and generation of reports, Brain mapping, etc.
- List of all the software marketed by supplier/ their principal must be provided along with their Principal must be provided along with their cost. Any upgrade of all the software (by whatever name it is called) will have to be provided free of cost for a minimum period of 5 years from the date of satisfactory installation.

**Montages/Event marking and retrieval facility:**

- Montage reformatting facility should be available. Reformatting of montages (in recording as well as review mode) even in the absence of patient to enable unmasking hidden activities.
- The video recording should be integrated with the EEG menu and event/spike detection etc. should be standard.
- In addition to predetermined montages it should be possible to make user definable/ editable montages.
- Automatic montage selection and check-up facility should be possible
- Event marking facility should be available
- Facility for simultaneous recording and acquisition of EEG should available.
- Number of programmable montages should be mentioned.

**Data filling, access and report generation:**

- Automatic data filling.
- Data access by time or events or on any parameter.
- It should be possible to record and store data for a continuous period of 24 hours.

**Accessories/Consumables:**

Required accessories/Consumables for approximately one to two years requirement should be quoted. Categories of all the electrodes accessories

**Catalogues/Operating manuals:**

- All the claims should be supported by proper catalogues.
- A copy of operating manual should be attached so as to enable evaluation of software capabilities.
- Tenderer should indicate the list of Users indicating those of modes being quoted.
- Tenderer should also mention as to whether it will be possible for them to demonstrate the system in case the same is required for evolution of the system.

**Power supply/ regulation:**

- The system should be capable of running under Indian power supply conditions in general and those at the Institute in particular.
- Details of the power requirement must be mention.
- In order to ensure proper functioning UPS of suitable capacity should be quoted.
- In case any other power condition equipment is required for running the system the same should be quoted.

## **2:- ADVANCED EMG/EP SYSTEM –Qty.1)**

- 4 Ch modular EMG/EP systems. It should be capable of conducting MNCV, SNCV, F wave, H reflex studies, VEP, SSEP, Blink Reflex, EMG BAEP, SSR. The tenderer must mention detail of all the tests possible with the system offered.
- The equipment should have at least 4 inputs channels with facility for analyzing data from all the channels simultaneously.

### **Computer/Printers:**

- CPU: 13 Processor or better.
- Hard Disc Drive: 1 TB or better.
- DVD drive or better
- RAM: 4 GB or better
- Multimedia Keyboard/Mouse
- Optical disc drive
- LED Monitor – 18.5 inch or
- Detail including number and type of channels, sensitivity, time constant, high pass filters, low pass filters, notch filters should be mentioned better.
- The whole system should be mounted on suitable cart.
- It should be possible to record/back up the EMG, EP and other data on the normal recordable CDs
- The system should have the facility be send data through the internet and it should be possible to read data at a remote location through an e-mail.

### **Printers:**

- A 4 size laser printer with A4 size color printer to enable dual option printing depending upon the nature of tests done.

### **Display Monitor:**

- The display should be at least 18.5 inch LED Monitor and should be able to display variable screen formats depending on recording mode. Simultaneous display of wave forms, graphs and alphanumeric data should be possible.

### **Amplifiers:**

- The number of input channels should be 4. The interface with the computer should be based on latest technology. Details of specifications of amplifiers as well as pre amplifiers must be mentioned. Better sensitivity, less noise ratio and better impedance configuration may be preferred.

### **Electrical Stimulator:**

- Two independent channels with constant current (from 0 to 100 mA) stimulation facility and remote controlled probe with adjustable intensity, with stimulation duration of 0.01 – 1ms and 0.1-100 per sec. rates.

### **Auditory Stimulator:**

- Auditory headphones with signal types click, tone pip or tone burst and stimulus intensity of 5dB-110dB

### **Visual Stimulator:**

- Visual Stimulator with color monitor of at least 18" with flexible target size and position and color. It should have static or pulsating targets for more reliable visual EP data. It should have pattern intensity control and a variety of patterns utilizing checks, bars or gratings.

### **The system should have the following technical features:**

- LED monitor 18.5" to display the normal and abnormal values in different color.
- A4 size Laser printer and colour printer
- Sensitivity – 1.0 micro volts/div. or better
- Display sensitivity 0.05 micro volts/div. or better
- Details of low frequency, high frequency settings available and also availability of notch filter must be mentioned. Better configuration specifications preferable.
- Details of noise level must be mentioned.

- Details of sweep speed available indifferent/individual programmers must be mentioned and the available sweep speeds must be adequate for easily conducting all the electrophysiological studies including advanced ones.

**Averagers:-** it should be possible to average data from individual channels independently channels independently and simultaneously. Availability of better facility is desirable.

**Software:**

- The operating system software should be based on industry standard, Microsoft Windows 7 or Windos 8 for easy networking and data storage and integration with hospital network. Acquisition and review software should be based on the Windows 7/8 operating system with easy to use menus, flexible protocols with standard settings and user definable settings and should be integrated with a standard data base based on Doctor, Technician, and Patient etc. There should be integrated report generation software based on Microsoft office package with automatically values appearing for each test done on the patient.
- Availability of online help in the form of comprehensive nerve, muscle, root built in directory and off line guide help for placement of electrodes as conduction of tests should be mentioned. There should be pictorial help for doing the tests and comparing the results with normal data. Also there should be library of EMG tests to compare the normal data.
- Software for comparing normal value with patient reuils digitally as well as graphically should be valuable.
- All the test results data should be incorporated into the Microsoft Office Package for patient reporting. Facility of integrated data management along with automatic comprehensive report generation should be available. It should be possible to summarize the results by conducting different tests and incorporating them all in the same report. It should also be possible to generate report test wise.
- Inbuilt integrated software for EMG,NCV, SEP's, BAEP, VEP and other advanced EMG/EP tests like reflex, etc. should be available.
- EMG should have integrated prog. For spontaneous activity interference pattern, Multi MUP, Single MUP & manual MUP.
- Nerve Conduction should have MNCV, SNCV, F Wave, H reflex & Inching techniques.
- It should have packages for doing EMG acquisition and analysis, quantitative analysis of EMG and interference pattern analysis with QMUP and AMUP, F-Wave, H-Wave etc.
- The Evoked potential studies for AEP, VEP and SEP should be available with standard protocols.
- All programmes should have user options programs to program the different technical specifications permanently.
- List of all software marketed by supplier / their principal must be provided along with their cost Any upgradable of the software (by whatever name it is called) will have to be provided free of cost for a minimum period of 05 years from the date of satisfactory installation.

**Accessories / Consumables:**

- Required accessories/ consumables for approximately one to two years requirement should be quoted. Catalogues of all the electrodes and accessories along with price list should be included.

**Catalogues/Operating manuals:**

- All the claims should be supported by proper catalogues.
- A Copy of operating manual should be attached so as to enable evaluation of software capabilities.
- Tenderer should indicate the list of Users indicating those of modes being quoted.
- Tenderer should also mention as to whether it will be possible for them to demonstrate the system in case the same is required for evolution of the system.

**Power supply/regulation:**

- The system should be capable of running under Indian power supply conditions in general and those at the Institute in particular.
- Details of the power requirement must be mentioned.
- In order to ensure proper functioning UPS of suitable capacity should be quoted.

In case any other power conditioning equipment is required for running the system the same should be quoted.

## Group-B- Pediatric Surgery-

### **Technical Specifications of Paediatric Laparoscopic set with Accessories-Qty-01**

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#### Camera

Digital image processing including dynamic aperture and automatic shutter regulation Output format 16:9 according to camera sensor , Full HD output 1920X1080 pixel 4 profiles adapted for special indications Digital electronic zoom (2X) in excellent quality ,2 remote port puts 3.5 mm BF isolation of applied part on control unit Automatic request for white balance after each start up sequence core integration for central control via touch screen or voice commands Camera head .

#### Monitor

24" High Definition (HD) Medical imaging system for Minimally Invasive Surgical (MIS) and interventional procedures . It consists of Multi Modality Image viewing .

Inputs:- Syn No Green Optional fibre optic ( for PACS, MRI, CT imaging )

#### Telescopes

\*PANOVIEW PLUS TELESCOPE diam 5.3 mm deg distortion free autoclavable working length 300 mm. \*PANOVIEW PLUS telescope diam . 5.3 mm , 30 degr distortion free autoclavable working length 300 mm \*PANOVIEW – Telescope 0 Diameter 10 mm, distortion free

\*PANOVIEW Telescope 0 Diameter 5mm Distortion Free. \*PANOVIEW – Telescope 30 Diameter 10mm, distortion free \*PANOVIEW – Telescope 30 mm Diameter 5mm distortion free

#### Hand instruments

\*Veres cannula 120mm working length including

\*Trocar sleeve with magnetic –ball valve plastic with retaining thread straight distal tip, capacity 305 mm working length 60mm.

\*Trocar pyramidal tip capacity 3.5 mm working length 60mm

\* Trocar sleeve with magnetic ball valve metal sleeve standard straight distal tip working length 100 mm capacity 3.5mm

\*Trocar pyramidal tip capacity 3.5 mm working length 100 mm.

\*Trocar sleeve with magnetic –ball- valve without insufflation tap metal sleeve standard straight tip capacity 5.5 mm. working length 60 mm.

\*Trocar pyramidal tip 60mm working length .

\* Trocar sleeve without insufflation tap capacity 5.5 mm Metal sleeve standard straight distal tip WL 100mm. \*Trocar with pyramidal tip capacity 10 mm working length 100mm

\*Tricar pyramidal tip for RIWO – ART trocar sleeves diam 10mm working length

100mm \*Trocar pyramidal tip for RIWO- ART trocar sleeves diam . 10 mm working length 100mm \* Instrument sleeve3 and extractor 12,5/10f.0 mm working length 170 mm.

\*Insulated reducing sleeve 5,5/3,5 mm working length 160 mm.

\*Scissors “ Metzenbaum” modular curved left both jaws opening insulated 3,5 mm WL 310 mm : consisting of jaw insert with insulated sheath tube and irrigation tab comfort handle without locking mechanism rotatable. \*Scissors modular 5mm curved left both blades opening “ Metzenbaum” WL 310 mm comprising jaw sheath tube isolated handle without locking mechanism swiveling .

Micro scissors Metzenbaum curved left double jaw action monopolar Diameter 5 mm WL 310 mm cpl consisting of Handle sheath tube insert .

\*Hook scissors modular single jaw action insulated 3,5 mm WL 310 mm consisting of jaw insert with insulated sheath tube and irrigation tab comfort handle without locking mechanism .

\*Dissector cpl consisting of insert with sheath tube diameter 3,5 mm WL 240mm.

\*Grasp & dissect forceps “Mixer “ angled fine pyramidal shaped teeth double jaw action monopolar Diameter 5mm WL 310 mm cpl consisting of Handle sheath tube insert.

\*Grasping coag forceps Dolphin both jaws opening monopolar comprising: comfort handle sheath tubing inner path .

\*Grasping / dissecting forceps modular curved left both jaws opening “ Maryland Dissector “ 3,5mm WL 240 mm

\*Atraumatic grasp forceps for fine structures double jaw action monopolar diameter 5mm WL 310 mm cpl consisting of : Handle sheath tube insert .

\*Grasping and Dissecting forceps modular , 5mm single jaw action WI 310 mm comprising jaw insert sheath tube isolated handle with locking mechanism swiveling.

\*Atraumatic grasp forcep smodular 5 mm both jaws opening WL 310 mm comprising jaw insert . \*Sheath tube isolated handle with locking mechanism swiveling .

\*Modular atraumatic grasping forceps insulated both jaws opening diam 3,5mm working 240 mm consisting of jaw insert with insulated sheath tube and cleaning channel axially aligned handle with locking mechanism rotatable.

\*Atrium grasping forceps “ Babcock” large distal grasping surface with fine horizontal serrations double jaw action monopolar diameter 5mm WL 310 mm cpl consisting of Handle sheath tube insert

\*Grasping forceps “Babcock” modular both jaws opening 3,5 WL 240 mm WL 240 insulated consisting of jaw insert with insulated sheath tube and irrigation tap comfort handle with locking mechanism rotatable . \*Grasping forceps atraumatic clamp “Debakey “ axial grooves with fine horizontal serrations double jaw action ( without HF) diameter 5mm , WL 310 mm springy branches cpl consisting of Handle sheath tube insert .

### **HOOK ELECTRODE**

-Hook electrode diameter 5mm working length 340 mm -Spatula electrode diameter 5mm WL 340 mm

-Modular needle holder straight with carbide insert . -Needle holder straight 300 mm NL d =5 mm

-Suction tube graduated with Luer connector 3 mm , 330 mm WL , d= 5mm -Suction irrigation tube with central opening 290 mm WL, d=5 mm

-Coagulation suction tube with Luer connector capacity 3mm , 315 mm WL d =5mm -Clip applicator 340 mm NL, d=10mm

-Bipolar forceps 5 mm WL 300 mm with fenestrated parallel paddle and spring handle sliding sleeve and outer tube .

-Bipolar coag forceps diameter 5 mm with spring handle comprising 8393.726,8393.923, 8393.925.

**LED Light sources** with universal light cable socket inclusive 180W xenon short arc lamp and power cable , colour temperature approx 6000K continuous manual light control form 2-100% classification CF power supply 100- 240V-, 50/.60 Hz dimensions wxhxd, 330X100X380 mm. -Fibre light cable 3mm long fibre bundle diam 4,5 mm

-Lapro-Co2 Insufflations up 20L/Min including Insufflations tube , diameter 5mm 2.5m long hygienic filter , strle pack Of 10 power cable 3m long.

-Suction irrigation tube with central and lateral opening, 290 mm WL,d =5mm

### **Digital Recording System**

**-Mobile video trolley** including at least 4 shelves 4 anti – static castor wheels, camera -Head holder, infusion bottle holder ,Co2 cylinder holder, integrated cable ducts, Indian.

-Formalin chamber (Indigenous) ; - Bidder should also quote separately for the supply of F. C with cidex tray (Indigenous)

-Cidex tray tray

-Bidder is required to quote rate of each accessories separately.

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

-The unit shall be capable of all type of laparoscope procedure. -All accessories should be from parent company.

-Such accessories should be quoted separately. -The instruments must be USFDA approved.

## **2:- PADIATRIC /NEONATEL RIGID BRONCHOSCOPE-Qty-01**

1. Digital three chip Endovision Camera : One (Compatible with Telescopes of Bronchoscope, Oesophagoscope and Cystoscope)

Color system PAL/NTSC, power supply : 100-240VAC, 50/60 Hz compatible with Pal. NTSC, automatic white balance with control or base unit and also on camera.

Integrated zoom lens for manual and automatic control for exposure of fog. Compatible with VHS and comp and DVI. Minimum sensitivity 3 lux. Instrument coupling for all rigid endoscope. Long camera cable 300cm. Two pre set function keys on camera for control of camera function, Printer, computer, VCR and other Peripherals.

### **Consisting of:**

Main cord, with per focal zoom lens, camera head, camera control unit (CCU), BNC/S Video connecting cable, length 180cms, 2 connecting cables for connecting video printer or recorder, DV cable, length 500cm 6 to 4 pin, keyboard.

Xenon/ Halogen Light source with fibreoptic cable

2. **Medical Grade Color Monitor 19" (Fully flat screen)** : one special 19" monitor (TFT) medical grade, PAL/NTSC & SECAM color system. For Bronchoscope, Oesophagoscopy and cystoscopy.
3. **TELESCOPE**
  - A. Straight forward telescope 0 degree, diameter 2.9 mm, length 36cm, autoclavable, fiber optic light transmission incorporate (One)
  - B. Straight forward telescope 0 degree, diameter 2.9mm, length 30cm, autoclavable fiber optic light transmission incorporated (one)
  - C. Straight forward telescope 0 degree, diameter 2.7mm, length 18cm autoclavable fiber optic light transmission incorporated (one)
4. **BRONCHOSCOPE SHEATH**

Should have attachment (Channels) for anaesthesia (Ventilation) and instruments and optical prism light.

  - A. Bronchoscope sheath, size 6, outer diameter 8.2mm, inner diameter 7.5mm, length : 30cm (one)
  - B. Bronchoscope sheath, size 5, outer diameter 7.8mm, inner diameter 7.1mm, length : 30cm (one)
  - C. Bronchoscope sheath, size 4.5, outer diameter 7.3mm, inner diameter 6.6mm, length : 30cm (one)
  - D. Bronchoscope sheath, size 4, outer diameter 6.7mm, inner diameter 6mm, length : 30cm (one)
  - E. Bronchoscope sheath, size 3.7 outer diameter 6.4mm, inner diameter 5.7mm, length : 30cm (one)
  - F. Bronchoscope sheath, size 3.5 outer diameter 6.4mm, inner diameter 5.7mm, length : 30cm (one)
  - G. Bronchoscope sheath, size 4.0 outer diameter 6.7mm, inner diameter 6.4mm, length : 26cm (one)
  - H. Bronchoscope sheath, size 3.7 outer diameter 6.4mm, inner diameter 6.4mm, length : 26cm (one)
  - I. Bronchoscope sheath, size 3.5 outer diameter 5.7mm, inner diameter 5.0mm, length : 26cm (one)
  - J. Bronchoscope sheath, size 3.0 outer diameter 5.0mm, inner diameter 4.3mm, length : 26cm (one)
  - K. Bronchoscope sheath, size 3.5 outer diameter 5.7mm, inner diameter 5.0mm, length : 18.5cm (one)
  - L. Bronchoscope sheath, size 3.0 outer diameter 5.0mm, inner diameter 4.3mm, length : 18.5cm (one)
  - M. Bronchoscope sheath, size 2.5 outer diameter 4.2mm, inner diameter 3.5mm, length : 18.5cm (one)
5. **Optical forceps (compatible with above mentioned telescopes and bronchoscope sheaths)**

Optical alligator forceps, 2x2 teeth, with spring action handle for controlled removal of flat foreign bodies (such as coins) : (two)

- A. Optical forceps, with spring action handle for controlled removal of soft foreign bodies (such as peanuts): (two)
- B. Optical alligator forceps, with forced controlled handle, for removal of hard foreign bodies (two)

6. **Forceps (one each)**

- A. Forceps alligator, grasping, double action jaw, sheath diameter 1.5mm, working length : 35 cm
- B. Forceps alligator, grasping, double action jaw, sheath diameter 1.5mm, working length : 35 cm, pointed serrated for coins and foreign bodies.
- C. Forceps alligator, grasping, double action jaw, sheath diameter 1.5mm, working length : 35 cm, pointed of peanuts and soft foreign bodies.
- D. Biopsy Forceps 35cm.

7. **Sponge Holder:-** (Spring handle working length 35cm (one)

8. **Right Suction tube with Rubber Tip** (one each)

- A. Rigid Suction tubs, straight length 35cm, diameter : 3mm
- B. Rigid Suction tubs, straight length 25cm, diameter : 3mm

9. Foreign body basket with right handle, working length 35cm.

10. Telescope bridge for fixed position between telescope and bronchoscope. Compatible with above mentioned telescopes and bronchoscope sheaths (three)

11. Prismatic light deflection with connection for fiber optic light cable autoclave (Two)

12. Glass Window Plug (Two)

13. Rubber Telescope Guide for use with telescopes or optical forceps (Two)

14. FLUVOG Adaptor with sliding glass window plug, sealing cap, notched lens and keyhole opening, moveable (two)

15. Injection canula only. Leur lock outer diameter – 3.5mm, for use bronchoscope tubes (for positive pressure assisted ventilation (Two)

Injection canula only Leur lock outer diameter – 2.7mm, for use with bronchoscope tubes

(for

positivepressure assisted ventilation (Two)

(a) Bridge to attach 36 cm telescope to 30 cm Bronchoscope.

16. Instrument guide for suction catheter (Two)

17. Adaptor from bronchoscope to any type of pediatric respiration equipment (Two)

18. Sealing plig for ventilation attachment of bronchoscope (Two)

19. Adjustable magnifier, swing – away type autoclave (one)

20. Fiber optic light cable size 3.5mm, length 180cm (Two)

21. Cold light source with twin bulb **Halogen Technology** 150 watt working on 220V AC. Led technology

22. Cold light source with twin bulb 2 ENON Technology working on 220V AC.

23 each accessories should be from parent company & price should be quoted separately. The

24. Instruments must be US FDA approved

### **3:- Pediatric RIGID OESOPHAGOSCOPE-Qty.-01**

#### **Part - A.**

1. Oesophagoscope Sheath: Should have side channel for instruments
  - A. Oesophagoscope sheath, size6, outer diameter 8.2mm, inner diameter 7.5mm, length 30cm (one)
  - B. Oesophagoscope sheath, size5, outer diameter 7.7mm, inner diameter 7.2mm, length 30cm (one)
  - C. Oesophagoscope sheath, size4, outer diameter 6.72mm, inner diameter 6.2mm, length 30cm (one)
  - D. Oesophagoscope sheath, size 3.5 outer diameter 5.6mm, inner diameter 5.2mm, length 18.5cm (one)
  - E. Oesophagoscope sheath, size 3, outer diameter 4.8mm, inner diameter 4.3mm, length 18.5cm (one)
  - F. Optical forceps.
  - G. Non Optical forceps.
  - H. Optical prisu.

#### **Part-B**

Paediatric flexiable esophago gastroduodenoscope with light source with suction attachment

- Both part A and part B accessories should be from parent company & price should be quoted separately.
- The instruments must be US FDA approved.

- E N D -



## Group-C- Dentistry

### DENTAL OPG MACHINE UNIT WITH CEPHALOMETRIC FACILITIES AND DIGITAL FILM PROCESSOR

| EQUIPMENT   | SPECIFICATIONS   | QUANTITY |  |
|---|--|----------|--|
| <b>DENTAL OPG MACHINE UNIT WITH CEPHALOMETRIC FACILITIES AND DIGITAL FILM PROCESSOR</b> | <ul style="list-style-type: none"> <li>• The machine mode must be type approved by AERB (Atomic Energy Regulatory Board)</li> <li>• Corrosion free construction</li> <li>• Should have laser beam / bright beam for accurate alignments of reference anatomical Land marks.</li> <li>• Should have provisions for programming depending on the patient male, female and Child.</li> <li>• Should have high frequency X-ray generator machine.</li> <li>• Should have constant magnification for the whole length and width of the image.</li> <li>• Central touch screen console for easy operation of the equipment preferable.</li> <li>• Should have provision for sitting and standing imaging positioning</li> <li>• Voltage 60-80 kv adjustable</li> <li>• Line voltage 230 V 50Hz ( voltage stabilizer of required capacity should be provided for OPG machine &amp; digital film processor)</li> <li>• Anode current up to 12 mA or more.</li> <li>• X-ray tube should confirm to the latest radiation safety standards.</li> <li>• Should possess Automatic soft tissue filtration.</li> <li>• Should have functional and easy to use head positioned which guarantees accurate Positioning for all Cephalometric projections.</li> <li>• The ear posts and nasal positioners of durable quality, hygienic and fully transparent to Radiation should be provided.</li> <li>• Automatic collimation for Cephalostat or OPG</li> <li>• Aperture selection should be automatic.</li> <li>• Should include, (lateral Ceph, frontal Ceph, all lateral and multi-angle TMJ views etc. )</li> <li>• Exposure time should be variable from 0.2 to 5 sec.</li> <li>• It should have panoramic X-ray imaging.</li> <li>• Should have movement technology, multi – motor with motorized carriage Movement.</li> <li>• Should have up/down movement.</li> <li>• Should have panoramic examination programs</li> </ul> | <u>1</u> |  |

|  |   |  |  |
|--|---|--|--|
|  | <p>for high resolution panoramic imaging.</p> <ul style="list-style-type: none"> <li>• Exposure time should vary according to the anatomical landmarks</li> <li>• X-ray system generator should have high frequency, constant potential, microprocessor Controlled tube voltage-40-80 KV, tube current 2-10mA, or more.</li> <li>• <b>X-ray tube:</b> <ul style="list-style-type: none"> <li>• It should have focal spot: 0.5 mm or less</li> <li>• It should have total filtration 205 mm AL eq.</li> </ul> </li> <li>• Standard accessories: <ul style="list-style-type: none"> <li>• Chin support.</li> <li>• Temple clamps.</li> <li>• X-ray exposure switch with extensible cable.</li> <li>• Hand grips.</li> <li>• Disposable bags</li> <li>• Bite blocks with supporters.</li> <li>• Accessory trays.</li> </ul> </li> <li>• <b>Electrical requirements:</b> <ul style="list-style-type: none"> <li>• Power supply voltage AC 230 V ± 10%</li> <li>• Frequency 50Hz</li> <li>• Power low power rating <ul style="list-style-type: none"> <li>• The unit must be supported with a digital film processor</li> <li>• Lead apron, thyroid collar and Gonadal shield and Dosimetry badges must be provided with complete unit.</li> </ul> </li> </ul> </li> </ul> <p><b>Make:</b> IMPORTED PREFERRED EXCEPT CHINESE MAKE</p> <ul style="list-style-type: none"> <li>▪ Equipment with latest specifications will be Preferred</li> <li>▪ 5 years warranty is must</li> <li>▪ Must comply with rules and regulations of national &amp; international radiation safety.</li> <li>▪ Cost of entire unit should include the cost of transportation, installation with required size lead screen fixation.</li> <li>▪ ( inclusive of all taxes)</li> </ul> <p><b>The equipment Should have a US FDA/ European CE approved &amp; AERB compliant.</b></p> |  |  |
|--|---|--|--|

## DEPARTMENT OF DENTAL SCIENCES AND RESEARCH, IGIMS, PATNA

### LIST OF INSTRUMENTS

| S.NO | PARTICULARS   | QUANTITY |  |
|------|---|----------|--|
| 1.   | Transfer instruments ( Chittel forceps ) of standard thickness  | 4        |  |
| 2.   | Instruments keeping kidney tray(small /medium/large)  | 1 each   |  |
| 3.   | Instruments keeping utility tray(small /medium/large)   | 2 each   |  |
| 4.   | Instruments keeping drums(small /medium/large)  | 2 each   |  |
| 5.   | Diagnostic instruments set (stainless steel & autoclavable plane mouth mirror tip with handle , dental probe , dental explorer , dental twizzer | 100      |  |
| 6.   | Swab holding forceps 6"   | 4        |  |
| 7.   | Bard parker handle no. 3  | 4        |  |
| 8.   | No. 9 molts periosteal elevator   | 4        |  |
| 9.   | Howarth's periosteal elevator   | 4        |  |
| 10.  | Austin's tissue retractor forked  | 2        |  |
| 11.  | Channel retractor regular ( size 8mm & 12mm)  | 1 each   |  |
| 12.  | Kilner retractor C shaped ( small & medium )  | 1 each   |  |
| 13.  | Malleable copper retractor 8 inch long  | 1        |  |
| 14.  | Langenback's retractor ( small 6* 20 mm) ( medium 10*30mm)  | 1 each   |  |
| 15.  | Plastic cheek retractor ( small & big )   | 1 each   |  |
| 16.  | Tongue depressor  | 4        |  |
| 17.  | Towel clips   | 10       |  |
| 18.  | Adson's Dissecting tissue holding forceps plain 5" & 7"   | 4 each   |  |
| 19.  | Adson's Dissecting tissue holding forceps tooth 5" & 7"   | 4 each   |  |
| 20.  | Crile artery forceps 6"   | 4        |  |
| 21.  | Mixter artery forceps 6"  | 4        |  |
| 22.  | Mosquito artery forceps 4" & 5"   | 4 each   |  |
| 23.  | Mayo needle holder fine 5"  | 4        |  |
| 24.  | Bone end cutting rongeur's 7.5"   | 1        |  |
| 25.  | Bone side cutting rongeur's 7.5"  | 1        |  |
| 26.  | Nylon faced hammer  | 1        |  |
| 27.  | Miller bone file double end straight & curved   | 1 each   |  |
| 28.  | Lucas curettes  | 1        |  |
| 29.  | Volksman bone scoop   | 1        |  |
| 30.  | Sinus forceps for drainage  | 1        |  |
| 31.  | Mouth props set of 3 ( small , medium , large )   | 1        |  |
| 32.  | Ferguson mouth gag  | 1        |  |
| 33.  | Dean's suture cutting scissors  | 4        |  |
| 34.  | Kilner's angular scissors   | 1        |  |
| 35.  | Iris dissection scissors  | 1        |  |
| 36.  | Frazier no 3 suction cannula  | 4        |  |
| 37.  | Gillies skin hook   | 4        |  |
| 38.  | Dental elevator straight  | 4        |  |
| 39.  | Dental elevator cryer mesial & distal   | 4 each   |  |
| 40.  | Dental elevator coup land's straight  | 4        |  |
| 41.  | Dental elevator coup land's curved  | 4        |  |

|     |  |        |  |
|-----|--|--------|--|
| 42. | Dental elevator coup land's serrated                       | 4      |  |
| 43. | Dental elevator cross bar                                  | 4      |  |
| 44. | Dental elevator apexo mesial & distal                      | 4 each |  |
| 45. | Dental elevator root pick                                  | 4      |  |
| 46. | Dental elevator warwick james mesial & distal              | 4 each |  |
| 47. | Maxillary anterior extraction forceps                      | 4      |  |
| 48. | Maxillary premolars extraction forceps                     | 4      |  |
| 49. | Maxillary molar extraction forceps( left & right )         | 4 each |  |
| 50. | Maxillary molar extraction forceps ( Bayonet )             | 4      |  |
| 51. | Maxillary root extraction forceps                          | 4      |  |
| 52. | Mandibular anterior extraction forceps                     | 4      |  |
| 53. | Mandibular premolars extraction forceps                    | 4      |  |
| 54. | Mandibular universal molar extraction forceps              | 4      |  |
| 55. | Mandibular molar extraction forceps Cowhorn                | 4      |  |
| 56. | Pediatric extraction forceps (2maxillary                   | 1 each |  |
| 57. | molar,1mandibular molar,1anterior,1root )                  |        |  |
| 58. | Marking ink pen ( stainless steel & autoclavable )         | 2      |  |
|     | Wire twisting forceps                                      | 1      |  |
| 59. | Wire cutter double action strong with tungsten carbide     | 1      |  |
| 60. | tip  |        |  |
| 61. | Arch bar cutter  | 1      |  |
|     | Mini plate cutter  | 2      |  |
| 62. | Self holding screw driver with fiber handle ( 1.5 , 2, 2.5 | 2 each |  |
| 63. | mm )   |        |  |
| 64. | Ordinary screw driver ( 1.5 , 2, 2.5 mm )                  | 1 each |  |
| 65. | Plate bending forceps                                      | 1      |  |
| 66. | Plate holding forceps                                      | 1      |  |
| 67. | Bone holding forceps pointed 6"                            | 1      |  |
| 68. | Rowe maxillary disimpaction forceps ( right & left )       | 1 each |  |
| 69. | Asch nasal septum forceps ( small & big )                  | 1 each |  |
| 70. | Rowe zygomatic elevator                                    | 2 each |  |
| 71. | Orthodontic soldering torch with gas                       | 1      |  |
| 81. | Dappen dish  | 5      |  |
| 82. | Amalgam plugger ( Teflon coated )                          | 2      |  |
| 83. | Amalgam carrier stainless steel( Teflon coated )           | 2      |  |
| 84. | Mortar & pestle  | 2 each |  |
| 85. | Spoon excavator( Teflon coated )                           | 2      |  |
| 86. | Ball burnisher ( Teflon coated )                           | 2      |  |
| 87. | Diamond shaped carver( Teflon coated )                     | 2      |  |
| 88. | Cement spatula( Teflon coated )                            | 2      |  |
| 89. | Cement plugger( Teflon coated )                            | 2      |  |
| 90. | Cement condensor( Teflon coated )                          | 2      |  |
| 91. | Teflon coated Agate spatula                                | 2      |  |
| 92. | Glass slab for cement mixing ( dental use )                | 2      |  |
| 93. |  |        |  |

|     |   |             |  |
|-----|---|-------------|--|
| 94  | Impression trays edentulous (0 to 4 no.)non perforated (stainless steel and plastic )                 | 2 sets each |  |
| 95  | Impression trays dentulous (0 to 4 no.) perforated (stainless steel and plastic )                     | 2 sets each |  |
| 96  | Wax knife   | 5           |  |
| 97  | Le cron's carver  | 5           |  |
| 98  | Mean value articulator  | 1           |  |
| 99  | Rubber bowl ( small & medium )  | 2 each      |  |
| 100 | Plaster spatula ( metal & plastic )   | 2each       |  |
| 101 | Plaster knife   | 2           |  |
| 102 | Crown remover ( gun type & manual )   | 1 each      |  |
| 103 | Double door refrigerator(350L with stabilizer) 5 star   | 1           |  |
| 104 | Digital camera up to 15 pixels( imported and recent   | 1           |  |
| 105 | advances preferred excluding Chinese make)<br>Laptop with LCD projector& projection screen            | 1           |  |
| 106 | Projection board ( white ) with colour markers& eraser  | 1           |  |
| 107 | Notice board  | 1           |  |
| 108 | Water bath sterilizer standard large size   | 2           |  |
| 109 | Ultra violet sterilizing cabinet ( 24 tray capacity) (  | 1           |  |
| 110 | imported and recent advances preferred excluding  |             |  |
| 111 | Chinese make)<br>Dog bite articulator   | 3           |  |
| 112 | Sphygmomanometer with stethoscope ( imported and<br>recent advances preferred excluding Chinese make) | 2           |  |
| 113 | Bio star machine  | 1           |  |
| 114 | Digital Weighing machine  | 1           |  |
| 115 | Wheel chair ( standard )  | 1           |  |
| 116 | Radio bisuography machine   | 2           |  |
| 117 | Micro motor machine   | 2           |  |
| 118 | Movable IOPA X-RAY Unit   | 2           |  |
| 119 | Pulp vitality tester  | 2           |  |
| 120 | Apex locator  | 2           |  |
| 121 | Endo motor  | 1           |  |
| 122 | Automatic Dental IOPA film developer (for 10 films)   | 1           |  |
| 123 | Automatic Dental IOPA film developer (for 50 films)   | 1           |  |
| 124 | Orthodontic spot welder   | 1           |  |
|     | Table top front loading Autoclave   | 1           |  |
|     |   |             |  |

N/B: - 1. All instruments should be made of standard quality stainless steel and must be rust proof.

2. All equipments must be CE & FDA approved.

## DEPARTMENT OF DENTISTRY IGIMS, PATNA

### LIST OF CONSUMABLE ARTICLES (2014-15)

| SNO | NAME OF ARTICLE  | QUANTITY                |  |
|-----|--|-------------------------|--|
| 1   | ALGINATE IMPRESSION MATERIAL   | 225 GM 3PKTS            |  |
| 2   | ZINC OXIDE EUGENOL IMPRESSION PASTE BASE AND ACCELARATOR                         | 75 GM EACH 2 PKTS       |  |
| 3   | IMPRESSION COMPOUND  | 2 PKTS                  |  |
| 4   | ADITTION SILICON PUTTY   | 400 GM JAR              |  |
| 5   | ADDITION SILICON FLOWABLE  | 30 GM 1 PKT             |  |
| 6   | GREEN STICK WAX  | 2 PKTS                  |  |
| 7   | SELF CURE ACRYLIC POWDER AND LIQUID  | 110 GM EACH 1 PKT       |  |
| 8   | TRANSPARENT SELF CURE ACRYLICIN B2 SHADE POWDER LIQUID                           | 110 GM I PKT EACH       |  |
| 9   | COLD MOULD SEAL  | 100ML 1 PKT             |  |
| 10  | MODEL PLASTERS 5KG   | 1 PKT                   |  |
| 11  | DENTAL STONE TYPE-1V 1 KG  | 3 PKTS                  |  |
| 12  | TISSUECONDITIONER 100GM  | 1 PKT                   |  |
| 13  | BITE REGSTRATION WAX   | 1 P-KT                  |  |
| 14  | SHELLAC BASE PLATE (UPPER/LOWER ARCH)  | 2 PKTS                  |  |
| 15  | STICKY WAX   | 1 PKT                   |  |
| 16  | MODELLING WAX PINK   | 3 PKT                   |  |
| 17  | TEMPORARY CROWN PLASTIC  | 2PKTS                   |  |
| 18  | PLASTIC TEETH ACRYLIC TYPE IN A3 AND B2 SHADES FOR ANTERIOR AND POSTERIOR TOOTHs | 2 SETS                  |  |
| 19  | BIOSTAR SOFT PLASTIC SHEETS FOR SOFT SPLINT                                      | 2 PKTS                  |  |
| 20  | LIGHT CURE BONDING AND ETCHING AGENT   | 3PKTS                   |  |
| 21  | LIGHT CURE COMPOSITE 3GM B2,A2,A3 SHADES   | 2 PCS EACH              |  |
| 22  | GLASS IONOMER CEMENT RESTORATIVE&LUTING POWDER AND LIQUID                        | 35 AND 15GM EACH 2 PKTS |  |
| 23  | ZINC-OXIDE EUGENOL POWDER AND LIQUID   | 100GM AND 50ML IPKT     |  |
| 24  | AMALGAM ALLOY POWDER AND LIQUID(MERCURY FOR DENTAL USE)                          | 30 GM 50GM EACH 1 PKT   |  |
| 25  | CALCIUM HYDROXIDE LIGHT CURE MATERIAL  | 5GM 1 PKT               |  |
| 26  | FORMOCRESOL PULP DEVITALIZER (IMPORTED)  | 1 PKT                   |  |
| 27  | HYDROGEN PEROXIDE 6% BY VOLUME   | 5 LIT                   |  |
| 28  | SODIUM HYPOCHLORITE 5.2%   | 5 LIT                   |  |
| 29  | NORNAL SALINE  | 5 LIT                   |  |
| 30  | BARBED BROCH (15-40MM) 21MM LENGTH   | 5 PKT                   |  |
| 31  | REAMER 15-40&45-80 NO NITI- (21MM&25MM LENGTH) EACH                              | 10 PKTS EACH            |  |
| 32  | K-FILES 15-40&45-80 NO NITI 21MM&25MM LENGTH                                     | 10 PKTS EACH            |  |
| 33  | PROTAPER ENDOMOTOR NITI FILE AND GUTTA PERCHA (ASSORTED SIZE)                    | 10 PKTS EACH            |  |
| 34  | GUTTA PERCHA CONE 15-40&45-80 NO IN 21MM AND 25MM LENGTH                         | 10 PKTS EACH            |  |
| 35  | LATERAL CONDENSER(FOR RCT) 21MM LENGTH   | 3 PKTS                  |  |
| 36  | K-FILES 8 AND 10 NO 21MM AND 25 MM LENGTH  | 2 PKTS EACH             |  |
| 37  | GP SOLVENT   | 1 PACK                  |  |
| 38  | EDTA 5GM   | 1 PACK                  |  |
| 39  | GLIDE 5GM  | 1 BOTTLE                |  |
| 40  | AH-26 SEALER   | 5 PKT                   |  |
| 41  | PRO ROOT-MTA FILLER 5GM  | 1 PKT                   |  |

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| 42 | FIBER POST FOR ANTERIOR AND POSTERIOR TEETH<br>0.8 AND 1 MM SIZE 5  | 1 PKT 50 POST EACH                         |  |
| 43 | PRECISION DRILLS FOR POST CORE IN DIFFERENT<br>SIZES  | 1 PKT                                      |  |
| 44 | PESSO REAMER  | 1 PKT                                      |  |
| 45 | PREMADE TEMPORARY FILLING MATERIAL (ZOE)<br>14GM  | 10 PCS                                     |  |
| 46 | SUTURES 3-0, 4-0. VICRYL REVERSE CUTTING AND<br>CUTTING 2465  | 25 PCS 0-3, 25 PCS 0-4                     |  |
| 47 | FACE MASK   | 200 PCS EACH                               |  |
| 48 | COLOR MARKERS (BLAK,BLUE,RED  | 5 EACH                                     |  |
| 49 | DRAPE FOR PATIENT   | DISPOSABLE 100 PCS<br>PLASTIC              |  |
| 50 | DOCTORS APRON(FULL AND HALF SLEEVE TERRY<br>COTTONWITH 80% COTTON &20% TERRY WHITE<br>HAVING IGIMS LOGO ON THE FRONT POCKET | 5 PCS EACH 42/XL IN SIZE                   |  |
| 51 | BARD PARKER BLADE SS 11, 12,15 NO   | 11 NO 100PCS,12 NO 15<br>PCS,15 NO 200 PCS |  |
| 52 | LOCAL ANAESTHESIA 2%LIGNOCAINE WITH<br>ADRENALINE (1:80000)   | 25 DOZENS                                  |  |
| 53 | SUTURES 3-0, 4-0. VICRYL REVERSE CUTTING AND<br>CUTTING 2490  | 20 PCS EACH                                |  |
| 54 | LOCAL ANAESTHESIA 2%LIGNOCAINE WITHOUT<br>ADRENALINE  | 2 DOZENS                                   |  |

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| 55 | DISPOSABLE SYRINGE 2.5 AND 5ML AND 10ML           | 1000PCS(2.5ML)<br>5ML(50PCS),10ML(15PCS) |  |
| 56 | LOCAL ANESTHETIC SPRAY                            | 5 PCS                                    |  |
| 57 | GEL FOAM (ABGEL)                                  | 1 PKT                                    |  |
| 58 | BOTROCLOT SOLUTION                                | 1 BOTTLE                                 |  |
| 59 | DEXONA 4MG AND 2MG                                | 5 VIAL                                   |  |
| 60 | ADRENALINE INJ (I:1000)                           | 5 VIAL                                   |  |
| 61 | DOPAMINE 5GM                                      | 5 VIAL                                   |  |
| 62 | AVIL(CHLORPHENIRAMINE)                            | 5 VIAL                                   |  |
| 63 | FLUX  | ONE BOTELS                               |  |
| 64 | IODIFORM GAUZE 4 INTO 4 CM                        | 50 PACKS                                 |  |
| 65 | ANTI FLUX   | ONE BOTEL                                |  |
| 66 | AUSTRALIN ARCH WIRE (.0016 INCH                   | ONE SPOOL                                |  |
| 67 | AUSTRALIN ARCH WIRE (.014 INCH)                   | ONE SPOOL;                               |  |
| 68 | NITI WIRE   | ONE SPOOL                                |  |
| 69 | E CHAIN   | ONE SPOOL                                |  |
| 70 | SEPERATOR PLACING PLIER                           | ONE PC                                   |  |
| 71 | O-RING  | ONE SACHET HAVING 500<br>PCS             |  |
| 72 | SEPERATOR   | ONE SACHET HAVING<br>100PCS              |  |
| 73 | ECHANT AND BONDING AGEN WITH PRIMER(SELF<br>CURE) | 1 SETS                                   |  |
| 74 | SILVER SOLDER                                     | ONE PC                                   |  |
| 75 | GAS TORCH DENTAL                                  | ONE PC                                   |  |
| 76 | PREFORMED BAND FOR ALL TEETH                      | 1 PKT                                    |  |
| 77 | LPG STOVE AND CYLINDER                            | ONE PC                                   |  |
| 78 | ELETRICAL HEATER (1000 WT)                        | TWO PCS                                  |  |
| 79 | BLOWER  | 2 PCS                                    |  |
| 80 | CROWN CUTTING BIRS WITH ALL THE BURS IN           | 10 SETS                                  |  |

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|     | DIFFERENT SHAPES INCLUDING FINISHING BURS IN DIAMOND AND CARBIDE(IMPORTED)   |  |  |
| 81  | BONE CUTTING BURS FOR STRAIGHT HAND PIECE AND AIROTOR HAND PIECE STRAIGHT,TAPERING AND ROUND                               | 5 SETS                                 |  |
| 82  | MICROMOTOR HANDPIECE BURS STRAIGHT FISSURE&ROUND FOR BONE CUTTING  | 2 EACH                                 |  |
| 83  | ACRYLIC CUTTING BURS CARBIDE AND FINISHING STONE BURS FOR DENTURE(CYLINDRICAL,STRAIGHT,TAPERING) FOR STAIGHT HAND PIECE    | 5 EACH                                 |  |
| 84  | X-RAY FILM FOR ADULT(KODAK)  | 150 (1 PKT) PCS IN ADULT SIZE FOR IOPA |  |
| 85  | X-RAY FILM HANGERS   | 1 DOZEN                                |  |
| 86  | PREADJUSTABLE BRACKET WITH MOLAR BAND TUBES ALONG WITH .022 INCH ROTH PRESCRIPTION   | 10 SETS                                |  |
| 87  | TITANIUM RECONSTRUCTION PLATES STRAIGHT 20 HOLES(2.5MM)  | 2 PCS                                  |  |
| 88  | TITANIUM BONE SCREWS 1.5MM DIAMETER(4MM/6MM/8MM LENGTH   | 25 EACH                                |  |
| 89  | TITANIUM BONE SCREWS 2 MM DIAMETR(4MM/6MM/8MM LENGTH   | 25 EACH                                |  |
| 90  | TITANIUM BONE SCREWS 2.5MM DIAMETER (4MM/6MM/8MM LENGTH  | 25 EACH                                |  |
| 91  | ERICH DENTAL ARCH BARS   | 50 PCS                                 |  |
| 92  | STAINLESS STEEL WIRE(26 AND 21 GAUGE)  | 5 EACH                                 |  |
| 93  | THICK BAND ELASTIC PACKET FOR IMF(3 MM)  | 2000 PCS                               |  |
| 94  | UNIVERSAL STAINLESS STEEL PLIER  | 1 PC                                   |  |
| 95  | HALF ROUND PLIER STAINLESS STEEL   | 1 PC                                   |  |
| 96  | WIRE CUTTER STAINLESS STEEL  | 1 PC                                   |  |
| 97  | PLASTIC SUCTION TIPS FOR DENTAL CHAIR  | 1000 PCS                               |  |
| 98  | TIN COATED DRILL BITS FOR MICROMOTOR(1,1.5, 2MM WITH 65 MM LENGTH)   | 10 EACH                                |  |
| 99  | STAINLESS STEEL DRILL BITS FOR MICROMOTOR(1,1.5, 2MM WITH 65 MM LENGTH)  | 10 EACH                                |  |
| 100 | TITANIUM BONE PLATES WITHOUT BAR(2,4,16 HOLES) 1.5,2 AND 2.5MM.  | 5 EACH                                 |  |
| 101 | TITANIUM BONE PLATES WITH BAR(2,4,16 HOLES) 1.5,2 AND 2.5MM.   | 5 EACH                                 |  |
| 102 | GLOVES SURGICAL 7 NO AND 7.5 NO LATEX POWDER COATED(STERILE)   | 500 EACH                               |  |
| 103 | GLOVES DIAGNOSTIC 7 AND 7.5 NO LATEX POWDER COATED(STERILE)  | 1000 EACH                              |  |
| 104 | DISPOSABLE GLASSES PAPER   | 1000 PCS                               |  |
| 105 | BETADINE SDOLUTION 5 LITERS  | 1 PC                                   |  |
| 106 | DEXTROSE 5%  | 5 BOTTELS                              |  |
| 107 | OXYGEN CYLINDER WITH MASK AND CYLINDER CARRYING TROLLEY DENTAL USE HAVING RENCH  | 1 PC                                   |  |
| 108 | FORMALIN 40%   | 2 BOTTELS                              |  |
| 109 | K FILES 8 NO AND 10 NO 21MM  | 2 PKTS EACH                            |  |
|     | Note: materials are of standard quality.chienese materials not entertained. Materials of dentsply,kavo,orthomac preferable |  |  |



## Group-D-Anatomy

### **1. PROJECTION MICROSCOPE:**

- Infinity optical system, Trinocular Microscope with following. Head: Trinocular Infinity optical system with Siedentopf 30 degree inclined, IPD – 47 -76 MM. Adjustment for diopter in left eye.
- **EYEPIECE:** EXTRA WIDE FIELD 10X/22MM. Infinity optical system.
- **NOSEPIECE:** Quintuple reversed, revolving nosepiece on ball bearing.
- **OBJECTIVES:** Infinity Optical system Plan Pi- 4x/0.10 10x/0.25 20x/0.40 S40x/0.65 S60x/0.85 S100x/1.25
- **Phase Objective:** Infinity Optical system 10X/0.25, 20x/0.40, S40x/0.65, Should be anti-fungus treated and anti-reflection coated for maximum light throughput.
- **STAGE;** 216mmx150mm rack less stage equipped with integrated 79x52mm mechanical stage.
- **CONDENSER:** Height-adjustable Abbe N.A. 1.25 condenser with iris diaphragm and opening for optional phase contrast sliders. Height-adjustable Zernike N.A. 1.25 phase contrast disc condenser.
- **FOCUS ADJUSTMENT:** Coaxial coarse and fine adjustments, 2µm precision, 20mm travel range Rack-stop for protection of slides and objectives. Friction adjustment.
- **ILLUMINATION:** Diascopic intensity adjustable with 3 W illumination Internal 85V – 240 V power supply. In-built sensor to automatically switch off should be available to save energy.
- **IMAGE PROJECTION:** Image projection system should consist of Digital High definition camera 1080P with USB and HDMI port, LED HDMI TV, Image grabbing and analysis software like image Stitching, Stacking, measurement, counting, segmentation, layering, editing, Brightness, contrast adjustment in Live and saved images. Suitable computer.

### **2. PENTA HEAD MICROSCOPE:**

- High quality routine observation microscope Infinity optical system with color corrected Trinocular head with 10x/22mm eyepiece, 30° inclined tubes with 4 extra binocular heads with 30° inclined tubes mounted on pillar, 10x/20mm eyepieces, Equipped with joystick for green Laser pointer, Interpupillary distances 50 -75 mm Diopter adjustment on both eyepieces, Reversed quintuple revolving nosepiece on ball-bearings, Infinity Optical system Plan – Achromatic 4x, 10x, S40, 60x, S100x oil immersion objectives, All optical parts should be anti- fungus treated, 150x140 mm stage with 76x50 mm mechanical stage. In height adjustable Abbe condenser N.A. 1.25 with iris diaphragm and filter holder, Condenser with slot for optional slider with dark field of phase contrast, Diascopic 3W/5W illumination with adjustable intensity with Internal power supply 85-240 V (CE), Delivered with power cord and dust cover. Digital CMOS camera with 18Mp dedicated for microscope only with imaging software having image grabbing, capture live, along with software featured with Image stacking, stitching, Time-lapse, Video overlay, water marking measurement, Layering, Image editing functions, Scale bar, save options like JPEG, TIFF, TIF PNG etc, suitable computer and monitor and 0.5x optical adapter. In should be upgradable to Phase contrast, DIC, Fluorescence, Polarizing microscope.
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**Group-E- F M T**

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| 1 | Air purifier | <p>1. Technical specifications:</p> <ul style="list-style-type: none"> <li>• Should be noiseless while running.</li> <li>• Spraying solution should be environment friendly, non toxic, ozone safe and biodegradable.</li> <li>• Spraying solution should be able to breakdown and neutralize odour causing bacteria and molecules.</li> <li>• System should have at least four spraying units.</li> <li>• Spraying solution should be readily available on a recurring basis.</li> </ul> <p>2. System configuration accessories, spares and consumables:</p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p>3. Environmental factors:</p> <ul style="list-style-type: none"> <li>• Shall meet IEC – 60601 – 1 – 2:2001 (Or Equivalent BIS) General requirements of safety for Electromagnetic Compatibility or should comply with 89 / 366 / EEC; EMC – directive.</li> <li>• The unit shall be capable of operating continuously in ambient temperature of 20 – 30 deg C and relative humidity of 15 – 90%.</li> <li>• The unit shall be capable of being stored continuously in ambient temperature of 0 – 50 deg C and relative humidity of 15 – 90 %.</li> </ul> <p>4. Power supply:</p> <ul style="list-style-type: none"> <li>• Power input to be 220 – 240 VAC, 50 Hz fitted with Indian plug.</li> <li>• UPS of suitable rating with voltage regulation, spike protection and maintenance free batteries for 60 minutes back up.</li> </ul> <p>5. Standards, safety and Training:</p> <ul style="list-style-type: none"> <li>• Should be FDA, CE, UL or BIS approved product.</li> </ul> | Qty.<br>01 |  |  |
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|   |                                  | <ul style="list-style-type: none"> <li>• Manufacturer should have ISO certification for quality standards.</li> <li>• Comprehensive warranty for 2 years and 5 years CMC after warranty including UPS.</li> <li>• Comprehensive training for lab staff and support services till familiarity with the system.</li> </ul> <p>6. Documentation:</p> <ul style="list-style-type: none"> <li>• User / Technical / Maintenance manuals to be supplied in English.</li> <li>• 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.</li> <li>• List of important spare parts and accessories with their part number and costing.</li> <li>• List of equipments available for providing calibration and routine Preventive Maintenance Support as per manufacturer documentation in service / technical manual.</li> <li>• Certificate of calibration and inspection.</li> <li>• 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.</li> </ul> |   |  |  |
| 2 | Weighing machine for dead bodies | <p>1. Technical specifications:</p> <ul style="list-style-type: none"> <li>• Length of floor scale should be 4 feet to 6 feet.</li> <li>• Platform for keeping the body – should be sturdy, made of stainless steel, 14 gauge – size 6 feet x 2 ½ feet x 4 inch.</li> <li>• Should have a digital meter</li> </ul>   | 1 |  |  |

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|  |  | <p>(dial) to display the weight rapidly and measurements can be calibrated to adjust the weight of the platform.</p> <ul style="list-style-type: none"> <li>• The digital meter (dial) should be enclosed dust proof and water tight stainless steel enclosure mounted on a wall. AC or DC operated.</li> <li>• Should be able to perform under the most rigorous conditions of a mortuary conducting 15 post-mortem examinations per day measuring dead body weight ranging from 0 kg to 200 kg. Accuracy upto 25 grams.</li> <li>• Rechargeable battery back-up pack provided for usage in power failure.</li> </ul> <p>2. System configuration accessories, spares and consumables:</p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p>3. Environmental factors:</p> <ul style="list-style-type: none"> <li>• None.</li> </ul> <p>4. Standards, safety and Training:</p> <ul style="list-style-type: none"> <li>• Should be FDA, CE, UL or BIS approved product.</li> <li>• Manufacturer should have ISO certification for quality standards.</li> <li>• Comprehensive warranty for 2 years and 5 years CMC after warranty including UPS. Comprehensive training for lab staff and support services till familiarity with the system.</li> </ul> <p>5. Documentation:</p> <ul style="list-style-type: none"> <li>• User / Technical / Maintenance manuals to be supplied in English.</li> <li>• 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.</li> </ul> |  |  |
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|   |                                     | <ul style="list-style-type: none"> <li>• List of important spare parts and accessories with their part number and costing.</li> <li>• List of equipments available for providing calibration and routine Preventive Maintenance Support as per manufacturer documentation in service / technical manual.</li> </ul> <p>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.</p> <ul style="list-style-type: none"> <li>• Certificate of calibration and inspection.</li> </ul> |   |  |  |
| 3 | Weighing machine for foetus/Newborn | <ul style="list-style-type: none"> <li>• Display device: - LED of high contrast</li> <li>• Scale bright, easy to read and clear</li> <li>• Operating brightness: 250-300 LUX</li> <li>• Powered by batteries as well as adoptor</li> <li>• Display resolution 1 gram</li> <li>• Weighing capacity 5 Kg</li> <li>• Pan: polished SS material</li> <li>• Capacity of Pan 4—5 litres</li> <li>• Compact and space saving</li> <li>• GLP/GMP compliance</li> </ul> <p>ISO certified.</p>  | 1 |  |  |
| 4 | Weighing machine for organs         | <ul style="list-style-type: none"> <li>• Display device: - LED of high contrast</li> <li>• Scale bright, easy to read and clear</li> <li>• Operating brightness: 250-300 LUX</li> <li>• Powered by batteries as well as adoptor</li> <li>• Display resolution 1 gram</li> <li>• Weighing capacity 5 Kg</li> <li>• Pan: polished SS material</li> <li>• Capacity of Pan 4—5 litres</li> <li>• Compact and space saving</li> <li>• GLP/GMP compliance</li> <li>• ISO certified.</li> </ul>  | 2 |  |  |

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| 5 | Oscillating electric autopsy saw | <p>Technical specifications:</p> <ul style="list-style-type: none"> <li>• Strong Motor with at least 18,000 RPM.</li> <li>• 15,000 – 16,000 Oscillations / out of blade</li> <li>• Motor and hand piece should be separate and connected by a long cord not less than 8 feet long so that motor is not required to be lifted every time.</li> <li>• Motor is to be provided with long service cord with plug.</li> <li>• Hand piece with safety flange permitting firm grip and should stay cool during operation</li> <li>• Easily detachable hand piece – autoclavable.</li> <li>• Both hand and foot switch for on and off operation.</li> <li>• Suitable wrench to remove blades</li> <li>• Accessories</li> <li>• Large section blade 6.3 cm width with a stem of 1.1 cm: 1 Nos.</li> <li>• Small section blade 4 cm width</li> <li>• Should have provision for vacuum bone dust collector</li> </ul> <p>2. System configuration accessories, spares and consumables:</p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p>3. Environmental factors:</p> <ul style="list-style-type: none"> <li>• Shall meet IEC – 60601 – 1 – 2:2001 (Or Equivalent BIS) General requirements of safety for Electromagnetic Compatibility or should comply with 89 / 366 / EEC; EMC – directive.</li> <li>• The unit shall be capable of operating continuously in ambient temperature of 20 – 30 deg C and relative humidity of 15 – 90%.</li> <li>• The unit shall be capable of being stored continuously in ambient temperature of 0 – 50 deg C and relative humidity of 15 – 90 %.</li> </ul> | 1 |  |  |
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|  |  | <p>4. Power supply:</p> <ul style="list-style-type: none"> <li>• Power input to be 220 – 240 VAC, 50 Hz fitted with Indian plug.</li> </ul> <p>5. Standards, safety and Training:</p> <ul style="list-style-type: none"> <li>• Should be FDA, CE, UL or BIS approved product.</li> <li>• Manufacturer should have ISO certification for quality standards.</li> <li>• Comprehensive warranty for 2 years and 5 years CMC after warranty including UPS.</li> <li>• Comprehensive training for lab staff and support services till familiarity with the system.</li> </ul> <p>6. Documentation:</p> <ul style="list-style-type: none"> <li>• User / Technical / Maintenance manuals to be supplied in English.</li> <li>• 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.</li> <li>• List of important spare parts and accessories with their part number and costing.</li> <li>• List of equipments available for providing calibration and routine Preventive Maintenance Support as per manufacturer documentation in service / technical manual.</li> <li>• 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.</li> <li>• Certificate of inspection and quality control indicating the S / N for all non consumable items with date.</li> </ul> |  |  |
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| 6 | Cadaver autopsy/ carrier | <p>1. Technical specifications:</p> <ul style="list-style-type: none"> <li>• Should be able to transport dead bodies from cold storage to autopsy table and then to the relative waiting area.</li> <li>• Dimensions: <ul style="list-style-type: none"> <li>- Length: 75 inches to 85 inches.</li> <li>- Width: 25 – 35 inches.</li> <li>- Height: 30 – 35 inches.</li> </ul> </li> <li>• Chassis should be made of heavy duty, high impact PVC, totally covering the dead body with non-transparent doors opening on the top side.</li> <li>• Casters should be rubber edged with total lock wheel locking in-built system. Navigation should be possible in all directions.</li> <li>• Should be able to bear the weight of the dead body (up to 200 kg).</li> <li>• Can be easily cleaned with ordinary detergent after each transportation and should be resistant to fumigation chemicals and cold temperature.</li> <li>• Should be durable and have bumpers to protect the carrier from accidental bumping on the walls of autopsy hall and body storage racks.</li> </ul> <p>2. Standards, safety and Training:</p> <ul style="list-style-type: none"> <li>• Should be FDA, CE, UL or BIS approved product.</li> <li>• Manufacturer should have ISO certification for quality standards.</li> <li>• Comprehensive warranty for 2 years.</li> <li>• Comprehensive training for lab staff and support services till familiarity with the system.</li> </ul> <p>3. Documentation:</p> <ul style="list-style-type: none"> <li>• User / Technical / Maintenance manuals to be supplied in English.</li> <li>• Log book with instructions for daily, weekly, monthly and quarterly maintenance</li> </ul> | 2 |  |  |
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|   |   | <p>checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.</p> <ul style="list-style-type: none"> <li>• List of important spare parts and accessories with their part number and costing.</li> <li>• 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.</li> <li>• Certificate of inspection and quality control indicating the S / N for all non consumable items with date.</li> </ul> |   |  |  |
| 7 | Dissecting lights (Double ceiling mounts) | <ol style="list-style-type: none"> <li>1. Intensity should be 100000 ± Lux</li> <li>2. Halogen bulb capacity 24V-70 W</li> <li>3. Reflector should be diachronic</li> <li>4. Colour temperature: 4300 K</li> <li>5. Temp should not be increased at head area more than 2°C to 4°C</li> <li>6. Dom-diameter should be approx 28"</li> <li>7. Minimum six numbers of bulb should be supplied extra.</li> <li>8. Dome should be 1 (7x1)</li> </ol>  | 2 |  |  |
| 8 | Centrifuge machine                        | <p>Table top model with swing out rotor</p> <p>head 16 tubes of 15 ml glass tubes</p> <ul style="list-style-type: none"> <li>• Digital speed indicator with 60 min. count down timer</li> <li>• Speed 4000rpm &amp; RCF2750 with rotor head</li> <li>• Dynamic breaks, Imbalance detector, cut off in case of uneven load</li> <li>• Step less speed regulator &amp; safety lid interlock to prevent lid opening during operation</li> </ul>  | 1 |  |  |

|    |  |   |   |  |  |
|----|--|---|---|--|--|
| 9  | Laboratory deep freezer                              | Vertical deep freezer, -80°C, Volume:- 270 Litre, volume: - 60 Cu ft, Inner chamber size (HxWxD) 900x500x600, Touch key pad/LED display, Microprocessor controlled<br>Alarm type: - audible & visible<br>Refrigerant: - CFC free refriferant<br>Construction: - Double walled w/PUF insulation<br>Door: - Solid door<br>Inner doors: - Double doors w/tempered glass<br>Cabinet housing: - MS w/powder coating<br>Inner chamber: - Stainless steel (304)<br>Outer chamber stainless steel 304 grades<br>Caster wheel<br>Voltage stabilizer<br>Power supply:- 220—240 Volts, 50 Hz. Single phase<br>Certification: - ISO and CE mark | 1 |  |  |
| 10 | Hot plate electrical                                 | Body made up of thick MS/SS, Top plates over hands by supporting ceramic beads, Selection caste iorn/ ss plate, Maximum surface temp about 300°C controlled by energy regulator, Long last nichrome element. Work on 230 V AC.  | 1 |  |  |
| 11 | Elevating grossing station with accessories          | Grossing work station all stainless steel on al surface, the main dissection area to have maximum space, safety zone, it should have circulating exhaust system with filter to guarantee a safe work area from toxic formaldehyde fumes. Plumbing fixtures. The entire control panel should be on eye level for quick easy excess to lighting fan and switches.   | 1 |  |  |
| 12 | Binocular research microscope with camera attachment | Binocular Microscope with high definition digital camera for Bright field microscopy, upgradable for Digital imaging and fluorescence. Observation tube 45 degrees , IPD adjustment 50 mm - 75 mm Eye-piece 10x with eye guard<br>Objectives – Nose Piece 5<br>Position to hold 5 objectives:<br>Obj. PLAN 4x/0.10<br>Objective PLAN 10x/0.25<br>Obj. PLAN 40x/0.65<br>Obj. PLAN 100x/1.25 Oil  | 1 |  |  |

|    |                      |  |    |  |  |
|----|----------------------|--|----|--|--|
|    |                      | <p>Mechanical stage - Mechanical stage with double plate flat top with stainless steel slide holder.</p> <p>Condenser – Condenser 0.90/1.25 Oil for Bright field phase contrast. Illumination – LED Illumination. Attached Computer with requisite software</p>  |    |  |  |
| 13 | Water bath           | <p>With temperature uniformity as tight as +/- 2 Degrees at Room Temperature. Digital Display of Temperature.</p>  | 1  |  |  |
| 14 | Microtome with knife | <p>Slice thickness range:- 0-60µm<br/> Setting value: - from 0—2 µm in 0.5 µm increment, from 2—10 µm in 1 µm-increment, from 10—20 µm in 2 µm increment, from 20—60 µm in 5 µm increment.</p> <p>Horizontal specimen stroke:- 28 mm<br/> Vertical specimen stroke: - 60 mm<br/> Slide precision ±5%<br/> Maximal slice section: - 50x 45 mm<br/> Approx Dimension : - 17¼" x 21¼" x 11½" (440 x 540 x 290 mm)</p> <ul style="list-style-type: none"> <li>• One-hand operated universal cassette clamp</li> <li>• Completely new knife holder design with red colored knife guard</li> <li>• Precise lateral knife holder adjustment with click stop settings</li> <li>• Spacious and easy-to-clean section waste tray</li> <li>• Wide range of accessories</li> <li>• Compact, ergonomic design</li> <li>• Ergonomically designed handwheel handle</li> <li>• Smooth-running handwheel with integrated quick-lock mechanism for safety</li> <li>• Enclosed micrometer feed mechanism</li> <li>• Low-maintenance cross-roller</li> </ul> | 20 |  |  |

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|  |  | <p>bearings</p> <ul style="list-style-type: none"> <li>• Two forward and backward coarse feed speeds</li> <li>• Alternate trimming and sectioning modes, as indicated on the display</li> <li>• Speed control through the cutting window for enhanced efficiency</li> <li>• Automatic, variable specimen retraction, depending on sectioning speed</li> <li>• Section thickness totalizer and section counter</li> <li>• Intuitive control panel</li> <li>• Integrated communication display</li> <li>• Precise specimen orientation with zero point reference <ul style="list-style-type: none"> <li>• Section thickness setting range : 0,5 – 100 <math>\mu\text{m}</math></li> <li>• Setting values: from 0,5 <math>\mu\text{m}</math> – 5 <math>\mu\text{m}</math> in 0,5 <math>\mu\text{m}</math>-increments<br/>from 5 – 20 <math>\mu\text{m}</math> in 1 <math>\mu\text{m}</math>-increments<br/>from 20 – 60 <math>\mu\text{m}</math> in 5 <math>\mu\text{m}</math>-increments<br/>from 60 –100 <math>\mu\text{m}</math> in 10 <math>\mu\text{m}</math>-increments</li> <li>• Trimming section thickness setting range: 1 – 600 <math>\mu\text{m}</math></li> <li>• Setting values: from 1 – 10 <math>\mu\text{m}</math> in 1 <math>\mu\text{m}</math>-increments<br/>from 10 – 20 <math>\mu\text{m}</math> in 2 <math>\mu\text{m}</math>-increments<br/>from 20 – 50 <math>\mu\text{m}</math> in 5 <math>\mu\text{m}</math>-increments<br/>om 50 – 100 <math>\mu\text{m}</math> in 10 <math>\mu\text{m}</math>-increments<br/>from 100 – 600 <math>\mu\text{m}</math> in 50 <math>\mu\text{m}</math>-increments</li> </ul> </li> </ul> |  |  |  |
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|--|--|--|--|--|--|
|  |  | <ul style="list-style-type: none"> <li>• Object feed: 28 mm ±1 mm, feed motion via step motor</li> <li>• Vertical specimen stroke: 70 mm</li> <li>• Sectioning modes: 4</li> </ul> <p>Specimen retraction: in manual operation: 5 – 100 µm in 5 µm-increments, can be turned off</p> <p>in motorized operation: varying with the sectioning speed, can be turned off</p> <p>Electric coarse feed: 300 µm/s und 900 µm/s</p> <p>Sectioning speed: 0,5 – 420 mm/s ± 10%</p> <p>Maximum specimen size (L x H x W): 50 x 60 x 40 mm</p> <p>Specimen orientation: horizontal: 8°, vertical: 8°</p> <p>Nominal supply voltages: 100 / 120 / 230 / 240 V AC ±10%</p> <p>Nominal frequency: 50/60 Hz</p> <p>Power draw: 340 VA</p> <p>Dimensions basic instrument</p> <p>Width (including hand wheel) 413 mm</p> <p>Depth (including waste tray) 618 mm</p> <p>Height (with storage area on cover): 305 mm</p> <p>Weight (without accessories) approx. 37 kg, approx. 81 lbs</p> <p>Dimensions control panel</p> <p>WxDxH: 121 x 166 x 50 mm</p> <p>Weight: approx. 0.66 kg, approx. 1.45 lbs (Certificates: CE, c-CSA-us)</p> |  |  |  |
|--|--|--|--|--|--|

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|----|-------------------------------------|--|---|--|--|
| 15 | Automatic tissue processing machine | <p>Semi-enclosed tissue processor, Gentle specimen processing and maximum safety at all stages of processing, Carousel type with 12 stations, Configurations: Basic instrument, Vacuum function with fume control system, Option: two basket loading, Tissue baskets made of metal with varying capacities of up to 80 cassettes, Ergonomic control panel with foil-protected keyboard and LCD, Infiltration time separately</p> <p>Dimension (WxDxH): - 32.5"W x 32.5"d x 23.5" h (31"h fully extended)</p> <p>Weight:- about 133 lbs</p> <p>Maximum cassette capacity: - 100 (200 with two baskets)</p> <p>Paraffin temperature range 45°C to 65°C</p> <p>Reagent temperature range:- ambient</p> <p>Delayed end time (up to 9 days)</p> <p>Number of paraffin station 2 (3 optional)</p> <p>Paraffin bath volume: - 1.8 Lit</p> <p>Fume control system</p> <p>Display LCD</p> | 1 |  |  |
| 16 | Tissue embedding Station            | <p>Depth x Height x width: - 25" x 32"x 11"</p> <p>Paraffin reservoir capacity about 3.8 Litres</p> <p>Paraffin reservoir temp:- about 50—70 °C</p> <p>Warming oven temp:- 62°C</p> <p>Tissue holding tank temp: - 50—70 °C</p> <p>Work surface temp: - 50—70 °C</p> <p>Cold plate temp: - -8°C to ambient</p> <p>Weight about 115 Kg</p> <p>Power: - 100—120 VAC, 50/60 Hz, 8 Amp</p> <p>Microprocessor based controller, Programmer timer</p> <p>Self paraffin draining system</p> <p>Infra red activated dispenser or foot switch.</p> <p>Dual power magnifying glass</p> <p>Electronic forceps</p>   | 1 |  |  |

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|----|---|--|---|--|--|
| 17 | Digital SLR camera (more than 12 MP) with accessories | <ol style="list-style-type: none"> <li>1. DSLR camera with 21.1 Megapixels full frame CMOS sensor for high resolution superb quality and detail</li> <li>2. New photodiode construction, new microns array and on chips noise reduction circuitry on CMOS sensor to minimize interference from electrical noises, keeping data clean for clearer images at high ISO setting and long exposures.</li> <li>3. DGIS 4 imaging processor's 14 bit/D conversions to give rapid processing speeds while maintaining fine details and accurate colour reproduction.</li> <li>4. 2 s RAW file format setting give you the versatility of RAW at the smaller sizes.</li> <li>5. Auto lighting optimizers with 4 settings (Standard, low, strong and disable)- Analyzes the brightness of the photographic subjects, and automatically corrects the darkest parts to make them brighter.</li> <li>6. New lens peripheral illumination correction setting to automatically even the brightness across the image.</li> <li>7. Full HD video capture at 1920 x 1080 resolution for up to 4 GB per chip with HDMI output for HD viewing of still and video.</li> <li>8. One speed light for same camera</li> <li>9. One additional battery for same camera</li> <li>10. One additional memory SD card 16 GB</li> <li>11. One 24-105 mm lens with camera</li> <li>12. All connecting wires as per requirement of same camera if any.</li> <li>13. Carry bag for same camera should be provided</li> <li>14. Literature for the equipment should be supplied.</li> <li>15. The manufacture/supplier shall provide practical training.</li> </ol> | 1 |  |  |
| 18 | Slide warming table                                   | <p>Top surface stainless steel (SS-304 grade)<br/> The surface temperature controlled from ambient to 70°C.<br/> Supplied complete with pilot lamp, cord and plug without thermometer.<br/> To work on 220/230 Volts A.C. Supply<br/> Heating plate size: - 600x150mm</p>  | 1 |  |  |

|    |                                   |   |   |  |  |
|----|-----------------------------------|---|---|--|--|
|    |                                   | MOC: - M.S. Sheet duly powder coated<br>Top platform: - Stainless steel sheet<br>Temperature controller: -<br>Microprocessor based PID digital<br>temperature indicator cum controller<br>Electric supply: - 220/230 V AC, 50/60<br>Hz  |   |  |  |
| 19 | Slide cabinet (Big)               | Block and slide storage facility mixed,<br>Metal make, vertical with groove,<br>20000 slide storage capacity.   | 1 |  |  |
| 20 | C-ARM MOBILE IMAGE<br>INTENSIFIER | <p><b>I. X-RAY GENERATOR</b></p> <p>i. Type: High Frequency minimum 14 KHz.</p> <p>ii. Fluoroscopy anode potential: 40 to 110Kvp</p> <p>iii. Fluoroscopy mA range: Normal mode : upto 7 mA</p> <p>iv. Power: 15 Kw</p> <p><b>II. X-RAY TUBE</b></p> <p>i. Type: Stationary anode</p> <p>ii. Focal spot: 0.6/1.5 mm</p> <p><b>III. IMAGE INTENSIFIER</b></p> <p>i. Input field size: 9" (Dual field)</p> <p>ii. Grid on the entrance field with grid ratio 8:1.</p> <p>iii. IRIS Collimator</p> <p><b>IV. TV CAMERA SYSTEM</b></p> <p>i. Type: CCD</p> <p><b>V. TV monitor</b></p> <p>i. Two 15" or more medical grade LCD/TFT/CRT monitors.</p> <p>ii. One for LIH and one for memory display</p> <p><b>VI. C-ARM CART</b></p> <p>i. SID: 880mm</p> | 1 |  |  |



|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  | <p>ii. Orbital Travel: 125°</p> <p>iii. C-arm Angular rotation: ±180° or more</p> <p>iv. Horizontal Travel: 200mm</p> <p>v. Vertical Travel: 400mm</p> <p>vi. Panning Movement: ±12.5°</p> <p>vii. Depth of C-arm: 600mm or more</p> <p><b>VII. OTHER SPECIFICATONS</b></p> <p>The unit should have the following facilities</p> <p>i. Automatic KV and mA technique selection and manual mode.</p> <p>ii. Cumulative exposure timer for fluoroscopy.</p> <p>iii. Should have Automatic dose control</p> <p>iv. 360 ° rotations of images should be possible for LIH image after fluoroscopy.</p> <p>v. Image vertical and horizontal reversal should be possible on the LIH image after fluoroscopy.</p> <p>vi. Should have 2x and 3x zoom function.</p> <p>vii. Should have at least 20cm distance between the focal spot and skin for radiation safety.</p> <p>viii. Should have a steering wheel with 180° rotation.</p> <p>ix. Two sets of sterile drape for the X-ray tube assembly, Image intensifier and C-arm and</p> <p>clips to hold the drape on the c-arm should be provided.</p> |  |  |  |
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|    |   | <p>x. Cassette holder should be supplied.</p> <p>xi. The quoted model should be AERB type approved for usage up to 7mA.</p> <p>Relevant copies of the certificate should be attached with the bid.</p> <p><b>VIII. POWER REQUIREMENTS</b></p> <p>i. Single phase, 230 Vac, 50Hz</p> <p>ii. Suitable stabilizer should be provided along with the unit.</p>  |   |  |  |
| 21 | Table top incubator                     | <p>Temperature range 5-60 degree centigrade.</p> <p>Temperature uniformity +/-1 at 37 degree centigrade.</p> <p>Temperature resolution 0.1 degree Centigrade.</p> <p>Digital display of temperature.</p>  |   |  |  |
| 22 | Autoclave                               | <p>Electrically operated 220 V- 240 V)</p> <p>Vertical type</p> <p>Should be double walled</p> <p>Inner wall made up of s.s.</p> <p>Outer wall made up of m.s / s.s.</p> <p>Size depth 550mm x 350 mm ( approx )</p> <p>Lid should be made up of stainless steel &amp; provided with tightening device .</p> <p>Should have pressure gauge, water level indicator , steam release valve &amp; safety valve &amp; drain for emptying the Autoclave .</p> <p>Joint less Gasket.</p> <p>Working pressure 10psi to 20 psi .</p> <p>To be supplied with cord, plug &amp; stainless steel basket .</p> <p>Should have pedal lifting arrangement to lift the lid or handle to lift the lid</p> | 2 |  |  |
| 23 | O T fumigator                           |   | 1 |  |  |
| 24 | C C TV Camera with monitor Installation |   | 5 |  |  |

## Group-F- Urology

### TECHNICAL SPECIFICATION FOR SALINE TURPWITH ELECTRO – CAUTRY

**This system should be compatible with following procedures:**

- Saline TUR
- Conventional TUR
- Can be used for open surgery and Laparoscopic surgery

**System should have following features:**

- Output mode: Monopolar, Bipolar and Saline
- Monopolar cutting and coagulation and vaporization
- Saline cutting and coagulation
- Base frequency range : 350 kHz – 450 Hz
- Protection against electric shock
- Automatic Smoke Evacuation facility.

**System should include following:**

- Electrosurgical Unit
- Footswitch
- Telescope 30 Degree, 4mm, Autoclavable
- Bipolar Active Working Element for Transurethral resection in saline (TURIS)
- Bipolar HF cable
- Rotatable outer sheath, 26 Fr. , 2 stopcock
- Resection inner sheath, 24 Fr.
- Cutting electrode – 12 pieces
- Roller electrode – 12 Pieces.
- Needle electrode – 12 Pieces.
- Button electrode for plasma vaporization – 12 pieces.
- Enucleation electrode – 12 pieces.
- Light Guide cable, 3.5 mm, 3 Meter.
- Cystoscopy sheath, 22.5 Fr.
- Cystoscopy Bridge, 2 Way
- Rotatable Irrigation Port, 2 stopcocks.
- Ellik Evacuator
- Bipolar Forceps, Laparoscopic Bipolar and instruments used for vessel sealing.

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## High End Color Doppler Specifications

| <b>High End Color Doppler Specifications-Qty-01</b> |   |
|---|---|
| Sr.no   | Specification   |
| 1   | System should be high end State of Art with fully digital technology equipment with broadband digital Beam former.  |
| 2   | The system designed Green Emission Product Specification. The system should comply with standards are environmentally Conscious Product ( ECP) Certificate to be attached.  |
| 3   | The beam former should be able to handle independent processing channel for each receiving information from transducer.   |
| 4   | The system should have 50000 or more digitally processing channel.  |
| 5   | The system should following optional capabilities:  |
|   | a. Real time 4D imaging capabilities (optional)   |
|   | b. Real time elastography capabilities with linear probe.   |
|   | c. Contrast Ultrasound Capability (Optional )   |
| 6   | The system should have region specific preset like Adult Abdomen, Pediatric Abdomen, TV/Tr, Gyn, Small Parts, Musculoskeletal and vascular preset. All preset should be customized according to the user. System should operate in following Modes. |
|   | a. 2-D mode   |
|   | b. M Mode   |
|   | c. Pulse Wave Mode  |
|   | d. Color Flow Imaging   |
|   | e. Continuous wave mode   |
|   | f. Color power Angio/Power Doppler Imaging.   |
|   | g. Tissue Harmonic Imaging  |
|   | h. Duplex & Triplex Mode simultaneously ( All three modes 2D, Color & Doppler Modes simultaneously)   |
|   | i. Anatomical M Mode  |
|   | j. Tissue Doppler Imaging   |
| 7   | The system should have  |
|   | a. Dual &/Quad Split display  |
|   | b. Duplex for simultaneous B mode & spectral Doppler  |
|   | c. Facility of full screen imaging.   |
|   | d. The system shall support full screen display of all 3D views.  |
|   | e. The system should support real time acquisition and display of two image planes simultaneously with color.   |
|   | f. Facility for zoom (real-time and frozen image)   |
|   | g. Cine loop review facility in individual and mixed modes with memory up to minimum of 200 images or seconds.  |
|   | h. The system should autofocus for color ROI.   |
| 8   | All the transducers are broadband with multi frequency capability.  |
| 9   | 2D fram rate should be more than 1000/s.  |
| 10  | Inbuild Hard disc Memory should be 500 GB or more.  |
| 11  | The system should have advanced Real Time Spatial Compounded imaging.   |

|    |  |
|----|--|
| 12 | the system should have 256 gray levels with system dynamic range more than 200 db and 2 D line density 512 lines.  |
| 13 | System should have 4 active Transducer ports.  |
| 14 | The system should have latest high density beam former for fast and wider system application.  |
| 15 | The system should have advanced wide band color Doppler imaging mode with directional in formations without blooming/ over painting for low flow application as a option.  |
| 16 | The minimum imaging depth should be 30 cm for convex probe.  |
| 17 | System must have minimum boot up time (for start up to scanning).  |
| 18 | System must be sturdy, resistant to breakage & damage on fall/hit against the wall/hard surface.   |
| 19 | System should perform well in temp range from 5-40 degree celcius & relative humidity of 30-85%  |
| 20 | System should have CE or FDA(US) approval.   |
| 21 | <b>Sophisticated Ergonomics</b>  |
|    | A flexible multi joint arm supports the LCD monitor, allowing appropriate for operations in the standing or sitting posture to be achieved easily.   |
| 22 | <b>Monitor</b>   |
|    | a. LCD/LED monitor and size should be 19" (inch) or more.  |
|    | b. The system shall include a minimum 9 inch LCD touch screen control.   |
|    | c. The displayed images are very easy to view and their excellent visiblity is relatively intensive to the brightness of the room. Also the display size and gamma level should be adjusted.   |
| 23 | <b>Console</b>   |
|    | a. The free programmable ,mode -sensitive more direct access to all absic and advance system controls.   |
|    | b. Convenient transducer trays on both sides at least four in number. Basic and advanced quantification functions should be activated directly on the programmable console.  |
|    | c. A alphanumeric keyboard should be available to manually enter comments or patient data.   |
| 24 | <b>Data Management</b>   |
|    | A large capacity HDD (500 GB or more) should be provided in the standard configuration ,facilitating efficient management of acquired images. Filled images can be output via the USB port ( USB memory or USB HDD) or stored on CD/DVD by image management. |
| 25 | <b>Measurement and calculation</b>   |
|    | a. Measurement should be possible on Frozen Images and image recalled from the image archive.  |
|    | b. The system should have comprehensive set of Measurements in Ob/Gyn/Carotid/lower Limb/Upper limb/Thyroid/testis/ Abdominal applications.  |
| 26 | <b>Transducer</b>  |
|    | Convex probe with band width of 2 Mhz to 6 MHZ or wider bandwidth.   |
|    | Linear probe with bandwidth of 4 Mhz to 11 Mhz or wider bandwidth.   |
|    | TV/TR probe with bandwidth of 4 MHz to 9 Mhz or wider bandwidth.   |

|    |  |
|----|--|
| 27 | <b>Standard Accessories:</b>                       |
|    | a. UPS (Online UPS-2 KVA with one hour backup)     |
|    | b. Biopsy attachments for trans rectal probe.      |
|    | Attachment for Ultrasound guided puncture for PCNL |

**C: Accessories for Endoscopic/ End urological and Laparoscopic Surgery**

| Sl no | Requirement                             | No. of items required |
|-------|---|-----------------------|
| 1     | Set for AV Fistula                      | 02 set                |
| 2     | Suction for PCNL                        | 02 set                |
| 3     | Hemalock applicator (large)             | 2set (12F)            |
| 4     | Ligaclip applicator                     | 300,400               |
| 5     | Diathermy                               | 04 pcs (wire)         |
| 6     | Laposcopic needle holder with self lock | 30pcs                 |
| 7     | Ports with hand instruments             | 2 sets                |
| 8     | PCNL alligator forceps                  | 6 pcs                 |
|       |   |                       |

## Group- G- (RIO)

### (a) SLIT LAMP WITH OBSERVERSCOPE(Qty-Qty.02)

#### **SLIT LAMP WITH OBSERVERSCOPE**

##### **MICROSCOPE UNIT**

TYPE

GALILEO TYPE

MAGNIFICATION DRUM, 5 STEP MAGNIFICATION

MAGNIFICATION STEPS 6 / 10 / 16 / 25 / 40

OVERALL MAGNIFICATION (ACTUAL VISION FIELD)6.37 (ø 35.1 mm)9.94 (ø 22.5 mm)

15.87 (ø 14.1 mm)25.37 (ø 8.8 mm)39.62 (ø 5.6 mm)

EYEPIECE LENS MAGNIFICATION 12.5 X

DIOPOTER ADJUSTMENT RANGE -5D TO +5D

BINOCULAR TUBES PD ADJUSTMENT: 55 TO 78 mm

##### **ILLUMINATION UNIT**

ILLUMINATION FIELD SLIT WIDTH

0 TO 14 mm CAN BE ALTERED GRADUALLY (14 mm = CIRCLE)

SLIT LENGTH 14 mm TO 1 mm,

CAN BE ALTERED GRADUALLY (14 mm = CIRCLE)

APERTURE DIAMETER ø 14, 10, 5, 2, 1, 0.2 mm

SLIT DIRECTION VERTICAL TO HORIZONTAL, CAN BE ALTERED GRADUALLY

INCLINATION: 5° / 10° / 15° / 20°

SIDE SWING

FILTER

BLUE FILTER, RED - FREE FILTER, AMBER FILTER

UV CUT FILTER (NORMAL USE),

ILLUMINATION LAMP HALOGEN TYPE/LED

##### **BASE UNIT**

FORWARD BACKWARD MOVEMENT 90 mm

RIGHT LEFT MOVEMENT 100 mm

VERTICAL MOVEMENT 30 mm

AMOUNT OF MOVEMENT IN ALL DIRECTION 12 mm

##### **CHINREST UNIT**

AMOUNT OF VERTICAL MOVEMENT OF CHINREST

80 mm

FIXATION TARGET \*\*

FIXATION TARGET WITH DIOPTOR ADJUSTMENT

LUMINOUS FIXATION TARGET

FIXATION LAMP

LED (RED)

DIMENSIONS

With motorized table

POWER SUPPLY

100 - 240 V AC, 50 - 60 Hz, 110 VA

OBSERVATION TUBE

**(b) DYNAMIC PASCAL TONOMETER(Qty-01)**

| <b>.DYNAMIC PASCAL TONOMETER</b>   |
|--|
| 1. DCT-Sensor tip: no application but relaxation   |
| 2.Constant apposition force of only 1g   |
| 3. LCD display shows: IOP (True IOP), OPA (ocular pulse amplitude) and Q (measurement quality index) |
| 4.Easy handling with one knob  |
| 5. Wireless printer  |
| 6.Sterile sensorcaps   |
| 7. Slit lamp adapter kit   |
| 8. Swingarm  |
| 9. DataWizard software   |
| 10. Rechargeable battery kit   |

**(c) VIDEO INDIRECT OPHTHALMOSCOPE-Qty-01)**

| <b>VIDEO INDIRECT OPHTHALMOSCOPE</b>   |
|--|
| <b>.Fully integrated camera system.</b> <ul style="list-style-type: none"><li>• <b>Compact.</b> Lightweight design</li><li>• <b>Water-proof camera head.</b> Can be placed in disinfectant solution (but cannot be autoclaved).</li><li>• <b>100% dustproof system.</b> No maintenance required.</li><li>• <b>Optics specially-developed.</b> Maximum brightness.</li><li>• <b>High-resolution A-Cam camera.</b> CCD CAM</li><li>• <b>Image sensor.</b> 1/2" CCD, color.</li><li>• <b>Focus adjustable for any working distance.</b> From 250 to 800mm.</li><li>• <b>Automatic white balance.</b></li><li>• <b>Automatic light metering at the center of the image.</b> Reduction in reflections.</li><li>• <b>Automatic light boost.</b> Boost function for examinations with low lighting.</li><li>• <b>Brilliant image with an S-VHS monitor.</b></li><li>• <b>FBAS (composite) and Y/C (SVHS) outputs.</b> Extensive compatibility and high image quality.</li><li>• <b>Optional PAL / NTSC format.</b></li><li>• <b>Connecting cable.</b> 3m.</li><li>• <b>Processor should connect to various output devices, such as: VCR's, digital printers, PC's with image capture software</b></li></ul> |

**(d )HAND HELD AUTOKERATOMETER-01**

| <b>HAND HELD AUTOKERATOMETER</b>  |
|---|
| LCD should shows centering and focusing indicators and allows easy operation. |
| AI mode   |



The AI mode automatically detects the most appropriate value and completes measurement.

90° correction

The 90° correction function facilitates measurement of a patient in lying position by correcting the astigmatic axis by 90°.

Auto shot

Automatically starts measurement when it is in the right position according to centering and focusing indicators.

Carrying case with portable stand (optional accessory)

**(e) APPLANATION TONOMETER FDA APPROVED-Qty.04**

**APPLANATION TONOMETER FDA APPROVED**

1. Should be Applanation type.
2. Should be based on Goldmann Tonometry principle.
3. Should have a measuring range from 0 to 78 mmHg in steps of 2 mmHg.
4. Should have an accuracy of  $\pm 0.5$ mmHg
5. Should be supplied with calibration Bar, Prism and tonometer mount base to fix with optics.
6. Should be compatible with all models of slit lamps.
7. Should supply 1 no spare prism.
8. Controls should be visible and clearly defined.
9. Labels and markings should be clear and visible.

**(f) FIELD ANALYSER (Qty-01)**

**HUMPHREY FIELD ANALYSER**

**STIMULUS:**

**GOLD MAN STIMULUS SIZE**

**WHITE ON WHITE**

**BLUE ON WHITE**

**BLUE ON YELLOW**

**FIXATION CONTROL;**

**VIDEO EYE MONITORING**

**HEIJL-KRAKAU FIXATION METHOD**

**GAZE TRAKING**

**HEAD TRAKING**

**LENS TRAKING**

**REMOTE VIDEO EYEMONITOR AREA OF FIELD TESTED:**

**90 DEGREE**

**TEST STRATEGIES:**

**SITA 10-2,24-2,30-2,MACULA**

**FULL THRESHOLD**

**FAST PAC**

**SCREENING: C-40,C-64,C-76**

**ANALYSIS SOFT WARE:**

**SINGLE FIELD ANALYSIS**

**MULTIPLE FIELD ANALYSIS**

**FOR BLUE ON YELLOW**

**GLAUCOMA PROGRESSION ANALYSIS SOFTWARE**

**PRINTER: FULL PAGE COLOR INK JET**

**DATA STORAGE OF ADEQUATE CAPACITY ON HD**

**FORUM COMPATIBLE**

**TOUCH SCREEN**

**KEY BOARD**

**MOTORIZED CHINREST**

**(g) A-SCAN WITH PACHYMETER(Qty-01)**

**A-SCAN WITH PACHYMETER**

**A. TRANSDUCER PROBE**

**FREQUENCY:10MHz**

**FIXATION:INTERNAL LED**

**BAND WIDTH >6MHz AT -6db**

**B. MEASUREMENT MODE**

**AUTOMATIC**

**MANUAL/CALIBRATION**

**IMMERSION MODE**

**C.SOFTWARE MEMORY: 10/EYE**

**D. USER MEMORY :**

**SURGEON 6 PROFILE**

**IOL STYLE 10/SURGEON**

**E. FORMULA FOR IOL CALCULATION :**

**SRK-T/11**

**HOLLADAY**

**BINKHROST**

**HOFFER**

**MODE FOR POST LASIK/RK PATIENT**

**F.STANDARD ACCESSORIES:**

**SOLID TIP TRANSDUCET WITH**

**FIXATION LIGHT / TEST EYE**

**G. PACHYMETER**

## Group-H-Nephrology.

### Portable 2D USG with ECHO

#### TECHNICAL SPECIFICATION FOR PORTABLE 2D USG WITH ECHO

The unit must be fully digital and enable use at points of care should have integrated battery backup of Minimum 2 hrs.

The Unit must have following facilities:-

- Black and white mode for displaying anatomy in real time.
- Color- coded overlay for real time blood-flow imaging.
- Weight of the unit should be less than 8 kg.
- Field-of-view of black and white imaging : up to 75 degree with maximum depth of 25 cm.
- The color flow sector for blood flow with angle of 20 degree and above.

1. Board-bandwidth phased array probe transducer technology for 2D, color and Doppler imaging.
2. Auto optimize adjusts gain for all depths automatically.
3. Built in memory card for storage of not less than 40 GB.
4. Presets for optimized setting for imaging cardiac, general imaging, abdominal and kidney imaging with biopsy guide.
5. 2D, color Doppler imaging.
6. Full dicom connectivity.
7. Automatic tissue optimization
8. High frame rate and color enhanced flow
9. Screen > 10" or more in size.
10. IM mode.( M mode.)
11. Quote one & latest model only.
12. UD FDA approved.
13. Probe Adult & Pediatric ( Curved. Linear,Doppler,Echo) as specified below:

#### For a better clarity transducers to be supplied :-

- ☐ 6-13MHz multi-frequency, broadband linear transducer.
- ☐ 8-12MHz multi-frequency, broadband Intra-cavitatory probe with **Biopsy Set**.
- ☐ 2-5MHz multi-frequency broadband curved array transducer with **Biopsy Guide** for general purpose & abdominal applications.
- ☐ 1-5MHz multi-frequency, broadband phased array cardiac, abdominal, FAST imaging (Curved, Linear, Doppler, Echo).

**Machine to be supplied with following :-**

- One rechargeable battery.
- Ac adopter with inter chargeable plugs to charge the scanner.
- Carrying Bags.
- Micro memory card/external hard disk should be provided.
- Docking station/ trolley.
- Thermal printer.
- Probes as specified.
- Kidney biopsy needle guide bracket set with spare needle guide.

## Group-I-Orthopaedics

### 1. TECHNICAL SPECIFICATION FOR ARTHROSCOPY SYSTEM(Qty-01)

#### General Specifications:

- 1 Should be USFDA and/or European CE Certified.
- 2 All the Electronic equipments should comply with Electrical safety conforms to standards for electrical safety.
- 3 All the equipment's power input should be 220-240 V AC, 50Hz fitted with Indian plug.
- 4 Compatible make instruments/extra instruments in individual sets may be coated but are to be highlighted.

#### Arthroscope

1. **Wide Angle Forward-Oblique Telescope 30°**, diameter 4 mm, length 18 cm, autoclavable, and fiber optic light transmission incorporated.  
**(Two Pieces)**
2. **High Flow arthroscopic Sheath with** snap in coupling mechanism diameter 6,5mm working length 13.5 cm, two stopcocks, rotating, for use with telescopes 30° with Obturators blunt  
**(One Each)**

#### Camera

1. Full HD Three-ChipCamera
2. Resolution not less than 1920X1080 pixels.

#### Monitors

1. **Full HDTV Medical grade Monitor 26" Monitor,**
2. **Resolution** not less 1920 x1080p
3. Full HD wide view monitor with aspect ratio of 16:10
4. To accept DVI-D, DV and SDI video inputs

#### Light source

1. **LED light source**
2. **Life of Lamp** 20000 to 30000 hours
3. With extra long optic cable (300 cm to 350 cm).

#### Arthroscopy Pump (Fluid management System with all accessories and tubes)

1. Electronically controlled irrigation pressure and flow rate
2. User friendly display of operating parameters and actual performance.
3. Memory to retain preselected pressures and flow rates
4. Foot switch

#### Arthroscopic shaver system

1. Stable torque throughout high speed shaver at least 1000-12000 RPM.
2. Oscillation mode 500-3000 RPM
3. Hand control, footswitch and by LCD touch screen with different display modes.
4. Clockwise, counterclockwise rotation
5. Autoclavable, quick coupling of blades

6. Pre programmed memory of the system.
7. Shaver hand piece of 7000 Rpm
8. Shaver Unit should be supplied with Footswitch.
9. Aggressive Shaver Blades Qty 6 no's
10. Multifunction hand pieces with Jacobs chuck (keyless) up to a diameter of 6.5mm, sagittal saw with attachment with blades no.6, pin driver and Synthes driver and connecting cable for FMS pump.

### **Radiofrequency Ablation system**

- 1) Controls on hand piece
- 2) Multiple distinct power levels
- 3) Impedence detection technology
- 4) User friendly display
- 5) Powerful generator with output of 400 watts.
- 6) Bendable probes with various tips

### **Manual Hand Instruments**

1. **Punch**, through-cutting, cutting width 3.4 mm, straight jaws.
2. **Punch**, through-cutting, cutting width 3.4 mm, curved jaws, 15° upwards.
3. **Punch**, through-cutting, cutting width 3.4 mm, curved jaws, 45° left.
4. **Punch**, through-cutting, cutting width 3.4 mm, curved jaws, 45° right.
5. **Punch** back bitter
6. **Scissors Punch**, cutting width 0.5 mm, straight jaws.
7. **Scissor Punch**, cutting width 0.5 mm, straight jaws, 10° curved to left.
8. **Scissor Punch**, cutting width 0.5 mm, straight jaws, 10° curved to right.
9. **Foreign Body Grasping** Forceps, straight jaws.
10. **Foreign Body Grasping Forceps**, with ratchet.
11. **Meniscus Retractor**, with serrated jaws, with teeth and ratchet, straight jaws,
12. **Probe**, graduated, length of hook 3 mm, diameter 1.5 mm, working length 18 cm.
13. **Probe**, graduated, length of hook 3 mm, diameter 1.5 mm, working length 20 cm angled downward 10 degrees.
14. **Rasp**, narrow
15. Sterilization Instrument container

## **2. TECHNICAL SPECIFICATIONS FOR ELECTROSURGICAL CAUTERY-Qty-03)**

### **Description and Specification: -**

1. System should be European CE and/or US FDA approved.
2. Advance 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 adjusts power.
4. Monopolar outputs should have three cutting modes: -
  - i. Low Cut for delicate tissue or Laparoscopic cases having maximum power of 300 W.
  - ii. Pure cut for clean, precise cut in general surgery having maximum power of 300 W.
  - iii. 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
  - i. Desiccate mode for low voltage contact coagulation suitable for Laparoscopic and delicate tissue work.
  - ii. Fulgurate mode for efficient non-contact coagulation in most applications.
  - iii. 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
  - i. Precise mode to have fine control of desiccation in delicate tissue.
  - ii. Standard mode for applications at low voltage to prevent sparking.

- iii. 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 two hand switching and foot switching bipolar output.
- 9. It should have membrane keyboard for power settings.
- 10. The unit should have LCD 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 for further up gradation.
- 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. The sealing clamp should be 100% reusable of both straight and curved in open surgery modes.
- 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. Bipolar Forceps-2no.
  - e. Forceps Cord-2nos
  - f. Universal Adapter-1no.

### **3. Instrument for Complete ACL Reconstruction Set**

- 1. ACL Zig
- 2. 5mm, 6mm and 7mm femoral aimer - **One Each**,
- 3. 6mm,7mm,8mm, 9mm, 10mm and11mm Femoral Reamer 3-Fluted - **One Each**,
- 4. 4mm, 5mm Cannulated Drill - **One Each**
- 5. 6mm to 10mm graft sizing gauge- **One Each**
- 6. Tunnel Notcher,
- 7. 2.5mm femoral eye loop guide wire 18 inch -**05 pieces**
- 8. 2mm tibial guide pin 9 inch- **05 pieces**,
- 9. 1.5 mm guide wire 14 inch- **05 pieces**,
- 10. 3.5mmHex screw driver cannulated,
- 11. Bone plug splitting block,
- 12. Depth Gauge,
- 13. ACL graft workstation,
- 14. Tendon stripper, graduated, closed 5.5mm length 30 cm.
- 15. Tendon stripper, graduated, closed 7 mm length 30 cm.
- 16. Tendon stripper, graduated, open 7.5 mm length 30 cm.
- 17. Tendon hook
- 18. Thread clip-2
- 19. Tissue forceps – 2
- 20. Graduated scale measurement of graft
- 21. Metal mallet with plastic head
- 22. Arthroscopic leg holder with all round padding, 360 swivel and rotating, height adjustable with appropriate clamp to fit into the side rail of table.
- 23. ACL Instrument Sterilization container



## **Group-J- Biochemistry**

### **TECHNICAL SPECIFICATIONS FOR FULLY AUTOMATIC ELECTROPHORESIS SYSTEM WITH DENSITOMETER-01**

1. System should run the Serum protein, Hemoglobins, lipoprotein, isoenzymes etc. Test in full automation from sample application to gel drying.
2. Analytical system must use the AGAROSE Gel as a support medium.
3. System should be equipped with automated sample applicator(s) that apply sample directly on the gel without any manual intervention.
4. Instrument must work with a dry migration chamber.
5. The Migration chamber must have a peltier controlled temperature control system.
6. Systems should have possibility to use more than 2 electrodes in same migration chamber if required,
7. Throughput 25-30 samples/ hour approx...
8. System should not mandate transfer of gel from one module to another by an operator.
9. It is preferred that system also has protocols pre-programmed for special assays like high resolution protein electrophoresis and SDS urine protein electrophoresis.
10. System should offer possibility to apply samples in the same sample plate without previous pre-treatment of turbid or viscous samples or serum containing cryoprecipitate.
11. System should have an external computer attached for quantification and report analysis.
12. System software should offer capability to assign the suspected monoclonal component in an automated fashion.
13. System software should have built-in LAN connectivity option where same sample data can be observed simultaneously at multiple computers.
14. System should offer capability of result authorization.
15. All analytical phases must be visualized with the same PC used for the data management.
16. System software offer possibility to customize each method via software.
17. System software should have patient history recall option for better patient monitoring.
18. System software should have facility for interfacing with LIMS.
19. System software should offer customizable reporting format.

### **TECHNICAL SPECIFICATION OF FULLY AUTOMATED REALTIME PCR-01**

1. For use with real time PCR, gene expression analysis gene quantification.
2. It should be an open system compatible with reagents/kits/ all standard makes PCR tubes.
3. Applications: provide specialized application specific software that collects and analyzes the fluorescence data for the applications of Absolute quantification, Relative quantification, Melt curve analysis, Allelic discrimination genotyping, SNP detection and High Resolution Melt (HRM).
4. Block should be peltier controlled 96 well or rotor disc (sample carrying capacity up to 100 samples) or individual tubes with the temperature range up to 99.9°C.
5. Fast system: Heating and cooling Ramp rate:  $\geq 4^{\circ}\text{C}/\text{sec}$  (heating and)  $\geq 2^{\circ}\text{C}/\text{sec}$  (cooling).
6. Temperature accuracy should be  $\pm 0.2^{\circ}\text{C}$  and uniformity at  $95^{\circ}\text{C}$  should be  $\pm 0.3^{\circ}\text{C}$ .
7. Should have controllable lid temperature from  $30-110^{\circ}\text{C}$ , with control on automatic temperature and pressure settings.

8. The Real time PCR should have 5 detection channels with 5 LED's has a Light source for excitation, 5 excitation filters as well as 5 emissionfilters or better.
9. Excitation range should be 475-640nm and for emission it should be 520-740nm for running the different tests/ assays.
10. System should excitation filters of 475-640nm, 515-535nm, 570-590nm, 600-640nm & 475-535nm.
11. System should have emission filter of 520-550nm, 551-590nm, 615-650nm, 666-740nm, and 520-590nm.
12. Multiplexing mini9mum of 4 targets should be possible.
13. Sensitivity should be as low as 1 copy number with Dynamic range of 10 order of magnitude.
14. The instruments may have display with an LCE touch screen that is a 6.5 inch full VGA (640X480).
15. The data analysis software and computer should be supplied with the instruments latest Pentium – IV with operating system either window 7 & 10 and colord laser printer.
16. Power usage should be 200 W maximum.
17. ONLINE UPS of 2KVA approximate for 2 ½ to 3 hrs. backup.
18. Necessary consumables to perform real-time quantitative PCR and assay including reverse transcription and real time PCR reagents (for 500 reactions) and plastic ware should be quoted separately.
19. HRM software should be provided free of cost with the instrument.
20. CE (European Conformity) & UL marked.
21. System should support reaction volume 5-30 µl
22. Excitation source should be single blue LED light source or Tungsten Halogen or high intensity Xerox Lamp & emission detection by photodiodes or cooled CCD camera.
23. Reagents for 500-1000 reaction should be provided with the instrument.
  - **Not** :- If required, Demonstration of Machine will be taken by three experts at the expenses of bidder.
24. Instrument demonstration & training.

## **TECHNICAL SPECIFICATION FOR FULLY AUTOMATED HPLC SYSTEM WITH BINARY PUMP-01**

### **1. Integrated HPLC system with Binary Pump**

#### **Binary Pump**

- a. Ninary gradient Solvent delivery system.
- b. Integrated HPCL system with dual pump.
- c. Delay volume <200 UI
- d. Flow range of +/-0.00ml/min or better.
- e. Adjustable upper pressure limit cut-off up to 6000 psi maximum 20 µl Loops.
- f. Should be capable of multiple (more than 10) gradient curves.

#### **Auto Injector**

- a. Should be able to inject different volumes Ranges 1µl to 5ml of sample.
- b. Pressure limit set of 5000 psi, adjustable up to 7000 psi maximum 20µl, 50µl, 200µl Loops

#### **Dual wavelength Absorbance UV-VIS Detector / Diode-array detector**

- a. Wavelength rage 190-700nm or more with suitable analytical & preparative flow cells.
- b. Light Source: Deuterium (D2) Lamp

- c. Measurement range: 0.0001 to 4,0000 AUFS
- d. Integral Cuvette holder to be used as qualitative bench-top spectrophotometer (preferable)

**Refractive Index (R.I.) Detector**

- a. Refractive Index Range: 1.00 to 1.75 RIU
- b. Measurement Range:  $7.0 \times 10^{-9}$  to  $5.0 \times 10^{-4}$  RIU
- c. Temperature Control: Internal over: 30 to 55 degree C or above.
- d. Temperature control chamber (Preferred)
- e. IEEE/Ethernet/ RS-232: for use with existing or future data products.

**Chromatographic Software:**

- a. User friendly technology to acquire.
- b. Process and report LC analyses, converting high-quality and accurate results.
- c. Using a single window, Software should provide simplified tools for:
  - Control of chromatographic instrumentation.
  - Acquisition of chromatographic data.
  - Interaction with and processing of data
  - Comprehensive reporting
  - Management of data and chromatography system
  - System Performance (Basic System Suitability)
  - Plate Count – USP, EP, JP
  - Retention Index – K Prime
  - USP Tailing
  - Symmetry Factor

Necessary Computer, colour Printer, Software & UPS to be supplied with the System

**Additional accessories: COLUMNS**

- a. C185 $\mu$ m, C85m, gel filtration (Lower molecular weight range – 1: higher molecular weight range - 1)
- b. Sample clean- Cartridge
- c. Sample clarification kit required for organic & aqueous samples
- d. Solvent clarification kit required with degassing unit.

**D:- High Capacity Centrifuge-75 to 100 tubes**

**Centrifuge Machine-75 to 100 tubes**

Table top model with swing out rotor

head 16 tubes of 15 ml glass tubes

- Digital speed indicator with 60 min. count down timer
- Speed 4000rpm & RCF2750 with rotor head
- Dynamic breaks, Imbalance detector, cut off in case of uneven load
- Step less speed regulator & safety lid interlock to prevent lid opening during operation

## Group-K- Surgical Oncology

### TECHNICAL SPECIFICATION COLPOSCOPE SYSTEM Qty. (01)

|       |  |
|-------|--|
| Sl No | Apochromatic optics with magnification Range 0.4x to 2.5x or more  |
|       | Working distance f= 200mm to 300mm continuous focus  |
|       | 180 degree tiltable tube f=170mm/200mm or straight binocular tube f=170mm/ 200mm with 200mm inter- papillary distance adjustment from 55 mm to 75mm or more                                |
|       | Pair of wide field push- in eyepiece 10x with sleeves and magnetic locks, diopter setting from -8D to +5D  |
|       | K0/120 degree swivel coupling depending on the need.   |
|       | Handgrips for movement of Colposcope.  |
|       | Coaxial fiber optics illumination system with proper backup.   |
|       | Dual lamp system with quick change over.   |
|       | Continuously lamp intensity adjustment by control knob near to the surgeon   |
|       | Automatic lamp cut off by moving up the carrier arm ensuring optimal usage of bulb   |
|       | Stable and sturdy floor stand on four lockable castors, column ( height: minimum 1.7m)   |
|       | Auto Balance or spring balance articulated arm carrier arm, power supply unit light guide 2m, power cable  |
|       | Sterilizable rubber caps for all knobs, dust cover.  |
|       | Fully integrated HD camera ( full HD1080p). The HD camera should not be visible from outside. Camera should be control by Foot Switch & Remote Control and it should be CE & FDA certified |
|       | Fully integrated HD medical Grade Recorder. The HD Recorder should not be visible from outside. HD Recorder should have 500 GB or more HDD.It should by CE & FDA certified                 |
|       | Fully integrated 21"HD medical Grade monitor which integrated with the Colposcope stand and Monitor should by CE & FDA certified.  |
|       | Suitable software for Video Editing and Reporting software   |
|       | Computer with Printer and Accessories  |
|       | Equipment should be CE & FDA certified   |

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