ESI-PGIMSR & ESIC MEDICAL COLLEGE
AND
ESIC HOSPITAL & OCCUPATIONAL DISEASE CENTRE (E.Z.),
(A statutory body under Ministry of Labour Govt, of India)
DIAMOND HARBOUR ROAD, JOKA, KOLKATA, 700 104
Fax: 033 2467 2795, Phone: 033 2467 1764 / 6280 / 1322/2799
(An ISO 9001:2008 CERTIFIED ORGANISATION)

Tender No. 412.U/16/30/3/Proposal/10-11 (Medical College)/Vol V **Dated: 17 . 09.2014.**

Sub: Open Tender Enquiry – (Two Bid System): For supply of Equipments & Instruments
(NOTE: The envelope containing the tender as well as subsequent communications should be addressed and delivered to 'The Medical Superintendent', ESIC Hospital & O.D.C. (E.Z), Diamond Harbour Road, P.O.: Joka, Kolkata, 700 104, West Bengal. All communications must be addressed to the officer named above by title only and not by name.**)**

To:

_____

_____

Sir(s),

Sealed tenders are invited (under Two Bid System - "TECHNICAL BID" & "PRICE BID") by post/per bearer from bonafide manufacturers / authorised dealers for supply of "**Equipments & Instruments"** as per categories / specifications and/or quantities detailed in the **Schedules / Specifications** (Annexure – IV) attached.

The "**Tender Documents**" comprising the Compulsory Documents **(Annexure I)** ,*General Terms and Conditions of Contract* **(Annexure II)** and the *Special Terms and Conditions of Contract* **(Annexure III)** which will govern any contract made**,** the *Tender Application Form* **(Annexure IV)** and the *Schedule of contract / specifications of items* (**Annexure-V)** are enclosed herewith. If you are in a position to quote for the contract in accordance with the requirements stated in the attached schedule as per the terms and conditions stated, please submit your quotation to this office.

The tender document may be obtained from the office of the Medical Superintendent in person by the bonafide applicant or his authorised representative by applying in their letter head **at a cost of Rs.1000.00 (Rupees One Thousand Only**). **The "tender documents" can also be downloaded from the web site www.esi-pgimsrkolkata.org, the web site (**www.esic.nic.in**) and Central Public Procurement Portal (eprocure.gov.in)** and in such case the same may be signed and submitted as per the procedures mentioned hereinafter along with the fee(s) for the "tender documents" @ Rs 1000.00 (Rupees One Thousand Only) (To be submitted along with the Technical Bid. It should not be enclosed in the envelope containing the Price Bid). All the payment may be made by **Demand Draft**; drawn **in favour of ESI Fund A/c No. 1, payable at Kolkata; Cheques will not be accepted.**

Tenderers are requested that, before quoting their rates or sending tender, the tender forms may please be read out thoroughly (line by line) so as to have a clear knowledge of the requirement contained therein, otherwise purchaser will not be held responsible for any error / oversight of his own and the penalties shall be levied for not complying with the requirements stated herein or supply of the required item/services.

The form is a Standard Form of Tender. Certain clause / clauses may not be applicable in some cases. So, Tenderers are requested to ignore such clause / clauses, which are not applicable in the instant case.

The Tender forms containing the compulsory documents(**Annexure – I),** the Terms and Conditions **(Annexure – II)**, the Special Terms and Conditions of Contract **(Annexure III),** the Tender Application Form **(Annexure IV)** and the Schedule of contract / specifications of items (**Annexure-V) should be returned in original along with the technical bid document, intact, after filling up the same and duly signing in full with stamp, on each page**, failing which the tender shall be liable for rejection.

In the event of the space on the Schedule of contract / specifications of items/proforma being insufficient for the required purpose, additional pages may be added. Each such additional page must be numbered consecutively, bearing the Tender Number and be duly signed and stamped by the tenderer. In such cases, reference to the additional pages must be made in the Tender Form. If any modification of the schedule is considered necessary, you should communicate the same by means of separate letter sent along with the Tender.

PARTICULARS

Cost of each Tender Document	**Rs. 1000.00 (Rupees One Thousand Only)**
Period for supply of Blank Tender Forms and related documents at the Hospital on all Working Days (Except Saturdays, Sundays and Holidays)	**09.10.2014 to 02.11.2014 from 10.30 am to 3.00 pm**
Pre Bid Meeting	**09.10.2014 at 2.00 pm**
Due Date & Time of submission of completed Tender Document in the Tender Box kept in the Office of ESIC Hospital.	**03.11.2014 upto 2.00 pm**
Date & Time of Opening of Technical Bid	**03.11.2014 at 2.30 pm**
Bid Security / Earnest Money to be deposited	Amount of EMD to be deposited is, as mentioned against each of the equipment / instrument /item in annexure V of the tender document. While quoting for more than one item, the earnest money mentioned against each quoted item are to be taken into consideration and added up while submitting the earnest money / bid security.
Performance security / Security Deposit Money to be deposited	10 % of the Bill Value of each of individual equipment & instrument to be purchased from the tenderer after selection.

Medical Superintendent, ESIC Hospital & ODC (E.Z), Joka, does not pledge himself to accept the lowest or any tender and reserves the right of accepting or rejecting the whole or any part of the tender without assigning any reason thereof. Canvassing in any form by the tenderer or his representative with any of the officials of ESIC Hospital shall render the tender liable to be rejected.

Acceptance by the purchaser shall be communicated in due course. You are requested that the instructions contained in the said communication should be acted upon immediately as asked for.

THE FIRM IS REQUESTED TO FOLLOW THE CHECK LIST AT THE TIME OF SUBMISSION OF TENDER DOCUMENT WITHOUT WHICH THE OFFER IS LIABLE TO BE CANCELLED:

COMPULSORY DOCUMENTS:

[Without which the offer is liable to be cancelled)

1. Tender Document Fee: Rs._____ DD No._____ dated_____

2. EMD Value: Rs._____DD No._____Dated_____

3. Valid Trade Licence Certificate: Valid upto_____

4. Warranty Certificate: At least for two years, submitted [Yes /No] [except item SL NO. 1 of department of anaesthesiology where warranty is mentioned in the respective specification]

5. VAT / CST certificate: Submitted [Yes /No]

6. Mandatory CMC for five years Certificate along with rates for different years:

Submitted, [Yes /No]

7. Mandatory spare parts availability for five years Certificate: Submitted, [Yes/No.]

8. Original tender document signing all the pages: Submitted, [Yes/No.]

***9.* Name & Address of Service Centre In KOLKATA: Submitted, [Yes/No.]**

10. COPY OF PAN/TAN CARD: Submitted, [Yes/No.]

11. Certificate regarding provision of free calibration certificate for medical equipments for 07 years [except item sl.no. 1 of department of anaesthesiology where free calibration certificate is required for 10 years.] [Yes/No.]

Enclosures:

1. Annexure – I (Compulsory Documents).
2. Annexure – II (General Tender Terms & Conditions).
3. Annexure – III (Special Tender Terms & Conditions).
4. Annexure – IV (Tender Application Form).
5. Annexure –V (Schedule / specifications of items/equipment).

Yours sincerely,

MEDICAL SUPERINTENDENT

ANNEXURE-I

To
Tha Medical Superintendent
ESIC Hospital & Occupational Disease Centre (E.Z.),
Diamond Harbour Road, Joka, Kolkata, 700 104

COMPULSORY DOCUMENTS:

[Without which the offer is liable to be cancelled)

1. Tender Document Fee: Rs._____ DD No._____ dated_____

2.EMD Value: Rs._____DD No._____Dated_____

3. Valid Trade Licence Certificate: Valid upto_____

4. Warranty Certificate: At least for two years, submitted [Yes /No]] [except item SL NO. 1 of department of anaesthesiology where warranty is mentioned in the respective specification]

5. VAT /CST certificate: Submitted [Yes /No]

6. Mandatory CMC for five years Certificate along with rates for different years:

Submitted, [Yes /No]

7. Mandatory spare parts availability for five years Certificate: Submitted, [Yes/No.]

8. Original tender document signing all the pages: Submitted, [Yes/No.]

9. **Name & Address of Service Centre In KOLKATA: Submitted, [Yes/No.]**

10. COPY OF PAN/TAN CARD: Submitted, [Yes/No.]

11. Certificate regarding provision of free calibration certificate for medical equipments for 07 years [except item sl.no. 1 of department of anaesthesiology where free calibration certificate is required for 10 years.] [Yes/No.]

Date:-
Place:-

Signature of the tenderer:-

Full Name:-
Designation:-

(Office seal of the tenderer)

GENERAL TERMS AND CONDITIONS FOR TENDER / BID

1. PREPARATION OF TENDER:

a. The original Tender form containing the Terms and Conditions (General and Special) and the Schedule should be returned in original after filling up the form and duly signing in full on each page with stamp, whether you are quoting for any item or not, failing which the tender is liable to be rejected.
b. If any item in the schedule is not being tendered for, the corresponding space against the item should be defaced by writing **'not quoting'**.
c. In the event of the space on the schedule form being insufficient for the required purpose, additional pages may be added. Each such additional page must be numbered consecutively, bear the Tender Number and be duly signed and stamped by you. In such cases, reference to the additional pages must be made in the Tender Form.
d. The Tenderer shall, wherever call upon to do so, give full information with reference to the services in hand and shall also permit the Medical Superintendent or any other officer nominated by him to inspect the premises of the tenderer at all reasonable times and shall give full assistance and information as may be required by him in connection with the contract.

2. SIGNING OF TENDER:

a) The tender is liable to be rejected if complete information is not given therein or if the particulars and date (if any) asked for in the tender are not duly & fully filled in. Particular attention may be given to the dates of delivery, places of delivery and also to the particulars referred to in the conditions of contract so as to comply with them.
b) Individuals signing tender or other documents connected with the contract must specify:
    i) Whether signing as a 'Sole Proprietor' of the firm or his Attorney?
    ii) Whether signing as a 'Registered Active Partner' of the firm or his Attorney?
    iii) Whether signing for the firm 'Per Procreation'?

In the case of companies and firms registered under the Indian Partnership Act, the capacity in which signing e.g. Secretary, Manager, and Partner etc. or their attorney and produce copy of documents, empowering him to do so, if called upon to do so.

NOTE: In case of unregistered firms, all the members or all Attorneys duly authorised by all of them or the Manager of the firm should sign the tender and subsequent documents.

1. PROCEDURE FOR SUBMISSION OF TENDERS / BIDS:

1. The tender should be submitted *in 'TWO BID' SYSTEM*:-

i. **TECHNICAL BIDS:**

a. TECHNICAL BIDS in one separate envelope, sealed, super scribed with the wordings "TECHNICAL BID".

b. The original copy of tender (Annexure – I to annexure - IV), duly completed and signed on each page, should be submitted/returned back, enclosed along with the "TECHNICAL BID".

c. The "Technical Bid" shall contain Earnest Money, the Cost of the Tender Document (if downloaded from the web), both in the form of demand drafts as prescribed hereinbefore, and all the technical details & documents along with commercial terms and conditions in support of the quoted equipment.

d. The Earnest Money Deposit (EMD) should be submitted in separate envelope super scribed with the wordings "EMD" .

e. Prices / Costs of the items *should not be* indicated anywhere in the Technical Bid. This should be followed meticulously failing which the tender is liable to be cancelled.

ii. **PRICE (FINANCE) BID**

a. PRICE (FINANCE) BID for each ITEM is to be submitted in SEPARATE sealed envelopes, super scribed with the wordings "PRICE (FINANCIAL) BID" and the "NAME OF THE ITEM". All such sealed envelopes of Price Bids for individual items are to be kept in a large sealed envelope, again superscribed with the wordings "PRICE (FINANCIAL) BID". This should be followed meticulously failing which the tender is liable to be cancelled.

b. The 'Price/Financial Bid' will contain item-wise price / cost for the items mentioned / quoted in the technical bid.

II. **Both the Technical Bid envelope and the Price (Financial) Bid envelope, prepared as above, are to be kept in a larger single envelope super-scribed with "TENDER (TWO BID SYSTEM) FOR SUPPLY OF Equipments and Instruments so as to give a double cover protection.**

III. **The outer cover should also be sealed and addressed to the Medical Superintendent in the address mentioned hereinbefore.**

IV. **Tenders submitted without following the 'Two Bid' System procedure will be rejected.**

2. LATEST HOUR FOR RECEIPT OF THE TENDER:

Your tender must reach this office not later than the date and time notified in the Tender Notice stated in the TENDER DOCUMENT. Any tender received after that shall be rejected. In the event of the stipulated date of opening of the tender being declared a closed holiday for Govt. offices, the date of opening of the tender(s) will be the next working day. Tender sent by hand delivery, should be delivered at this office not later than the due date and time stipulated in the schedule of tender.

3. THIS TENDER DOCUMENT IS NON-TRANSFERABLE

4. PERIOD FOR WHICH THE OFFER WILL REMAIN OPEN AND PERIOD OF VALIDITY:

i) All tenders should remain open for acceptance for **a period of twelve months** from the date **of opening of the tender.**

ii) The contract / tender, if awarded, shall be valid **initially for one year from the date of award of Contract** subject to continuous satisfactory performance and on failure on this aspect by the contractor, the Competent Authority will reserve the right to terminate the contract. The period of the contract can be extended for further period at the discretion of the Competent Authority, to a maximum of one year, on terms and conditions of the hospital, while accepting the tender.

iii) Quotations qualified by such vague and indefinite expressions such as 'subject to immediate acceptance'; 'subject to prior sale' etc. will not be considered.

5. OPENING OF TENDER:

I. The **Technical bids** will be opened on the specified date and time in the presence of bidders/representatives who choose to attend on the date and time as mentioned.

II. The bidders/ representatives who are present in the opening shall sign evidencing their attendance.

III. The **Price/Financial bids** of the bidders whose technical bids are found technically suitable (after the selection of samples / demonstration of equipment / Item, if any) only will be opened later. **The decision of the committee on technical suitability shall be final and shall not be opened for discussion.**

6.PRICES:

i) Prices are to be quoted in Indian Rupees.

ii) Prices quoted in the Price/Financial Bid must be meaningful and measurable in the context.

iii) The prices quoted must be per unit shown in the schedule inclusive of all packaging, installation and delivery charges wherever applicable. Refunds on account of returnable package (if any) are to be separately specified. Price & Fund must be clearly shown in figures and words.

iv) Tenderers should clearly specify whether prices quoted are inclusive of Sales Tax/ VAT / duties / statutory charges or such charges as extra. Where no specific mention is made to Sales tax / VAT/ or other duties, prices quoted shall be **deemed to be inclusive of such taxes** / charges.

v) The ESIC Hospital and ODC (EZ), Joka, is not authorized to issue 'C/D forms'.

7. BID SECURITY / EARNEST MONEY:

The tenderer shall have to deposit an earnest money equivalent to the amount as mentioned against each of the equipment / instrument /item in annexure V of the tender document **with their Technical Bid at the time of application, failing which the tender shall be rejected**. While quoting for more than one item, the earnest money mentioned against each quoted item are to be taken into consideration and added up while submitting the earnest money / bid security and shall be paid in single demand draft . The earnest money is to be paid by Demand Draft drawn in favour of **ESI Fund A/c No. 1,** payable at Kolkata. NO CHEQUES OR CASH WILL BE ACCEPTED. In the event of the withdrawal / revocation of tenders before the date specified for acceptance, the earnest money shall stands forfeited. In the event of acceptance of the tender the earnest money may be adjusted, on written request, towards the amount of security required to be deposited by the contractor in terms of Clause mentioned herein. The earnest money will however, be returned without interest to the tenderer whose tender is not accepted after the finalisation of the tender.

8. SECURITY DEPOSIT / PERFORMANCE SECURITY:

On acceptance of the tender, within the period specified by the Medical Superintendent, the successful tenderer / contractor shall deposit a sum equivalent to **10 % (Ten Percentages) of the Bill Value, rounded off to the nearest Rupee,** as security deposit, for due compliance & fulfilment of the terms and conditions of the contract. This has to be in the form of a bank draft, drawn in any of the nationalised bank, in favour of **ESI Fund A/c No. 1,** payable at Kolkata. NO CHEQUES WILL BE ACCEPTED for this purpose. On due performance and successful completion of the contract in all respect including warranty period, the security money deposit shall be returned to the contractor without any interest *on presentation of an absolute 'No Demand Certificate' in the prescribed form and upon return in good condition of any specifications, samples or other property belonging to the purchaser, which may have been issued to the contractor. If the contractor fails in fulfilling the terms and conditions mentioned here in different parts of this tender document, such failure will constitute a breach of the contract and the Medical Superintendent shall be entitled to make other arrangements at the risk and expense of the contractor. Also, n*on-performance/unsatisfactory performance or violation of terms and conditions of the contract will make the contractor liable for forfeiture of security deposit. The decision of the Medical Superintendent shall be final and binding on this count.

9. DELIVERY TERMS:

a. Time and date of delivery: The essence of contract: - The time for and the date of delivery of the stores / date of execution of work as stipulated in the schedule shall be deemed to be the essence of contract and delivery / execution must be completed not later than the date(s) specified. The delivery of the stores / execution of work / providing the services etc. are required within a period as specified in the purchase order and as the place mentioned therein. Normally maximum 6 weeks time is allowed from the date of issue of the purchase order for execution of the supply of the equipment / article. However, the time allowed for execution of order shall be governed by the stipulated time mentioned on the purchase order of Delivery of equipment / Items.

b. The tenderer shall deliver the stores/ execute the work at the destination / space defined to the consignee / authority in good order (of which the Medical Superintendent, ESIC Hospital & ODC (EZ), Joka, Kolkata shall be the sole judge) within the limits of the time as deemed reasonable and specify in such quantities/qualities as may be ordered by him from time to time.

c. When a purchase order is placed to the successful tenderer, he shall have to acknowledge the receipt of the said order within 10 (ten) days of the issue.

d. In case this office does not receive supply of the above item(s), by due or extended date of delivery, the above stated order will stand CANCELLED, unless extension is sought for and granted by the competent authority for the late supply. In such cases, purchase of the above items will be made at the tenderer's RISK & COST without his consent and correspondence in these regards. The competent authority reserves the right to recover the difference of excess expenditure so incurred from the tenderer's incoming bills or otherwise in addition to forfeiting the earnest money deposited by the tenderer.

e. But if the delay shall have arisen from any cause, such as strikes, lockouts, fire accidents, riots, etc., which, the Medical Superintendent, ESIC Hospital & ODC (E.Z) may admit it as reasonable ground for further time, and the Medical Superintendent may allow such additional time required by circumstances of the case.

10. PAYMENT TERMS:

1) 100% Payment will be made only after supply, inspection, complete installation and satisfactory demonstration of performance of the item / equipment / instrument (including supply of all accessories) subject to deposition of a sum equivalent to 10 % (Ten Percentages) of the Bill Value as mentioned under Security Deposit / Performance Security Clause mentioned above or submission of Performance Bank Guarantee for 10% value of the order valid for the warranty period from any Scheduled Bank or. Otherwise 90% payment will be released after installation & balance 10% payment will be released after warranty period or against bank guarantee for the warranty period. No advance payment before effecting supply as above either part or full of any kind shall be made under any circumstances.
2) Payment shall be made through cheque or Electronic Clearing System. Normally, payment is made within six weeks after satisfactory inspection, installation and performance of the item / equipment / instrument subject to submission of appropriate and correct invoice, Challans and other documents as deemed fit.
3) In case of cheque, the same may be dispatched through Registered Post.

11. OTHER TERMS:

a) **Responsibility for executing Contract**: The contractor is to be entirely responsible for the execution of the contract in all respects in accordance with the terms and conditions as specified in the acceptance of tender.
b) The contractor shall not sublet transfer or assign the contract to any part thereof without the written permission of the Medical Superintendent. In the event of the contractor contravening this condition, Medical Superintendent be entitled to place the contract elsewhere on the contractors account at his risk and the contractor shall be liable for any loss or damage, which the Medical Superintendent, ESIC Hospital & ODC (EZ), Joka, may sustain in consequence or arising out of such replacing of the contract.
c) Recovery of sums due: Whenever any claim for the payment of a sum of money arises out of or under this contract against the contractor the purchaser shall be entitled to recover of such sum by appropriating, in part or whole the security/earnest money deposited by the contractor, when the balance or the total sum to be recoverable, as the case may be shall be deducted from any sum then due or which at any time thereafter may become due to recoverable under this or any other contract with the purchaser. Should this sum not be sufficient to cover the full amount recoverable, the contractor shall pay to the purchaser on demand the remaining balance due.

d) Insolvency and breach of contract: The Medical Superintendent may at any time by notice in writing summarily terminate the contract without compensation to the contractor in any of the following events, that is to say:-

i) If the contractor being at individual or if firm, any partner in the contractor's firm, shall at any time be adjudged insolvent or shall have a receiving order or orders for administration of his estate made against him or shall take any proceedings for liquidation or composition under any insolvency not for the time being in force or shall make any convenience or assignment of his efforts or enter into any arrangements or composition with his creditors or suspend payment of if the firm be dissolved under partnership act, or

ii) If the contractor being a company shall pass a resolution or the court shall make an order for the liquidation of the affairs or a receiver of Manager on behalf of the debenture holder shall be appointed or circumstances shall have arisen which entitled the court or debenture holders to appoint a receiver or Manager.

iii) If the contract commits any breach of this contract not herein specifically proved for: Provided always that such determination shall not prejudice any right of action or remedy which shall have accrued or shall accrue thereafter to the purchaser and provided also that the contractor shall be liable to pay the purchaser for any extra expenditure, he is thereby put to but shall not be entitled to any gain on repurchased.

e) **Arbitration**: In the event of any dispute or difference arising out of the terms and conditions lsid down in this tender, the same shall be refered to Arbitrator appointed by the medical superintendent. The procedure of the Arbitration will be governed by the provisions Arbitration Act 1996 (as amended as rules framed there under).

f) **Document**: The tenderer should have a valid **Trade licence, PAN / TAN / other statutory document as applicable** and produce attested copies of such certificates along with the tender papers in Technical Bid, failing which the tender is liable to be rejected.

g) **Right to accept / reject**: The hospital authority reserves the right to **reject** any or all tender without assigning any reason whatsoever. Also, the hospital authority reserves the right to **award** any or part or full contract to any successful agency at its discretion and this will be binding on the tenderer.

h) The quantity shown in the tender can be increased or decreased to any extent depending upon the actual requirement.

i) **Assistance to contractor**: The contractor shall not be entitled to assistance either, in the procurement of raw materials required for the fulfilment of the contract or in the securing of transport facilities.

j) In case of failure to comply with the provisions of the terms and conditions mentioned, by the agency that has been awarded the contract, the hospital authority reserves the right to award the contract to the next higher tenderer or outside agency and the difference of price will be recovered from the defaulter agency who has been awarded the initial contract and this will be binding on the tenderer.

k) Medical Superintendent, ESIC Hospital & ODC (E.Z), Joka, does not pledge himself to accept the lowest or any tender and reserve to himself the right of accepting the whole or any part of the tender or portion of the quantity offered and you shall supply the same / execute the work at the rate quoted by you. You are at liberty to tender for the whole or any part.

l) **Failure and Termination:** If the contractor fails to delivery the stores or any instalments thereof within the period prescribed for such delivery in the contract or any time liquidation the contract before the expiry of such period, the Director (Medical)/Medical Superintendent may without prejudice to his right to recover damages for breach of the contract, be entitled at his option.

i. To recovery from the contractor as agreed liquidated damages, and not by way of penalty a sum equivalent to 2% of the price of any stores which the contractor has failed to deliver within the period fixed for delivery for the schedule for each month or part of the month during which

the delivery of such stores may be in arrears, where delivery thereof is accepted after expiry of the aforesaid period, or

ii. To purchase elsewhere, without notice to the contractor, on his account and at the risk of the contractor, the stores not delivered or stores of similar description (where stores exactly complying with the particulars are not in the opinion of the Director (Medical)/Medical Superintendent, ESIC Hospital & ODC (E.Z), Joka, readily procurable such opinion being final). Without cancelling the delivery in respect of the consignments not yet due for delivery, or

iii. To cancel the contract or a portion thereof, and if so decided to purchase or authorise to purchase of stores not so delivered or other of a similar description (where stores exactly complying with the particulars are not, in the opinion of the Director (Medical) / Medical Superintendent readily procurable, such opinion being final) at the risk and cost of the contractor.

MEDICAL SUPERINTENDENT

ANNEXURE-III

SPECIAL TERMS AND CONDITIONS

The following special terms and conditions shall apply for supply of **Equipments & Instruments"**at ESIC Hospital & O.D.C. (E.Z), Joka.

A. INSPECTION / INSTALLATION OF ITEMS / EQUIPMENTS:

Supplies shall be accepted and work shall be certified as completed subject to **satisfactory and complete installation** (upto full potentials claimed for that respective equipment/ Item) of the equipment / items supplied including supply of all accessories, and certified by the assigned officer, and subsequent inspection by Medical Superintendent, ESIC Hospital & ODC (EZ), Joka, or his assigned representative. Any defect found in the materials / equipment / items supplied / work done will render the supplies / work open to rejection and decision of the Medical Superintendent, ESIC Hospital & ODC (EZ), Joka, shall be final and legally binding. The tenderers shall **have to take the same (rejected store) back at their own cost and risk**, and **shall replace** such rejections with the items of standard specifications / quality as acceptable to the Hospital Authority. Alternatively, the stores may be purchased from others / work may be executed through others, at the risks and costs of the tenderer, at the discretion of the authority.

B. WARRANTY / GUARANTEE:

Along with the **Technical Bid** the following information are to be provided exclusively.

(i) All the **equipments** shall be carrying **at least 2 (two) years** warranty / guarantee against defects of manufacturer/workmanship and poor quality of components. Accordingly, the **tenderers shall indicate clearly** and exhaustively the mandatory warranty / guarantee offered by them / by the manufacturing / supplying firms, its duration, as well as the various Terms & Conditions involved therein, at the time of submission of the Technical Bid papers.

(ii) The tenderer must be able to provide **CMC** for the equipments quoted at least for a period of **five years**. A declaration to such effect must be accompanied with the offer, in the technical bid.

(iii) **Uptime guarantee:** During the warranty/guarantee / CMC period the firm will maintain the equipment in good working condition. All the complaints will be attended by the firm within 24 hours of the dispatch of a complaint to their office. The firm shall ensure that machine is set right within 10 days (Ten Days) of the intimation. However, the tenderer have to arrange similar equipment as a standby at his cost and risk in case of breakdown. In case of the machine not being made functional within 10 days (Ten Days), **Stiff Penalty** equivalent to **1½%** of the cost of machine per week shall be levied for every week of delay at the discretion of the authority. In addition, the tenderer have to arrange similar equipment as a standby as stated above.

(iv) A certificate about satisfactory performance of the equipment duly authenticated by other existing users of the equipment has to be supplied.

C. SOFT WARE UPGRADATION:

Free up-gradation of software (all update & upgrades) at least for 5 years is to be provided wherever applicable.

D. CERTIFICATES TO BE SUBMITTED ALONGWITH THE TECHNICAL BID:

The following written guarantee / declaration must be provided exclusively without which the quotation shall be liable for rejection.

1. The name, addresses, phone no, fax no, etc, of the authorised **service centre in Kolkata** for each of the specific equipment / Article / item quoted.
2. A certificate about satisfactory performance of the equipment duly authenticated by other existing users of the equipment has to be supplied.
3. A declaration that the **CMC (including all spares & labours)** shall be made available at least for **five years** for each of the specific equipment / Article quoted.
4. A declaration indicating willingness to provide **CMC services** at least for five years after the expiry of the warranty for each of the specific equipment quoted. Accordingly, the tenderer must

quote prices for **CMC**, separately, for each year, for 5 years. **The quotation for the cost of such CMC are to be furnished along with cost of the equipment in the Price Bid. No such rate shall be mentioned in Technical Bid.**

5. A declaration that the specific equipment/article with the given specifications has not been sold / supplied to any other organisation at a lesser price than the price quoted here for each of the specific equipment quoted here.

E. SAMPLES / DEMONSTRATION

The firms should be prepared to demonstrate their item(s) / arrange for demonstration of items within 3 (Three) weeks from the date of opening of tender for verification / inspection, etc., or at a later date as decided by the competent authority. The firm shall have to comply with such conditions failing which the tenderer shall be liable for rejection and forfeiture of the Earnest Money. The tenderer / firm / company shall arrange for demonstration of equipment / Item / article at his own cost and risk. Tenderer who fails to demonstrate the equipments/ instruments quoted will not be considered for selection.

F. DETAILS OF ITEMS QUOTED:

It is mandatory to indicate the full name, make / brand, model number, and details specification of the equipments quoted by them, (in addition, a brochure of product information may be attached along with). Tenderers also have to indicate clearly the Name, Address and all Contact numbers of the MANUFACTURING FIRM and the firm responsible for providing **CMC**, of the equipment quoted by them.

G. Within the warranty period, substitute working equipment of same model and make must be temporarily provided by the supplier free of cost to cover for any downtime exceeding 48 hours.

H. Onsite (in the hospital premises) Physical demonstration of the quoted model is preferable. However in difficulties demonstration is allowed only within the Kolkata city limit.

I. Cost of accessories & consumables should also be quoted separately in the price bid.

J. CMC is not applicable for Single small instruments.

K. Free calibration certificate for the Medical Equipments for 05 years.

L. BUY BACK OFER {wherever specified in the Schedules / Specifications (Annexure –V)}:

Preference will be given to the bidder who offers for buy back of the condemned equipments. The rate for buy back offer of the condemned equipments is to be mentioned in the **Price Bid**. No such rate shall be mentioned in technical bid. The equipments which are offered for buy back may be inspected by the tenderers on any working day from 11 AM to 3PM.during the period of supply of blank tender form as mentioned in the tender notice(at the time of issue of Tender Documents).

The payment will be made in shape of ECS/RTGS directly into the Bank Account of the Tenderer . Hence the Tenderer is requested to submit the mandate form duly filled in and submit along with the bills.

MEDICAL SUPERINTENDENT

ANNEXURE - IV

TENDER APPLICATION/DECLARATION FORM

1		Name of the firm:-	
2	a	Full Postal Address:-	
	b	Cell Phone No.	
	c	Telephone No:-	
	d	Fax No.	
	e	E-mail address:	
3		Date of Establishment of Firm:-	
4		If your Firm Registered under:-	
	a	The Indian Factories Act:-	
	b	Any other Act, if not, who are the owners (Please give full address):-	
5		Name and Address of your Bankers stating the name in which the Account stands:-	
6		Whether insured against fire, theft, burglary etc. If so, please state the amount and name of company with policy no:-	
7		Total number of Employees:-	
8		Are you in the list of approved contractors of any other organisations / institutions, if any give details (Append extra page if necessary):-	
9		Give details of any Government contracts executed during the last twelve months (Append extra page if necessary):-	
10		Any other information which you consider necessary to furnish:	

UNDERTAKING:

a. I, the undersigned certify that I have gone through the terms and conditions mentioned in the tender document and undertake to comply with them.

b. The rates quoted by me are valid and binding upon me for the entire period of contract and it is certified that the rates quoted are the lowest quoted for any other institution/ hospital in India.

c. The earnest money of Rs._____ to be deposited by me has been enclosed herewith vide Demand Draft no._____, Dt._____, drawn on bank _____, Branch _____.

d. I hereby undertake to supply the items as per directions given in the tender document / supply order within stipulated period.

e. I/We give the rights to Medical superintendent to forfeit the earnest money deposited by me/us if any delay occur on my/agent's part or failed to supply the article within the appointed time or the items of desired quality.

f. There is no vigilance/CBI case or court case pending against the firm.

Date:- **Signature of the tenderer:-**

Place:-

Full Name:-

Designation:-

(Office seal of the tenderer)

(For Technical Bid Only)

PLEASE QUOTE YOUR RATE AS PER THE GIVEN SPECIFICATIONS.

The amount of Earnest Money / Bid Security to be deposited for each of the item quoted is mentioned against each serialised item below. The total amount of Earnest Money for all the quoted items may be drawn in a single demand draft. However, in such case, the detail break up of earnest money submitted for each item is to be furnished in a plain paper along with the bank draft.

ANNEXURE – V

SL. NO.	NAME OF EQUIPMENT & INSTRUMENT	SPECFICATION	REQUIREMENTS (FOR ESI-PGIMSR, JOKA)	EMD VALUE	QUOTED (YES/NO)
DEPARTMENT OF ANESTHESIOLOGY ESIC-PGIMSR & MC & ESICH & ODC (EZ) JOKA					
1	Anesthesia Workstation (with multiparameter patient monitor)	**1.Three gas (O2, N2O, Air) Anesthesia Gas Delivery Unit with the the following sub specifications:** a) The unit should have primary connection for central medical gas supply for O2, N2O and Air. b) Provision for back up emergency supply through pin indexed O2 and N2O small cylinders. c) Electronically controlled gas mixing and delivery system. d) In case of O2 failure, the machine should automatically switch over to Air. e) Audio visual alarm for O2 failure. f) Accurate control of minimum 25% O2 in fresh gas (through sensitive oxygen ratio controller) up to flow of > 1 L/min, in presence of N2O. At least 250 mL/min of O2 for low flow and minimal flow applications (fresh	**03 pcs**	90000.00	

		gas flow < 1 L/min). g) Should be capable of accurate fresh gas delivery of up to 500 mL/min for minimal flow applications. h) Ergonomically located integrated emergency O2 flush with self returning valve. i) Should have single user-interface of at least 30 cm color display and electronic fresh gas doing for adult, child and neonate modes. The same user-interface should control and display all parameters including control of ventilator modes, display of pipeline and cylinder pressures, FiO2, ETCO2, airway pressures, tidal volume, minute ventilation, fresh gas flow, etc. j) The user-interface should have configurable screen layouts for individual screen setups. k) The machine should have fully automatic menu driven self test and user check list. In case of emergency machine startup, it should be possible to bypass the self test completely. l) The system leak test should be done through the Y-piece of the circle system and should not require user interaction during the test. m) O2 safety flow adjustable from 0 – 12 L/min, through the vaporizer for emergency back up use. n) Machine should also have an independent fresh gas outlet for connection to external circuit (Bain's circuit and Magill's circuit). o) The machine should have a configurable nitrous-oxide-free operation (in case of necessity). p) Fresh gas flow setting 50 mL/min to 12 L/min.			

		q) It should have the indicator to show the efficiency of fresh gas setting while used in low flow and minimal flow. r) In the event of complete loss of external electric power and internal battery failure, it should be possible to manually ventilate the patient at 100% O2 and deliver anesthetic agent. s) Major and critical components to be made of corrosion proof and durable metal alloy. **2.Integrated Anaesthesia Ventilator:** a) Electronically controlled, electrically driven ventilator should not require any driving gas or pneumatic power for its operation. b) Ventilator should be suitable to ventilate adult, child and neonate without changing ventilator bellows. c) Ventilator should have fully automatic calculations and preset of patient specific ventilation settings based on ideal body weight of the patient. d) Automatic breathing circuit compliance correction. Bellow should be enough light weight as not to offer any constant PEEP. e) Modes of ventilation: Spontaneous ventilation, Manual ventilation, IPPV with plateau adjustment from 0 – 60 % of inspiratory time, PLV (pressure limited ventilation) with decelerating flow, Pressure controlled ventilation, SIMV-VCV, SIMV-PCV, Pressure Support (PS), PS with CPAP, PS with SIMV (CMV/PCV). f) Should be upgradeable to Volume assured mode - autoflow – delivering set tidal volume at minimum airway pressure. g) Peak inspiratory flow up to 150 LPM.			

		h) Tidal volume adjustments from 20 mL to 1400 mL (upgradeable to minimum 5 mL). i) PEEP from 0 – 20 mbar, electronically adjustable. j) Respiratory frequency 3 – 100 /min. k) I:E ratio: 5:1 to I:99 l) Should have the capability to ventilate with atmospheric O2, in case of O2 and power failure. **3.Circle breathing system, Circle absorber:** a) Compact circle breathing system suitable for standard, low flow and minimal flow with minimum patient circuit volume including circle absorber (approx. 3 L, excluding reservoir bag) for fast response to change in fresh gas compensation. b) Fresh gas decoupled / compensated breathing system for adult and children. c) Integrated warmer in circle absorber for breathing gas conditioning and prevention of water condensation inside the circle system. d) Breathing gas inlet and outlet of the circle system should be fitted with reusable (autoclavable) bacterial-viral filter. e) Should have facility of gas sampling from the breathing system. f) Manual APL on circle system valve with direct setting of release pressure. g) Easy to fit and change circle absorber canister of about 1.5 L capacity. **4. Vaporizers:** a) Temperature and pressure compensated and flow interdependent			

		vaporizer for Sevoflurane (1 such) and Isoflurane (1 such). b) Vaporizer should have extended delivery range from 0 – 6%. c) Vaporizers must have selective interlocking safety mechanism to prevent simultaneous operation of two vaporizers. d) Should have transport lock and provide hermetic sealing of agent chamber during transport and storage. e) The vaporizer should require no calibration in its life cycle. **5. Safety features and alarms:** a) The machine should have adjustable alarm limits for all the parameters with auto set alarm function. b) The machine should have automatic display of MAC/MACx values and automatic activation of low agent alarm c) Airway pressure low limit should automatically change with PEEP setting changes. d) Continuous monitoring and display of tidal volume, airway pressure, ETCO2, FiO2 (paramagnetic O2 sensor), anesthetic agent concentration (with automatic identification of anesthetic agent), lung compliance (VCV modes). e) Graphic display of curves and loops with fast analysis of change in lung mechanics provided by simultaneous display of reference and real time loops. f) Bar graph display of tidal volume (inspiratory and expiratory volume). g) Trending for alarms and measured values with graphic trend			

		display. h) The machine should calculate agent compensation and agent uptake by patient on a case to case basis and display total fresh gas consumption in the electronic logbook of the machine. **6. Accessories to be provided:** a) Should have at least 3 pc of RS232 connectivity port to communicate with patient monitor or HIS for automatic data transfer. b) Pin indexed yokes for O2 and N2O (one each) c) The machine should have externally-fitted water and moisture trapping chamber (large capacity) fitted to the medical air pipeline inlet. d) Trolley with drawer. e) Floor mounting with durable caster wheels with brake. f) Writing surface. g) Color coded and DISS coded pipeline connections and hoses for O2, N2O and Air. h) Adult and Child breathing circuits (autoclavable). i) Anesthetic face masks (silicone, latex free). j) Water traps and sampling lines for gas analyzer. k) Semi closed breathing system for adult and child (latex free). l) Cylinder key (2 such) chained to the machine, near the cylinder yokes. m) User manual.			

		7.Quality standard of the equipment, warranty and after sales service: a) All the components of the of workstation (anesthesia gas delivery unit, vaporizer, ventilator, circle absorber and circle system), should be manufactured by the same agency to maintain uniformity of parts and efficient after sales service. b) Authorization for standing by, terms of warranty & AMC & supply of spares for 7 years. c) Physical demonstration of the quoted model is mandatory. d) Must have CE certification (EN 60601-2-13) w.r.t the essential requirement for safety and performance of the anesthesia workstation. e) The comprehensive warranty will be 5 years (including all spares and labor) from the date of satisfactory installation of equipment. Also quote rates for comprehensive CMC (including all spares and labor) for 6th to 10th year, after expiry of warranty period. Cost of spares, accessories and consumables should also be quoted separately. f) Within the warranty period, substitute working equipment of same model and make must be temporarily provided by the supplier free of cost to cover for any downtime exceeding consecutive 48 hours. **g)** Facility for good after sale & service with trained engineers posted in Kolkata.			
		Multi-parameter patient monitor (integrated with the anesthesia workstation) with the following technical specifications are required. **1.Parameters:** a) Should be suitable for monitoring adult, child and neonatal patients under anesthesia. b) Should have minimum of ECG, SpO2, NIBP, 2 IBP, 2 Temperature as inbuilt standard parameters. All other parameters should be by			

		upgrades as pods or modules and software. c) ECG: Five lead ECG monitoring with simultaneous display of three leads of ECG wave forms. Simultaneous display of twelve lead ECG waveform should be possible. d) Respiration: Through impedance pneumography from ECG. e) SpO2: Should have digital display, plethysmography, and tone modulation with change of f) SpO2. Should be supplied with Masimo SET technology with compatible sensors for Adult, Child and Neonate. g) NIBP: Oscillometric method of NIBP measurement with stepwise deflation. Adult, child, neonate preset modes. Compatible NIBP cuffs for Large adult, Adult, Child and Neonate. Should display systolic, diastolic, mean pressure in large, easy to read display. Measurement modes: automatic, manual and stat. Automatic mode adjustable intervals from 2 minute – 240 minutes and adjustable alarms. h) IBP: Simultaneous monitoring of 2 IBP. Range – 50 to 400 mmHg. i) Temperature: Simultaneous monitoring of two temperature: core and skin temperature. j) Simultaneous monitoring of two IBP and one temperature should be possible. **a)User Interface:** a) Should be suitable for adult, child and neonatal monitoring. b) Should have non-volatile memory for graphic and tabular trending of all monitored parameters as standard.			

		c) Should have event recall for minimum of 50 events, graphical and tabular trends, drug dose calculations, alarm logs, OxyCRG, oxygenation-ventilation and hemodynamic calculations as standard. d) Should have arrhythmia detection including life threatening arrhythmias such as ventricular tachycardia, ventricular fibrillation, asystole, as standard feature. e) Should have manual and automatic setting of screen format. f) Should have user selectable parameter priority and color selection for parameter on screen. g) Should have excellent cable management with as minimum as possible cables at monitor and patient end for maximum user friendliness. h) Should have facility for both wired and wireless networking. i) Should have minimum eight channels of waveforms with minimum 8 inch display. j) Cursor tool for vertical and horizontal cursors. k) Should have web browsing facility to review each networked monitor through hospital LAN via PC in hospital LAN from remote location should be possible as future upgrade. **b)Optional upgrades/ modules (to be quoted separately):** a) Neuromuscular monitoring module for monitoring neuromuscular blockade. b) Bispectral index module for monitoring depth of anesthesia. **c)Safety features:**			

		a) Internal battery backup for minimum of 3 hours (Li-ion battery) to be provided. b) CE and US FDA certification for the monitor as well as the individual parameter modules w.r.t the essential requirement for safety and performance of the monitor and accessories. c) Should have defibrillator and ESU protection, ECG Synchronization, IABP interface (ECG and Arterial for triggering and deflation with a device delay of < 20 milliseconds. **d)Accessories:** a) 5/12 lead ECG cable. b) SpO2 Masimo set finger sensor with extension cable for adult, child and neonate. c) Temperature probes (2 pc). d) NIBP Hose. e) NIBP cuffs (large adult, adult, child, neonate). f) IBP reusable cable for 2 IBP and 10 pc disposable transducers. g) BIS module and DSC cable.. h) NMT module and cable with acceleromyograph.. i) User manual. **e)Warranty and after-sales service:** a) All the components of multi-parameter patient monitor should be manufactured by the same agency to maintain uniformity of parts and efficient after sales service.			

		b) Authorization for standing by, terms of warranty & AMC & supply of spares for 7 years. c) Physical demonstration of the quoted model is mandatory. d) The comprehensive warranty will be 5 years (including all spares and labor) from the date of satisfactory installation of equipment. Also quote rates for comprehensive CMC (including all spares and labor) for 6th to 10th year, after expiry of warranty period. Cost of spares, accessories and consumables should also be quoted separately. e) Within the warranty period, substitute working equipment of same model and make must be temporarily provided by the supplier free of cost to cover for any downtime exceeding consecutive 48 hours. f) Facility for good after sale & service with trained engineers posted in Kolkata.				
2	**Multi functional Surgical OT table (C-arm fluoroscope compatible) with electronic control**	**Multi functional Surgical OT table (C-arm fluoroscope compatible) with electronic control with the following specifications :** Should be a mobile universal operating table with Direct motor driven adjustment of height, lateral tilt, Trendelenburg/anti-Trendelenburg. It should be 100% oil free. Should have a longitudinal adjustment of 250 mm. Should have pneumatic spring support for leg section and back section. Adjustment of the column functions should be electrically Motorised via cable remote control Should have additional operating panel with status indicators for tabletop orientation on column. Should have built-in electronic interface to allow remote diagnosis and software updates via modem. Should have maintenance-free battery, integrated in the column, which can be charged via a separate charging cable that also serves for direct mains operations if needed. Basic tabletop should consists of seat section and back section that can be adapted and extended to meet the requirements of all the surgical disciplines by combining it with other tabletop components.	**03 pcs**	100000.00		

The system should have Electrical and functional safety with Microprocessor and Sensor Technology Module.
Completely X-ray translucent tabletop.
Pads should be integrally foamed, electrically conductive, soft and detachable, Velcro-free system for optimum hygiene and durability.
Should have stable running gear with 4 large double castors with a minimum diameter of 150 mm for easy manoeuvring.
Should have foot switch for brake.
Should have H – shaped base providing a plenty of space for the surgical team's feet.
Tabletop frame, column cladding, side rails and running gear frame should be made from disinfectant-resistant, easy to clean stainless steel.
It should be operated manually without the remote.

Column drive	**Electro-mechanical motor**
Height adjustment (without pads)	700 mm – 1.120 mm
Trendelenburg/Anti-Trenelenburg	30°/35º
Tilt	+-25°
Pneumatic spring-assisted leg section up/down	+20°/-90°
Standard leg section up/down°	+-90°
Back section up/down	+85°/-30°
Longitudinal slide	250 mm
Patient weight	More than 225 Kg

The systems should be quoted with following General accessories :

1. Arm positioning support with radiolucent upper arm pad and roll- 2 nos.
2. Shoulder support-1 pair.
3. Anaesthesia Screen-1 nos.
4. Suspended arm strap set-2 nos
5. Infusion pole with 4 hooks-1 nos.
6. Body strap with locking Clamps-2 nos.
7. Lateral support height adjustable-2 nos.
8. Clamps-4 no.
9. Semi-circular pad-1 nos.

The systems should be quoted with following Orthopaedic accessories :

1. Knee Arthroscopy adapter
2. Radial clamp
3. Leg holder

		4. Side rail extension & adapter 5. The table should be USFDA, & CE and UL certified 6. It should be meeting international standards for medical and electrical safety standards;				
3	**Portable Blood Gas & Electrolyte Analyzer:**	**Technical Specifications of kit-based portable Blood Gas & Electrolyte Analyzer:** 1. The kit-based portable Blood Gas & Electrolyte Analyzer should be able to measure the following parameters: **pH, PCO2, PO2, Na+, K+, Ca++, Glucose, Lactate and Hematocrit**. 2. The analyzer must be small in dimension and portable system, easy to transport by a single person to the patient's bed. 3. The analyzer must be easy to operate, intuitive user interface, requiring minimum technical training of the operator. 4. The unit should operate on AC adapter or accompanying Li-ion battery and should be able to operate while battery is being charged. 5. The sample requirement must not be more than 125 micro liters. 6. The single-use test cartridge should be self contained with all the reagents, sensors & calibrating solutions required for the test. 7. The system should not use any other consumable other than test card (test-kit) and thermal printer roll paper. 8. The system should be provided with a dedicated wireless (Bluetooth/IR) thermal printer. 9. The system should have Amperometric, Potentiometric, and Conductometric sensors for measurement of test parameters.	02 pcs	20000.00		

		10. The system should have an embedded and detachable barcode reader. 11. The system should have Bluetooth / WiFi connectivity for data communication with PC. **12.** Should be USFDA certified and CE marked for all the main equipment as well as the accessories and kits used.			
4	**Cardiac Biomarker Analyzer (Card-based Quantitative Assay):**	**Technical Specifications of Cardiac Biomarker Analyzer (Card-based Quantitative Assay):** a) The card-based portable Cardiac Biomarker Analyzer should be able to **quantitatively measure** the following parameters: Troponin I, BNP, CK-MB, Myoglobin, D-Dimer, using **Fluorescence Immunoassay Technology**. b) The analyzer must be small in dimension and portable system. c) The analyzer must be easy to operate, intuitive user interface, requiring minimum technical training of the operator. d) The unit should operate on AC adapter and also on inbuilt Li-ion battery backup. e) The sample requirement must be less than 300 micro liters for a given panel of test. f) The single-use test card should be self contained with all the reagents, sensors & calibrating solutions required for the test. g) The system should have inbuilt memory capacity of at least 500 test results with date and time. h) Operating temperature range between 18 and 30 degree Celsius. i) The system should be provided with an in-built thermal printer. j) The system should be able to interface with HIS and LIS software.	02 pcs	20000.00	

		k) Should have built in QC check facility for the instrument. l) Should be able to perform all the quantitative tests of a single sample in less than 20 minutes. m) Should be US FDA certified and CE marked for all the main equipment as well as the accessories and kits used.			
5	***The Endoscope Drying Cabinet***	***The Endoscope Drying Cabinet should have the following technical specifications:*** 1. Approximate dimensions: Width X Depth x Height = 1280 mm x 470 mm x 2150 mm. 2. Approximate depth of chamber = 370 mm; approximate volume of chamber 0.6 cubic meters. 3. Number of endoscope positions: at least 6 (six). 4. Drying time = 120 minutes or less. 5. Storage time = 160 hours or more. 6. Power supply: 230V x 0.9 A, 50 Hz, AC. 7. Power consumption should be less than 150 watts. 8. Air supply: compressed air pressurized medical grade dry air, internal pressure 3 – 8 bar, dew point = - 43 degree C. 9. Internal ventilator 30 cubic meter/h (approximately). 10. Hepa filter (filter class minimum 7) with 0.3micrometer/9997 DOP; HEPA filter resistance = 200 Pa 11. Cabinet doors must be lockable, with user access control to prevent unauthorized access.	02 pcs	5000.00	
6	**ELECTRO SURGICAL UNIT**	**<u>TECHNICAL SPECIFICATION FOR ELECTRO SURGICAL UNIT</u>** The Micro-processor based isolated Electro Surgical Unit should be compatible with Argon Coagulator system, designed for all kind of General Surgeries with both monopolarand bipolar modes. <u>The following features are required</u> 1. The unit should be entirely microprocessor based. 2. Machine should have LED displays. 3. **"Highest power efficiency rating"** - have to be within the range more than 97 %.	03 pcs	**5000.00**	

		4. Real time tissue impedance monitoring technology to deliver the selected power perfectly into a wide range of tissue types reducing thermal spread, RF interference and Neuro muscular stimulation and spark using feedback technology of sensing tissue types at a rate as high as 200 times in a second. 5. Return Electrode Contact Quality Monitoring (REM) system with Adaptive REM facility. 6. The Machine should work with disposable dual plate patient's return electrode with good quality of polyhesive adhesive get. 7. Patients' return electrode should be available in three sizes, for adults, paediatric and neonatals. 8. The patient return electrode should be all disposable type. 9. The service provider of the unit should have their working office/workshop in Kolkata. 10. Facilitating two surgeons at a time using one machine in the same surgery. 11. Numerical Error alarming system should be inbuilt. 12. With a single button on the machine, previous power setting can be recalled. 13. Should be type CF Equipment (IEC 601 – 1 & IEC 601-2-2) defibrillator proof. 14. Unit should be US FDA and CE certified 15. Facilitating under water procedures 16. Unit should have "Spray" mode with Highest **Crest Factor (in the range of 7-9) - (***Crest Factor as an indicator of a waveform's ability to coagulate bleeders without cutting effect.) 17. There should be option of changing the crest factor from low to high value with a single button. 18. There should be sufficient Coag modes present for all applications (Preferably 4 coag modes) 19. Must be compatible with smoke Evacuator system, Argon Plasma Coagulator system and CUSA <u>Input power source;</u> Operating Range : 170-260 VAC Line Frequency : 50-60 Hz <u>Minimum High Frequency Leakage</u> Bipolar Less than 60 mA Monopolar Less than 150 mA			

		OUTPUT CHARACTERISTICS Highest Powers should be in the below ranges Precise – 70 Watts Standard – 70 Watts Macro – 70 Watts Low – 300 Watts Pure – 300 Watts Blend – 200 Watts Deisccate – 120 Flug. High Crest Factor – 120 Flug, Low Crest Factor-120 Spray - 120 **OUTPUT WAVEFORMS :-** **BIPOLAR:** 470 Khz sinusoid **Monopolar Cutting** Pure: 393 kHz sinusoid Blend: 393 kHz bursts of sinusoid recurring of 27 Khz intervals. 50% duty cycle envelope **Monopolar Coagulation:** Dessication:- Low 1: 240 +-40 Khz sinusoid recurring at 39 Khz. 8% duty cycle Low 2: 393 kHz sinusoid Low 3: 393 kHz sinusoid Fulguration:- High 1: 470+-40KHz damped sinusoidal burstswith a repetition frequency of 57 Khz High 2: 470+-40KHz damped sinusoidal burstswith a repetition frequency of 30 Khz			

		Spray:- 390 Khz damped sinusoidal bursts with a randomised repetition centered at 28 kHz. Frequency include 21 Khz ‹ f ‹ 35 KHz Output Is further modulated by a random 250 Hz envelope with a variable duty cycle Output power changes by ‹ 15% or 5 Watts, which ever is greater, as the line voltage varies from 90 – 135 volts and 186 – 264 volts (into a 300 ohm load)				
7	**FOWLERS' BED**	**<u>SPECIFICATION OF FOWLERS'BED</u>** 1. Should have the full features of a hospital bed with adjustment of height, back, upper leg & lower leg sections & trendelenburg on four separate crank systems. 2. Should have polymer molded handle. 3. Should have mild steel perforated sheet top. 4. Should have Back rest, upper leg section, trendelenburg/ Rev. trendelenburg /Rev. trendelenburg & height adjustment on cranck mechanism with polymer molded handle, polymer molded head & foot boards . High grade synthetic body castors 125 mm diameter, 2 with break & 2 without breaks. 5. Should have raised back rest. 6. 125 mm high grade synthetic castors, 2 with break & 2 without breaks. 7. Should have patient load bearing capacity safe working of 135 kgs.		03 pcs (against condemnation)	**10000.00**	

		8. Should have collapsible type safety side rails (pair) with locks on foot end. 9. Should have IV polish.			
8	**Forced air warmer**	**Specifications for Forced air warmer** 1. **Forced air warmer** for patient warming with adjustable automatic temperature control between 32 - 44 degree Celsius, in steps of 4 degree Celsius; with outlet hose temperature monitoring system. The warmer unit should have the system of securely mounting on any IV pole or bed rail. Non-tipping mounting pole, with caster wheels, and wire basket to be provided with each warmer unit.	03 pcs	**4000.00**	
DEPARTMENT. OF OBST. & GYNAE. ESI-PGIMSR, JOKA					
1	Cardiotocographic fetal monitor with Maternal Monitor	Specification of Cardiotocographic fetal monitor with Maternal Monitor. •Standard size colour TFT screen monitor for display of wave forms and digital •Automatic fetal movement detection facility in wave forms. •Standard twin pregnancy monitoring system •Support for external thermal printer or ink jet printer •Built- in rechargeable battery and AC/DC power supply. •Built-in network capability. •24 hours monitoring, data storage and reload capacity. •Fetal heart acceleration and deceleration measurement ability •Fetal heart base line beat to beat variation and acceleration, deceleration analysis capability. •Printing functions with paper for documentation. •Automatic monitoring mode and convenient operation by manual/digital keys and rotary knob.	03 pcs	**15000.00**	

		•Light and auto-alarm ability complying with international standard. OPTIONAL (Additional Specification): Maternal monitoring parameters may be present in addition to fetal monitoring system. •ECG •SPO2 •NIBP •Respiratory rate •Temperature •Other parameters				
2	**Endovision System**	**Technical Specification Endovision System** **Specifications for Full High Definition Digital Camera Qty-1** **Camera Console and Camera Head with coupler** **The system should have following features:** • It should have Pure digital signal with high definition video of 1920 x 1080p (min) native resolution and progressive scan technology both on camera head and console • **It should be compatible with Aspect ratio of 4:3 and 16:9** • **The system should have Digital Zoom to enhance the quality of Image size & cross specialty standardization of the camera system, regardless of the telescope used.** • Digital zoom, white balance control and two peripheral controls on camera Head • Integrated Gain/Shutter/Enhancement with automatic brightness control • Video Outputs: two DVI, one SVHS, direct fiber optic output • The system should automatically optimize all settings. The system should be ready- to-use as soon as it is connected to the camera control unit. • **The system should be touch screen Menu driven, thus allowing the surgeon to program the camera head functions as per the surgical needs & requirement.** • **The system should have surgical multispecialty settings.**	01 pc	40000.00		

		Technical Specifications: **Image System:** 1/3" Progressive Scan CCD **Pixels** 1920 X 1080 pixels per chip (min) **Camera Head Weight** **< 100 gms.** **AGC:** Microprocessor controlled **Signal-to-noise ratio** 65-75 dB **Video output:** S-video signal, Digital Video Interface **Power Supply** 100-240 VAC, 50/60HZ				
		High Resolution Monitor (HD) Qty-1 The system should have: • Hi Definition Medical Grade Colored Monitor 26" IPS Alpha panel with LED backlight Flat Panel Monitor • PAL/NTSC system compatible. The response time should be <8ms. • Composite, S-Video and DVI inputs. • Compact & Lightweight design. • The system should have Compact & Lightweight design • The system should have Resolution of 1920 X 1080 • Aspect Ratio: 16:9 and contrast ration 1400:1with viewing angle 178 degree • Must have a preset specality setting. • **Weight should not be more than 19lbs** **LED Light Source (Mininmum of 240Watt) Qty-1** The system should have: **Electrical specification** • Primary: 100 - 240 VAC, 50/60 Hz, **400 W** • Fuses (2): 5.0A 250V **Light Engine** • Type: Red, Green, Blue LEDs **(Should have LED's for light emission)** • Light outlets: 1 • Light intensity adjustment: continuously adjustable from 0 to 100% manually • It should have Standby mode which will reduce light output to a minimum, preventing the light cable from generating excessive heat • **It should have Electronic Scope Sensing Technology (ESST), a special safety feature that helps prevent accidental burns caused by a light cable that is not connected to**				

		the scope. • Intuitive simple user Interface with **LCD touch screen** • Universal Jaw Assembly to adapt any make of Fiber Optic Cable **Fiber Optic Cable Qty-1** • Should be at least 4mm diameter and it should be compatible to transmit the best picture quality from HD camera system. • It should have the technology to ensures that the light source goes to standby mode when it is detached from the scope **High Defination Laparoscopes:** **10mm 30 degree Qty-1** **10mm 0 degree Qty-1** **5mm 30 degree Qty-1** • Should be Fully Autoclavable • Should be in both 0 and 30 degree • Should be Wide Angled distortion free view • Must be equipped with Universal Adaptor for other Light Sources • Should have Yellow Sapphire Glass Tip Index for Optimum Evenness of Focus & Contrast			
		All the above equipment should be of single make			
3	Laparoscopic Hand Instrument	Specification for the Laparoscopic Hand Instrument (Gynae)	02 sets	**20000.00**	

	(Gynae)				
		Insufflators 45L • 45 liter of high flow & having LCD Display measurement • Soft approach pressure control for safe recovery of abdominal pressure • Should have four mode & visual and audible alarms with min 0.1 L flow rate • Internal leakage detection capability • Integrated Gas heating • Having internal venting system for safety • Should have video on screen display • Unit should include heated tubing, hose & yoke	1		
		Trocar /Cannula Size 11 mm	3		
		Trocar with pyramidal tip ,multi function automatic valve, stopcock for insufflation			
		Trocar/Cannula Size 5.5 mm	3		
		Trocar with pyramidal tip ,multi function automatic valve, stopcock for insufflation			
		Reducer flap type 10/05 mm	2		
		Maryland Dissecting forceps, 5mm, working length 33 cm			
		5mm, Rotating, Dismantable with channel for cleaning & connector pin for unipolar coagulation. Insulated Metal Handle without ratchet & Milled Radel shaft insulation. Easy to change insert.	1		
		Kelly Beak Dissector forceps, 5mm working length 33 cm	1		
		5mm, Rotating, Dismantable with channel for cleaning & connector pin for unipolar coagulation. Insulated Metal Handle with ratchet & Milled Radel shaft insulation. Easy to change insert.			

		Metzenbaum Scissor, 5mm, working length 33 cm	1		
		5mm, Rotating, Dismantable with channel for cleaning & connector pin for unipolar coagulation. Insulated Metal Handle with ratchet & Milled Radel shaft insulation. Easy to change insert.			
		Allis tooth Grasping forceps, 5mm working length 33 cm	1		
		5mm, Rotating, Dismantable with channel for cleaning & connector pin for unipolar coagulation. Insulated Metal Handle with ratchet & Milled Radel shaft insulation. Easy to change insert.			
		Alligator Grasping forceps,5mm, working length 33 cm	1		
		5mm, Rotating, Dismantable with channel for cleaning & connector pin for unipolar coagulation. Insulated Metal Handle with ratchet & Milled Radel shaft insulation. Easy to change insert.			
		5mm meso overian forceps, working length 33 cm	1		
		5mm, Rotating, Dismantable with channel for cleaning & connector pin for unipolar coagulation. Insulated Metal Handle with ratchet & Milled Radel shaft insulation. Easy to change insert.			
		5mm Oviduct Forceps, working length 33 cm	1		
		5mm, Rotating, Dismantable with channel for cleaning & connector pin for unipolar coagulation. Insulated Metal Handle with ratchet & Milled Radel shaft insulation. Easy to change insert.			
		Dissecting Electrode (L shaped) , 5mm, working length 33 cm	1		
		5mm instrument with proper insulation upto working tip			
		Dissecting Electrode (Spatula shaped) , 5mm, working length 33 cm	1		
		5mm instrument with proper insulation upto working tip			
		Suction / Irrigation cannulas. Trumpet valve.	1		
		5mm all metal & single hand control trumpet with perforations at distal tip for smooth function.			

		05 mm Bipolar Fenestrated forcep with ring handle. Working Length 33cm should be with cable	1		
		Needle P C O D	1		
		Vaginal Rectractor (Uterine Manipulator) 10 MM with one cannula and attachment	1		
		5mm Straight tip needle holder with metal handle and ratcheting mechanism, can be desmantal with channel for cleaning	1		
		5mm Knot pusher	1		
		5 mm Myoma Drill	1		
		Monopolar Cable	1		
		Standards & Safety for above equipments: **1. Should be FDA & CE approved product** **2. Comprehensive training for lab staff and support services till familiarity with the system.** **3. Shall be certified to be meeting safety standard IEC 60601-1:2005 requirements for the safety of endoscopic equipment.** **4. The Manufacturer preferably should have their own authorized service centre in Kolkata.**			
4	Hysteroscope Hysteroscopy set	**Technical Specification- Hysteroscope** **Hysteroscopy set** 1. Examination sheath of suitable size with luer lock adapter. 2. Operating sheath with instrument channel for operating hysteroscopy of suitable size. 3. Autoclavable telescope 30deg. diameter 4mm, length 30cm. 4. Polypectomy loop unipolar electrode suitable for polyductomy. 5. Bipolar Dissection Electrode, semi rigid suitable for hysteroscopy. 6. Monopolar High Frequency Cord with 4mm plug for HF unit, length 300cm 7. Bipolar High Frequency cord with 4mm plug for HF Unit, length 300 cm 8. Unipolar ball electrode suitable with above instruments.	01 set	**20000.00**	

		9. Flexible scissors single / double action jaws suitable with above instruments. 10. Flexible Biopsy and grasping forceps double action jaws. 11. Flexible Biopsy and grasping forceps double action jaws. 12. Biopsy spoon forceps double action jaws. 13. Flexible Scissor 14. Hysteroscopic cannulation system with guide and wire. <u>II Irrigation Systems</u> 1. Should be fully automatic. 2. Should have irrigation capacity of 0 to 500 ml per minute 3. Pressure range should be 10 – 200 mmHg 4. Should have digital displays like preset pressure and preset flow 5. Should be supplied with the accessories like silicon tubing compatible with the instruments suppied, power cord, etc. 6. Should work with input 200 to 240Vac 50 Hz supply <u>III. Digital endoscopic camera system</u> 1. Should be a single chip camera technology. 2. Should have one composite video outputs and one S-video output. 3. Should have anti-moister filter for fiber scopes. 4. Should have fully automatic exposure control. 5. Should have automatic white balance with memory function. 6. Should have horizontal resolution of more than 450 lines. 7. Should be supplied with flat LCD TV of suitable size. 8. Should work with input 200 to 240Vac 50 Hz supply <u>IV Light source and fiber optic light cable</u> 1. Should be a halogen light source with minimum 250W light output with 10 spare bulbs. 2. Should have manual light intensity control. 3. Should have inbuilt cooling system.			

<table>
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<td></td>
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<td>4. Should have two lamps of 250W and should have provision to change over in the event of failure from one lamp to another.
5. Should be supplied with flexible fiber optic light cable with minimum diameter of 4.5 mm and minimum working length of 300cm.
6. Should work with input 200 to 240Vac 50 Hz supply
<u>V Others</u>

1. Should be supplied with suitable trolley.
2. Trolley should have at least 6 power sockets

All equipments except irrigation system offered should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.</td>
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<td>5</td>
<td>Delivery Bed</td>
<td>Specifications
<u>Delivery Bed:</u>
• Overall size: 1880L X 900w X600-800H mm.
• Tubular Frame work mounted on 125 mm dia castor two with breaks.
• Three Section top made of MS pipe with fixed cushioned mattress.
• Height Adjustment preferably Hydraulic height adjustment & back section adjustment through electric actuator system.
• Trendlenburg/ Reverse Trendlenburg Positions through pneumatic pump.
• Leg end section can slide under the main section. Wheel lock system must be present.
• Provided with a pair of upholstery lithonomy position.
• SS telescopic IV Rod.
• Detachable SS Tray.</td>
<td>02 pcs</td>
<td>5000.00</td>
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<td>6</td>
<td>MICROSCOPE</td>
<td><u>MICROSCOPE SPECIFICATIONS</u>
<table>
<tr><td>Optical System:</td><td>UIS2 (Universal infinity-corrected) optical system</td></tr>
<tr><td>Illumination:</td><td>Built-in transmitted Koehler illuminator
6V/30W halogen bulb
100-120V/220-240V ~ 0.85/0.45A 50/60Hz</td></tr>
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<td>02 pcs</td>
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		Focusing:		Stage height movement by roller guide (rack and pinion) Stroke per rotation: 36.8mm Full stroke range: 25mm Upper limit stopper Tension adjustment on coarse focus adjustment knob				
		Revolving Nosepiece:		Fixed quadruple nosepiece with inward tilt				
		Observation Tube:	Type:	U-CBI30-2, Binocular	U-CTR30-2, Trinocular			
			Field Number:	20	20			
			Tube inclination: Interpupillary distance adjustment range:	30° 48mm-75mm	30° 48mm-75mm			
			Light path selector:	None	None (Bi 50%, Video/Photo 50% fixed)			
		Stage:		Size:	188mm(W) x 134mm(D)			
				Movement range:	76mm X-direction x 50mm Y-direction			
				Specimen holder:	Double slide holder			
				Rubber grip:	Equipped as standard			

			Type:	Abbe condenser			
			NA:	1.25 with oil immersion			
		Condenser:	Aperture in iris:	Built-in			
		Dimensions & Weight:	233mm(W) x 432mm(H) x 367.5mm(D), approximately 8.5kg (approx. 18.7lbs.)				
7	**Portable Ultrasound Machine**	**<u>Specifications of Portable Ultrasound Machine</u>** 1. The unit should be compact, light weight, portable,sturdy and resistant to break & damage.. 2. It should be suitable for vascular access (CVC placement,PICC) Nerve blocks(Lower as well as upper extremity),E-FAST examination, AAA Exam, small parts, applications in adults and paed. patients and also suitable for echocardiography & interventions. Multiple preloaded applications presets should be available for the above. 3. The unit must have real time compound imaging for improved contrast resolution & eliminating ultrasound artifacts to achieve optimum image quality. 4. The unit must have automatic gain adjustment for B mode imaging 5. Scanning depth must be available up to 35 cm. 6. System should support transducer technologies like convex, linear and phased array. 7. Imaging modes of real time 2D, color Doppler, Pulsed wave Doppler, Continuous wave Doppler and Power Doppler must be available in all probes. 8. Simultaneous connectivity of at least 2 probes. 9. System must have fast start up to scanning in less than 60 seconds as essential in critical and emergency situation in ICU, emergency & OT. 10. Cine memory on all modes 11. DICOM ready system with facility to print along with printer, store, ready to connect to PACS 12. Flat LCD/TFT monitor of at least 10” with flicker free image 13. Alphanumeric soft keys keyboard with easy access scans controls, facility to sanitize the system keyboard 14. to avoid cross contamination must be available 15. Onboard storage of at least 10,000 images ,USB port for connectivity to computer 16. Should be able to operate both on AC and battery. Battery pack should be self recharging and		01 pc	**10000.00**	

		should last at least for 2 hours when fully charged. 17. Transducers to be provide as standard. ▯ High frequency Linear transducer 6-12 MHz with 60mm size for vascular access, small parts, vascular, muscuskeltal interscalene,Supraclavicular,Axillary,Musculocutaneus,Popliteal,Saphenous. Higher frequency will be preferred. ▯ Convex transducer 2-5 MHz for deep nerve access specially Celiac,Sciatic nerve,Epidural,Subgluteal & abdominal applications. ▯ Broad band phased array transducer,1-5 MHz for accessing the cardiac function & other related application. ▯ Needle guide must be supplied for Linear & Convex probes along with 20 compatible needles with the unit. 18. System should be supplied with trolley. 19. Valid US FDA/CE(European)/BIS certification.			
8	**Digital Fetal Doppler**	**Specifications for digital Fetal Doppler:** •Fetal doppler CE approved, with blue blacklight for dark sight •Easy operation for everyone, over 10 years quality satisfaction •Tm-100B Fetal Doppler CE Approved •Ultrasound frequency : 2.5+-0.25Mhz •Ultrasound output power : 10mW/cmDC •Power supply:9.6V rechargeable battery •Working environment temperature : 10-40	01 pc	**2000.00**	
9	**COLPOSCOPE**	**TECHNICAL SPECIFICATIONS COLPOSCOPE** 1. Should be a basic model with binocular tubes with inter papillary adjustment and vertical stand. 2. Should have a working range with fine focus of minimum 40mm. 3. Should have a 12.5x or 13.5x or 15x eye piece.	01 pc	**2000.00**	

		4. Should have a standard objective of working distance between 250 to 300mm. 5. The vertical stand should have at least 4 wheels and at least 2 of them should have breaking facility. 6. The vertical joint should be rotatable and should have vertical height adjustment. 7. The head should be tiltable and should have positioning handle. 8. Should use a halogen light source with coaxial illumination.			
DEPARTMENT. OF SURGERY ESI-PGIMSR, JOKA					
1	**OPERATING HAND INSTRUMENTS**	**OPERATING HAND INSTRUMENTS Set for LAPROSCOPIC SURGERY**	01 set	**10000.00**	
	1	Trocar /Cannula Size 11 mm	3		
		Trocar with pyramidal tip ,multi function automatic valve,			
		stopcock for insufflation			
	2	Trocar/Cannula Size 5.5mm	3		
		Trocar with pyramidal tip ,multi function automatic valve,			
		stopcock for insufflation			
	3	Maryland Dissecting forceps, 5mm, working length 33cm	1		
		Rotating, Dismantable with channel for cleaning & connector			
		pin for unipolar coagulation. Insulated Metal Handle without			
		ratchet & Milled Radel shaft insulation. Easy to change insert.			
	4	Curved Kelly Dissecting forceps, 5mm, working length 33cm	1		
		Rotating, Dismantable with channel for cleaning & connector			
		pin for unipolar coagulation. Insulated Metal Handle without			

		ratchet & Milled Radel shaft insulation. Easy to change insert.			
	5	Right Angle Dissecting forceps, 5mm, working length 33cm	1		
		Rotating, Dismantable with channel for cleaning & connector			
		pin for unipolar coagulation. Insulated Metal Handle without			
		ratchet & Milled Radel shaft insulation. Easy to change insert.			
	6	Babcock Grasping forceps 5mm, working length 33cm	1		
		5mm, Rotating, Dismantable with channel for cleaning			
		Non insulated handle with ratcheting mechanism, easy to change insert			
	7	Alligator Light Grasping forceps,5mm, working length 33cm	1		
		5mm, Rotating, Dismantable with channel for cleaning & connector			
		pin for unipolar coagulation. Insulated Metal Handle with ratchet			
		& Milled Radel shaft insulation. Easy to change insert.			
	8	Fundus Grasper , 5mm, working length 33cm	2		
		5mm, Rotating, Dismantable with channel for cleaning			
		Metal Handle with ratchet & Milled Radel shaft insulation.			
		Easy to change insert.			
	9	Tooth Grasper / Allis, 5mm, working length 33cm, with double row of teeth	1		
		Rotating, Dismantable with channel for cleaning			
		Metal Handle with ratchet & Milled Radel shaft insulation.			

		Easy to change insert.			
	10	Endo Grasper , 5mm, working length 33cm	1		
		5mm, Rotating, Dismantable with channel for cleaning			
		Metal Handle with ratchet and non-ratchet & Milled Radel shaft insulation.			
		Easy to change insert.			
	11	Double Action Claw , 5mm, working length 33cm	1		
		5mm, Rotating, Dismantable with channel for cleaning			
		Insulated Metal Handle with ratchet and non ratchet facility &			
		Milled Radel shaft insulation. Easy to change insert.			
	12	Metzenbaum Scissor, 5mm, working length 33cm	1		
		5mm, Rotating, Dismantable with channel for cleaning & connector			
		pin for unipolar coagulation. Insulated Metal Handle without ratchet			
		& Milled Radel shaft insulation. Easy to change insert.			
	13	Straight Metzenbaum Scissor, 5mm, working length 33cm	1		
		5mm, Rotating, Dismantable with channel for cleaning & connector			
		pin for unipolar coagulation. Insulated Metal Handle without ratchet			
		& Milled Radel shaft insulation. Easy to change insert.			
	14	Hook Scissor, 5mm, working length 33cm	1		
		5mm, Rotating, Dismantable with channel for cleaning & connector			

		pin for unipolar coagulation. Insulated Metal Handle without ratchet			
		& Milled Radel shaft insulation. Easy to change insert.			
	15	Dissecting Electrode (L shaped) , 5mm, working length 33cm	1		
		5mm instrument with proper insulation upto working tip			
	16	Dissecting Electrode (Spatula) , 5mm, working length 33cm	1		
		5mm instrument with proper insulation upto working tip			
	17	Clip Applicator 10 mm dia for Ethicon LT-300	1		
		10mm, Rotating, with channel for cleaning			
		Metal Handle without ratchet .			
	18	Suction / Irrigation cannulas. Trumpet valve.	1		
		5mm all metal & single hand control trumpet with perforations at			
		distal tip for smooth function.			
	19	Reducer 10 / 5 mm for reducing 10 mm to 5mm dia.	1		
	20	Aspiration Needle, 5mm	1		
	21	Gall Bladder Extractor	1		
		10mm, Rotating, Dismantable with channel for cleaning			
		Metal Handle without ratchet .			
	22	Monopolar Cable	1		
	23	5mm Bipolar Fenestrated Forceps with Ring Handle and cable	1		

	24	Reusuable bipolar cable	1		
	25	5mm Straight tip needle holder with metal handle and ratcheting	1		
		mechanism, can be dismantled, with channel for cleaning.			
2	**Ultrasonic Scalpel with Advance Vessel Sealer system**	**<u>Specification for Ultrasonic Scalpel with Advance Vessel Sealer system:</u>** • **System should have a universal connector to connect Ultrasonic energy and Advanced RF energy instruments.** • **System should have automatic instrument recognition.** • **System should be CE approved.** • **System should have a touch screen display for fast and setup, operation and on-screen diagnostics.** • **System should have a high-resolution display with wide viewing angles.** • **System should have the ability for software updates via USB memory stick.** • **System should be a single generator that provides Ultrasonic energy and Advanced RF energy technology for soft tissue dissection and vessel sealing** • **System should have a potential equalization terminal for compatibility with other medical systems requiring such connections** • **System should conform to the following international standards EN (IEC) 60601-1, EN (IEC) 60601-1-2, EN (IEC) 60601-2-2, EN (IEC) 60601-1-8** • **System should provide Class 1 protection against electric shock and defibrilation proof** • **System should have a single footswitch for operating ultrasonic energy or advanced RF energy instruments** • **System should have the ability to select handswitch or footswitch activation or both for Ultrasonic and advanced RF energy instruments and the ability to change selection during use** • **System should have multiple language options with English language as default** • **System should not have minimal lateral thermal spread more than 1 mm.** • **System should not have an auto switch off mechanism.** • **System should have standby mode to ensure safety.** • **System should come equipped with system diagnostics and troubleshooting guide to pin point any problems in the systems.** • **System should have onscreen warning display system for generator overheating, generator software upgrade, hand-piece errors and instrument errors**	01 set	**10000.00**	

		• **System should be able to power ultrasonic energy instruments 50 KHz frequency and have the ability to power ultrasonic energy instruments in the frequency range of 30-80 KHz in future** • **System should be compatible for open surgery and for laparoscopic surgery.** • **System should be compatible with both 5mm and 10mm instruments.** • **System should have atleast 5 power settings levels along with display** • **System should be able to power energy instruments with microprocessor controlled bipolar electrosurgical radiofrequency technology with a quasi-sinusoidal forced impedance output.** • **System should be equipped with smart advanced RF energy technology to measure the tissue impedance and control the power delivery.** • **System should be equipped with advanced RF energy technology that can simultaneously seal and transect vessels up to and including 7mm, large tissue pedicles and vascular bundles.** • **System should be equipped with advanced RF energy technology that provides temperature controlled energy delivery which should maintain tissue temperature approximately at 100 degree Celsius.** • **System should have Advanced RF Energy hand instruments with a unique electrode configuration to minimize the lateral thermal spread.** • **System should have Advanced RF Energy hand instruments with technology to deliver high compression uniformly across seal area.** • **System should have Advanced RF Energy hand instruments that provide tissue / vessel seal strength to withstand bursting pressure of more than 5 times the systolic pressure.** • **All hand probes for open and lap procedures should be able to simultaneously cut and coagulate tissues.** • **System should be able to power advanced RF energy hand instruments of 5mm shaft diameter for both open & laparoscopic procedures in the following shaft lengths**			

		(14cm, 25cm, 35cm & 45cm) and should be both hand & foot activated. • **Systems should be able to power ultrasonic energy hand instruments of 5mm shaft diameter for both open & laparoscopic procedures and should be both hand and foot activated.** **Hardware:** **1 Generator : 1 Set** **2 Footswitch & Cable – 1 No** **Accessories:** **1 Hand Piece (Transducer)-1 No** **2 Adaptors for ultrasonic and advanced RF energy instruments -1 Set** **Probes of Ultrasonic scalpel:** **1. Lap Probe (36cm)- 12nos** **2. Open Probe (23cm)-- 6 nos.** **Probes of Advance Bipolar:** **1. Lap Probe(35cm)- - 6nos** **2. OpenProbe(14 cm)--- 6nos.**			
		DEPT OF DERMATOLOGY ESI PGIMSR, JOKA KOLKATA			
1	**Radiofrequency machine**	**<u>Radiofrequency machine</u>** Number of items: 2 Power required: 230v/50 hz Dimensions 260x300x150 Weight 7kg Electrodes insulated Frequency 0.20-2.93 Mhz Cut: 70%cut, 30% coagulation Coagulation : 60%coagulation, 40% cut Fulguration: available intensity control: Linear	02 pcs	2000.00	

2	**Centrifuge machine**	**Centrifuge machine** Number of items- 2 Capacity in ml: 24x5 Type of head: Angle No. of tubes: 24 Maximum speed: 3500 rpm Maximum RCF: 1250 W×D×M (MM) : 210×210×250 Supply: 221-240v, 50Hz, single phase	02 pcs	500.00	
3	**Binocular microscope**	**Binocular microscope** Optical system: UIS2 (UNIVERSAL INFINITY CORRECTED) CE certified Antifungal treated optical lens Illumination: built in transmitted Koeheler illuminator, 6v/30W halogen bulb 100-120V/220-240V~0.85/0.45A , 50/60 Hz Focussing: Stage height movement by roller guide (rock & pinion), stroke/rotation=36.8mm Full stroke range: 25mm Revolving nose piece: Fixed, quadruple nose piece with inward tilt Binocular observation: field no. 20, tube inclination:30 degree, interpupillary distance adjustment range: 48mm-75mm Stage: size-188mm x 134mm, movement range: 76mm (X direction) x 50mm (Ydirection) Specimen holder: double size holder Rubber grip: equipped as standard Condenser: type- Abbe condenser, NA: 1.25 with oil immersion, aperture in diaphragm: built in Dimensions & weight: 233mm (W) X 411mm (H) X 367.5 mm (D), 8KG	02 pcs	6000.00	
		DEPT OF ENT ESI PGIMSR, JOKA KOLKATA			
1	**Surgical Operating Microscope**	**Specification of Surgical Operating Microscope** Surgical operating microscope for micro ear surgery and micro laryngeal surgery with the following associated features; 1. Integrated HD monitor to display surgical steps to students. 2. Integrated HD video recording system with HD camera system.	01 set	50000.00	

		3. Integrated HD still photography enabling system with camera attachment facility. 4. Data storage, transmission and documentation facility with appropriate software. 5. Stereo co-observation tube for assistant surgeons and students. 6. Lens for ear and laryngeal surgery (400, 200) 7. Lens covers and microscope covers for sterility purposes 8. Microscope stand and wheels.			
2	**Rigid Oesophagoscope set Adult**	**<u>Specification for Rigid Oesophagoscope set Adult:</u>** 1. 0 degree telescope diameter 5.5mm, length 53 cm, autoclavable with incorporated fibre optic light transmission 2. Telescope guide for use with 50cm esophagoscope 3. fibre optic light carrier for use with 50cm esophagoscope 4.Rigid oval esophagoscope, outer diameter 12 X 16 mm, length 50 cm 5. Rigid oval esophagoscope, outer diameter 10X14 mm, length, 50 cm 6. Prismatic light deflector, autoclavable with fibre optic light cable connection 7. fibre optic light carrier for use with 30cm esophagoscope 8. Rigid oval esophagoscope, outer diameter 12.2X 16.2 mm, length 30 cm 9. Rigid oval esophagoscope, outer diameter 10.2 X14.2 mm, length 30 cm 10. Rigid oval esophagoscope, outer diameter 8.6X 12.1 mm, length 30 cm 11. Fibre optic light carrier for use with 20 cm hypopharyngoscope 12. Rigid Oval Hypopharyngoscope, outer diameter 10X14 mm. length 20 cm 13. handle for Esophagoscopes 14. Adjustable magnifier autoclavable(swivel action) 15. Cotton carrier(55cm) 16. Rigid suction tube with rubber tip, straight, working length 55cm 17.spring handle sponge holder, working length 55cm 18. Alligator forceps for hard foreign bodies, double action jaws, sheath diameter 2.5mm,working length 55cm 19. biopsy forceps and foreign bodies, working length 55cm 20. cupped forceps for biopsies, working length 55cm 21. Peanut removal forceps ,working length 55cm 22. Cotton applicator, working length 30cm	01 set	10000.00	

		23. Straight suction tube with rubber tip, working length 35cm 24. Spring handle sponge holder, working length 35cm 25. Alligator forceps, sheath diameter 2mm,working length 35cm 26. Peanut forceps, working length 35cm 27. Cupped forceps for biopsy ,working length 35cm 28. Universal forceps for biopsy and foreign bodies ,working length 35cm			
3	**Rigid oesophagoscopy set , Paediatric**	**<u>Specification for rigid oesophagoscopy set , Paediatric</u>** 1, Oesophagoscope tube, size 6,length 30 cm 2. Oesophagoscope tube, size 5, length 30 cm 3. Oesophagoscope tube, size 4, length 30 cm 4. Oesophagoscope tube, size 3.5, length 18.5 cm 5. Oesophagoscope tube, size 3, length 18.5 cm 6. Prismatic light deflector ,autoclavable with connection for fibreoptic light cable 7. Rubber telescope guide 8. Adjustable magnifier (swivel action) autoclavable 9. 0 degree telescope, diameter 2.9 mm, autoclavable, fibreoptic light transmission incorporated 10. Optical forceps,2x2 tip, with spring action handle for use with telescope (for coins and flat foreign body) to be used with 30 cm oesphagoscope 11. Optical forceps with spring action handle for use with telescope (for peanuts and soft foreign body) to be used with 30 cm oesphagoscope 12. Optical forceps with spring action handle for hard foreign bodies to be used with 30 cm oesphagoscope 13. Peanut removal forceps with double action jaws, sheath diameter 1.5mm,working length 35cm 14. Biopsy and foreign body forceps, double action jaws, sheath diameter 1,5mm, working length 35cm 15. Alligator forceps for hard foreign bodies, double action jaws, sheath diameter 1.5mm, working length 35cm 16. Cupped forceps for biopsy, double action jaws, sheath diameter 1.5mm, working length 35cm 17. Straight suction tube with rubber tip, working length 35cm 18. Straight cotton applicator working length 35cm - 3 such	01 set	10000.00	
4	**Rigid bronchoscopy set, adult**	**<u>Rigid bronchoscopy set, adult</u>** 1. 30 degree telescope, diameter 5.5mm, length 50cm, autoclavable, fibreoptic light transmission incorporated	01 set	10000.00	

		2. 90 degree telescope diameter 5.5mm, length 50cm, autoclavable, fibreoptic light transmission incorporated 3. Rigid bronchoscope, size 8.5, length 43cm 4. Rigid bronchoscope, size 7.5, length 43cm 5. Rigid bronchoscope, size 6.5, length 43cm 6. Deflecting device for bronchoscopes and telescopes 7. FLUVOG Adapter with sliding glass window plug, sealing cap, notched lense and keyhole opening, movable 8. Adapters to respirator - 2 such 9. Rubber telescope guides - 2 such 10. Glass window plug - 2 such 11. Instrument guides for suction catheter - 2 such 12. Injection canula for positive pressure assisted ventilation, LUER lock, outer diameter 3.5 mm for use with bronchoscopes 13. Optical forceps, alligator, large jaws for hard foreign bodies 14. Optical biopsy forceps, circular cup, 4.3mm 15. Flexible forceps for biopsy 16. Alligator forceps for hard foreign bodies, double action jaws, diameter 2.5mm, working length 50cm 17. Peanut removal forceps, double action jaws, sheath diameter 2.5mm, working length 50 cm 18. Cupped forceps for biopsy, double action jaws ,sheath diameter 2.5mm, working length 50 cm 19. Cotton carrier, working length 50cm - 6 such 20. Sponge holder with spring handle, working length 50cm 21. Cytology brush with ring handle, working length 55cm 22. Coagulation suction tube, insulated, working length 50 cm accompanied by unipolar high frequency cord with 5mm plug, length 300cm 23. Straight suction tube with rubber tip, working length 50cm - 2 such 24. Curved suction tube with rubber tip, working length 50 cm 25. Suction tubes 4mm diameter, length 50 cm - 2 such 26. Aspirator, can be connected to suction tubes or suction catheter 27. Spare glass for aspirator 28. HUZLY Aspirator and bronchial irrigator 29. Laryngeal syringe, 5ccm, LUER lock, with canula 30. Bronchial atomizer, with graduated container and rubber bulb, length 50cm 31. Laryngeal atomizer with bulb, length 50 cm 32. Suction catheter, 7 Fr with connector			

		33. Suction catheter, 5 Fr with connector			
5	**Rigid bronchoscopy set, Paediatric**	**<u>Rigid bronchoscopy set, Paediatric</u>** 1. Bronchoscope size 6, length 30cm 2. Bronchoscope size 4.5, length 30cm 3. Bronchoscope size 3.7, length 30cm 4. Bronchoscope size 3.5, length 26cm 5. Bronchoscope size 3, length 26cm 6. . FLUVOG Adapter with sliding glass window plug, sealing cap, notched lense and keyhole opening, movable 7. Adapters to respirator - 2 such 8. Rubber telescope guides - 2 such 9. Glass window plug - 2 such 10. Instrument guides for suction catheter, short, for children and infants - 2 such 11. Injection canula , only, LUER lock, outer diameter 3.5 mm for use with bronchoscopes - 2 such 12. Prismatic light deflector, autoclavable with connection for fibreoptic light cable 13. Cotton applicator, working length 35cm - 3 such 14. Sponge holder with spring handle, working length 35cm 15. Foreign body basket with ring handle, working length 35cm 16. Cytology brush with ring handle, working length 35cm 17. Straight suction tube with rubber tip, working length 35cm 18. Curved suction tube with rubber tip, working length 35cm 19. Suction tube, 3mm, working length 35cm, curved 20. Bronchial atomizer, graduated container and rubber bulb, working length 40 cm 21. Graduated containers - 2 such 22. Aspirator with spare glass and cut off hole, can be connected to suction tube or catheter	01 set	10000.00	
6	**AUDIOMETER**	**<u>AUDIOMETER REQUIREMENT</u>** The audiometer should have the following specifications: *It should be a Clinical PC-based audiometer. *The manufacturer should provide instructions and provision for calibrating the instrument. *The following tests should be able to be performed by the audiometer: • Pure tone audiometry, Speech audiometry (Including Speech reception threshold and speech discrimination score), SISI, ABLB, AUTO THRESHOLD , TONE DECAY *It should have the following provisions:	01 set	10000.00	

		• SMPS Switch Mode Power Supply capable of withstanding extreme voltage fluctuations (115 V to 270 V) • INPUT: Tone, Speech, Tape, Pulse Tone. • OUTPUT: Left, Right, Bone, L + R. F/F Left, F/F Right, F/F L+R. • HEADPHONES: TDH-39/TDH-49. • BONE: B-71 BONE CONDUCTOR. • Air : 120 dB Max, 125 Hz to 12 kHz., -20 dB Min. • Bone : 80 dB Max, 250 Hz to 6 kHz., -20dB Min. • Noise : Wide Band, Narrow Band, Speech Band. • Built-in Mike, Ext. Mike, Mike Sensitivity Control. • Interrupt Lock. • Printer Facility-Sequential Merged Graphs. • Memory Review. • Computer Interface. • Storage of the patient data in the hard disc for future reference. • Connectivity to an external USB Printer to print the reports.			
7	**IMPEDENCE AUDIOMETER**	**<u>IMPEDENCE AUDIOMETER</u>** • It should meet the international standards • Should be able to test the following 1. Tympanometry	01 set	10000.00	

		2. Acoustic reflex test • Should have facility for producing printed report • Should have facility for data storage			
8	**FLEXIBLE NASOPHARYNGOSCOPE**	**FLEXIBLE NASOPHARYNGOSCOPE** • Should be able to view nasopharynx, larynx, trachea and hypopharynx • Should be able to take biopsy with flexible forceps • Should have suction and irrigation facility • Should have own cold light source	01set	15000.00	
9	**TYMPANOMASTOID SET**	**SURGICAL INSTRUMENTS** **TYMPANOMASTOID SET** 1. SHEA aural speculum – set of 4, black finish – 3 sets 2. Tumarkin tapered slotted aural speculum – set of 4 – 3 set 3. Adsonforcep – plain – S.Steel – 6 such 4. Adsonforcep – 1x2 teeth – S.Steel – 6such 5. Hartmann aural forcep – 3 such 6. Lempert endaural speculum – right – 3 such 7. Mollison self retaining mastoid retractor 3 such 8. Plester self retaining retractor 2x2 prong – 3 such 9. Plester self retaining retractor 3x3 prong – 3such 10. Plester self retaining retractor – right solid blade – 3 such	01 set	2000.00	

		11. Plester self retaining retractor – left solid blade – 3such 12. Farabeuf periosteum elevator – straight – 3 such 13. Freer'selevator double ended – 3 such 14. Howarth elevator – 3such 15. Zollner suction tube with 4 microtips – 3 such 16. Verhoeven suction tubes – no. 12,14,16,18,20,22,24 – 3 sets 17. Verhoeven suction tube adaptor – 3 such 18. Micro aural crocodile serrated – fine straight – 3 such 19. Micro aural cup – straight – 3 such 20. Micro aural cup – upward – 3 such 21. Micro aural scissors – straight – 3 such 22. House dieter malleus nipper – up – 3such 23. House dieter malleus nipper – down – 3 such 24. Caw Thorne hook – micro pick 90 degree angled – 3 such 25. Caw Thorne hook – micro pick 45 degree angled – 3 such 26. Wullstein needle – very slight curved – 3 such 27. Wullstein needle – slight curved – 3 such 28. Wullstein needle – straight – 3such 29. Rosen curette curved straight shaft – 3uch 30. Sickle knife – 3 such			

		31. BealesRaspatory – 3 such 32. Circular cutting knife 60 degree – 3 such 33. Ball probe – 3such 34. Rosen elevator for lifting drum – 3such 35. Plester first incision knife – 3 such 36. Curved circular cutting knife – 3 such 37. House curette double ended – 3 such 38. House curette double ended slightly curved – 3 such 39. Myringotomy knife – 3such 40. Small curved scissor – 3 such 41. Mastoid micromotor drill (30000 rpm) 1 42. Straight hand piece for mastoid drill 1 43. Contra angle hand piece for mastoid drill 1 44. SS cutting burrs (8mm,6mm,4mm,2mm,1mm0.8mm) 1 each 45. Diamond polishing burrs (6mm, 4mm, 2mm 1mm) 1 each			
10	**STAPEDECTOMY SET**	**STAPEDECTOMY SET** Each instrument one number required • Round Knife 45° diameter 1 mm, length 16 cm • Flag knife	01 set	50000.00	

		• Micro elevator • Sickle Knife, double-edged, standard model, slightly curved, length 16 cm • Pick 90°, 16 cm, 0.6 mm • Pick 90°, 16 cm, 0.8 mm • Ear Forceps extra delicate, serrated, 0.4 x 3.5 mm, working length 8 cm • Ear Forceps extra delicate, pointed, serrated, 1 x 4.5 mm, working length 8 cm • Scissors delicate standard model, blade length 8 mm, working length 8 cm • Malleus Nipper, extra delicate, upbiting, width 0.8 mm, working length 8 cm • Ear Forceps extra delicate, oval cupped jaws, 0.6 mm, working length 8 cm • Ear Forceps extra delicate, oval cupped jaws, 0.9 mm, working length 8 cm • Perforator, 16 cm,diameter: 0.4 mm. • Perforator, 16 cm,diameter: 0.6 mm. • Perforator, length 16 cm, diameter 0.8 mm • Footplate burr • Measuring Rod, length 16 cm, Marker pins at 3 mm, 4 mm, 5 mm • Holding Forceps, for holding Stapes and Total Prostheses, length 13.5 cm • Crimping Forceps for Total Prosthesis, length 10.5 cm • Scissors, for Total Prostheses, length 11 cm • Micro Hook, 2.5 mm, 45°, length 16 cm			

		• Diamond Straight Shaft Burr, length 7 cm, Diameter 1.4 mm • Needle. 16.5 cm, light curve. • Seeker, ball end angled 45°, 15.5 cm, size 3. • Suction Cannula, angular, LUER- Lock, working length 6 cm, O.D. 0.7 mm- 2 in number • Suction Cannula, angular, LUER Lock, working length 6 cm, O.D.: 1.0 mm- 2 in number • Suction Cannula, angular, LUER- Lock, working length 6 cm, 1.3 mm- 2 in number • Suction Cannula, angular, LUER- Lock, working length 6 cm, O.D.: 1.5 mm- 2 in number • Suction Cannula, angular, LUER- Lock, working length 6 cm, O.D.: 2.0 mm- 2 in number • Adaptor, for suction cannulas- 2 in number • Curette, large, spoon sizes 2 x 3.2 mm and 1.6 x 2.6 mm, length 15 cm • Curette, small, spoon sizes 1 x 1.6 mm and 1.3 x 2 mm, length 15			
11	**ADENO-TONSILLECTOMY**	**<u>ADENO-TONSILLECTOMY</u>** 1.BoyleDevis mouth gag- 1 (with full set of tongue blades) 2.Draffin Bipod- 2such 3.Magauran plate-1such 4. Tonsil holding forcep-1such 5. Tonsillar knife with dissector - 1such 6.Mollison's blunt tonsillar dissector and anterior pillar retractor-1such 7.Serrated tonsillar dissector and anterior pillar retractor- 1such 8.Long straight tonsil hemostatic forceps- 1such 9. Naegus artery replacement forcep- 1such 10.Naegus ligature slipper and knot tier- 1such 11. Eve's tonsillar snare- 1such	01 set	200.00	

		12. Long dissecting scissor- straight- 1such 13.Yankauer's oral suction- 1such 14. St. clair thomson's adenoid curette with cage- 3 sizes- 1each 15. Long tooth forcep- 1such 16. Quinsy forcep- 1such			
12	**SEPTO-RHINOPLASTY**	**SEPTO-RHINOPLASTY** 1. Thudicum's nasal speculum- 3 sizes- 1 each 2. St. Clair thomson's long bladed nasal speculum- 3 sizes- 1 each 3. Killian's self retaining nasal speculum- 2 4. Freer'smucoperichondrium elevator-2 5. Luc's forceps- 2 sizes- 1 each 6. Killian's nasal gouge- 1such 7. Tilley's antral Harpoon-1such 8. Tilley's antral trocar and cannula-1such 9. Tilley's Forcep- 1 such 10. Turbinectomy scissors- 1 such 11. Walsham'sforcep- 1 such 12. Asch's forcep- 1 such 13. 2mm osteotome-1 such 14. 2mm osteotome with guard-1 such 15. 10mm osteotome-1 such 16. 10mm osteotome with gurad-1 such	01 set	400.00	

		17. Mallet-1 such 18. Cartilage scissor-1 such 19. Aufritch retractor-1 such 20. Killian's ala retractor-1 such 21. Push rasp-1 such 22. Pull rasp-1 such 23. Joseph saw-1 such			
13	**MICROLARYNGOSCOPY AND MICROLARYNGEAL SURGERY**	**<u>MICROLARYNGOSCOPY AND MICROLARYNGEAL SURGERY</u>** 1. Kleinsasser'smicrolaryngoscope- 1such 2. Anterior commisure laryngoscope- 1 such 3. Light cable for laryngoscope-2 4. Riecker's chest holder 5. Microlaryngeal cup forceps- straight, right turn, left turn, up turn- 1each 6. Microlaryngeal alligator forceps- 2 7. Microlaryngeal scissors- straight, right turn, left turn- 1 each 8. Microlaryngeal blunt dissector with handle- 1 such 9. Microlaryngeal knife with handle- 1such 10. Vocal cord retractor with handle-1 such 11. Microlaryngeal suction- 1 such	01 set	400.00	

		12. Microlaryngeal suction with diathermy- 1such			
14	**GENERAL INSTRUMENTS**	**GENERAL INSTRUMENTS** 1. AdsonTooth forceps- (5”)-4 such 2. AdsonNontooth forceps- (5”)-4 such 3. Needle holder- (6”/5”/4”)- 6 each 4. Curved needle holder-(4”)- 4 5. Mosquito Artery forceps- curved(4”)- 24 6. Medium artery forceps-curved(5”/4”)- 6 each 7. Large artery forceps- curved(7”)- 6 8. Right angle artery forceps- large/medium(7”)- 4 9. Kocher’s artery forceps(6”)- 4 10. Sinus forceps-2 11. Kocher’s gland holding forceps(6”)- 2 12. Babcock’s gland holding forceps(6”)- 6 13. Alle’s tissue holding forceps(5”)- 12 14. Tissue cutting scissors- straight/curved(5”)- 2 each 15. Medium dissecting scissors- curved(6”)-4 16. Small dissecting scissors- curved(4”)- 4 17. Langenberg’s retractor- 4	01 set	200.00	

		18. Metal suction cannula- 3 sizes(2.5mm/3mm/4mm)- 4 each 19. Humpy's knife- 1 20. Malleable sinus probe-2 21. Towel clip- 24 22. Kidney dish(6"/8")- 4 each 23. Sponge Holding Forceps (8")-6 24. Catspaw- 4 pair 25. Gallipot-6 26. Tilley's Forceps- 4 27. Hartman's forcep-4 28. Chettle forcep-6			
		DEPARTMENT OF ORTHOPAEDIC			
1	**High Definition Arthroscopy Set**	**<u>Specification of High Definition Arthroscopy Set:</u>** **True High Definition (HD 3 Chip) Camera System 1080p-1 No** •720p, 1080i, 1080p Selectable •Multiple digital outputs (HD & SD Outputs) •Light source communication •Electronic zoom (in p-modes only) •Autoclavable Camera Head •Shockflex prism mounting •Resolution 1920X1080p, •Light up card edge receptable	01 set	70000.00	

		•Progressive scanning, Aspect ratio 16:9 •2 Camera Head Buttons for 4 Remote Fuctions **300W Xenon Light Source- 1 No** •Automatically adjust to optimal light intensity •Auto Bulb saver function •Stand by Mode •Homogenized Light distribution •Light Guide Locking Mechanism •OLED Window **Fiber Optic Light Guide Cable 5mm, Autoclavable-1 No** **High Definition Monitor- 1 No** •24 " or More Fully High Definition Monitor •Fully compatible with HD and Digital peripherals •Sealed front panel in light-weight design with VESA mount •Wide-screen 16:9 aspect ratio •PIP functionality •Conntrast Ratio-1000:1 •Resolution- 1920x1200 **High Definition Arthroscope, 4mm, 30 deg, Autoclavable-1 No** **Arthroscope sheath- 1 No** •5.9mm, Dual Stopcock system, Autoclavable, including Obturator **Shaver Console -1 No** •Shaver Console 230 Volt •Capacity to recognize the Hand piece, display of speed •The console should have option for connecting Large Bone Drill & Saw			

		Handpiece. **Shaver Hand Piece-1 No** •500- 12,000rpm, •500- 2,500 cpm, Single and Multi-turn Oscillate **Chuck** for small drilling (for shoulder anchors etc) -1 No •Shaver Hand Piece should adapt the chuck **Cutters** •Full Radius resector, 4.2mm, 13 cm-6 Nos •Bendable Cutter-6 Nos •Bender for bendable cutter-1 No **Wireless Foot control-1 No** •3 pedal foot control **Hand Instruments** •Wide bite Straight punch-1 No •Alligator Grasper-1 No •Hook Probe-1 No •90 deg rotary puch,right •90 deg rotary punch,left **Arthroscopic Pump System-1 No** •Easy to setup and use. •Flow not less than 2 lt / min. •Pressure ranging 30 - 150 mmHg •Weight should not more than 7 lbs •System should be supplied with auclavable remote control			

		Inflow / out flow tubing set-10 Nos **Arthroscopy Trolley(Indian)-1 No** •The System should be CE/US FDA Approved.			
2	**C-ARM MACHINE (IMMAGE INTENSIFIER)**	**<u>SPECIFICATION OF C-ARM MACHINE (IMMAGE INTENSIFIER)</u>** (C-ARM FULLY MICROPROCESSOR BASED SYSTEM WITH FEATHER TOUCH PANAL) IMAGE INTENSIFIER: •6 & 9 with high imaging System with high performance capability CONTROL PANNEL & GENERATOR: •All operation on control panel k-board. •Microprocessor based control with feather touch panel. •Generator unisearch IMD unit. •Excellent fluoroscopy. •Radiography output 25mA. On requirement •Fluoroscopy: foot switch & on the control panel. •Kvp variation of 40 -110kvp. •3 step mode selection, normal (LIH), PULSE and LIVE control. •Digital kvp metering display. •Digital ma metering display. •Foot switch. X-RAY TUBE HEAD (User Friendly Design): •Duel focus having 0.6mmand 1.8mm focus. •Anode heat storage capacity 30kj.	01 set	18000.00	

		•Anode cooling rate250 w/hr. •Type of Generator – khz hf •X-Ray Tube - Fluro 0.6mm X 0.6mm •Focal Spot - 1.5mm X 1.5mm •Fluro / Radio KVP - 40-110kvp •Fluro mA - 0-4 mA •Fluro Timer - 5 Minute •MAS - Up to 200 •Power Requirement - 220V/50-60 hz & 3.5 kw •Image Intensifier - 9 Inch **C-ARM FEATURE** •Rotation 360Degree •Source to II Distance 90Cms •Arc orbital Movements 110Degree •Pann movements 0-25Degree •Horizontal Travel 22 cms •Vertical motorized movement 32cms •Detachable Cassette Holder (Option) 10” x 12”&8” x 10” **TV MONITORS** •15” / 17” Colour (Option) •625 Lines •50-60 hz •High resolution display capability monitor. **MEMORY OPTION** •26 frame memory •Computer compatible (Option) •100 frame memory (Option)			

3	**Orthopaedic Electric Drill System**	**Orthopaedic Electric Drill System:**	04 pcs (against condemnationof Battery operated drill)	10000.00	
		•Driving Unit includes Motor, Stand, foot Control, Flexible Shaft-1Pc, Tool Kit, Oil Bottle & special container •Cannulated Drill Hand piece max. speed 1200 RPM & with Fixed S.S.Chuck (0-1/4") •Reaming Handpiece with Max. Speed 400 R.P.M. Cannulated & AO type quick coupling. •Drill Chuck Adaptor with Jacob's Stainless Steel Chuck (USA) •Pistol Grip Sagital Saw (Set of five blades) •Flexible Reamers (2 pieces with reaming pieces 6mm – 13mm)			
4	**DIGITAL ELECTRONIC TOURNIQUET**	**SPECIFICATION OF DIGITAL ELECTRONIC TOURNIQUET:** • Cuff pressure range: 10 to 450mmHg. • Pressure regulation: +/- 10mmHG of set point. • Online Setting: Increase and decrease in pressure settings • Timer: Timer range from 9hours to 59minutes. • Internal least count: Timer 1minute/Internal 1/1000 second. • Alarm & Display Indication:- ➢ When set pressure is over ➢ When pressure goes 25mmHg above set pressure. ➢ When pressure goes 25mmHg below set pressure.	04 pcs	2500.00	

		➢ In battery mode, when battery voltage reaches 9V. • Memory: Pressure set in earlier session is stored and displayed, when machine is switched on again. • Pressure Table: Maintains set pressure under leak condition. • Backup: 3hours battery backup. (on full charge) • Switch over: Automatic switch over from offline to online (vise versa). • Power: 230V(AC)/50Hz ± 10% (Voltage fluctuations from 180-270). • Stabilizer: Inbuilt. • Cuffs: Different Sizes of five cuffs—washable & easy fitting (Paediatric, small, medium, big & large). • Digital Display: Digital Display of time elapsed, set time, actual and set pressure.			
5	**SMALL FRAGEMENT INSTRUMENT SET**	**SMALL FRAGEMENT INSTRUMENT SET** <u>Content List:--</u> i) Drill Bit Q.C.End 2.5mm Dia—115mm Length—2Pcs., ii) Drill Bit Q.C.End 3.2mm Dia—130mm Length—2Pcs., iii) Counter Sink—6mm Head—1Pc., iv) Quick Coupling Handle—T-Type—1Pc., v) Tap with T-Handle for 3.5mm Cortical Screw—2Pcs., vi) Tap with T-Handle for 4.0mm Cancellous Screw—2Pcs., vii) Drill & Tap Sleeve combined 2.5/3.5mm—1Pc., viii)Insert Drill Sleeve 2.5mm—1Pc., ix) Screw Driver Shaft Q.C.End ---2.5mm Tip—1Pc., x) Hexagonal Screw Driver 2.5mm tip—1Pc., xi) Small Depth Gauge—1Pc., Sharp Hook—1Pc.,	03 sets	1200.00	

		xii) Small Neutral & Loaded Drill Guide—1Pc., xiii)Spanner—11mm—1Pc., xiv) Small Plate Bender—pair—1Pair., xv) Plier Cum Wire Bender—1Pc., xvi) K-Wire Bender—1Pc., xvii) Reduction Forceps—Serartted---Ratchet Lock—140mm—1Pc., xviii) Reduction Forceps—Pointed---Ratchet Lock—140mm—1Pc., xix) Self Centering Bone Holding Forceps—190mm—1Pc., xx) Hohmann Retractor 8mm wide, short narrow point, 160mm Length. 2Pcs., xxi) Hohmann Retractor 15mm wide, 160mm Length—2Pcs.., xxii) Periosteal Elevator ---Straight—160mm length —8mm—1Pc., xxiii) Instrument Box with two trays length 300mm—1Pc.			
6	**LARGE FRAGEMENT INSTRUMENT SET**	**LARGE FRAGEMENT INSTRUMENT SET** <u>Content List:--</u> i) Drill Bit Q.C.End 3.2mm Dia—130mm Length—3 Pcs., ii) Drill Bit Q.C.End 4.5mm Dia—130mm Length—1Pc., iii) Counter Sink—8mm Head—1Pc., iv) Quick Coupling Handle—T-Type—1Pc., v) Tap with T-Handle for 4.5mm Cortical Screw—2Pcs., vi) Tap with T-Handle for 6.5mm Cancellous Screw—1Pc., vii) Insert Drill Sleeve 3.2mm—1Pc., viii)Drill & Tap Sleeve combined 3.2/4.5mm —1Pc., ix) Drill & Tap Sleeve combined 3.2/6.5mm—1Pc., x) Screw Driver Shaft Q.C.End ---3.5mm Tip—1Pc., xi) Large Hexagonal Screw Driver 3.5mm tip—1Pc., xii) Large Depth Gauge—1Pc., xiii)Sharp Hook—1Pc.,Spanner—11mm—1Pc.,	03 sets	1500.00	

		xiv) Large Neutral & Loaded Drill Guide—1Pc., xv) Pointed Drill Guide with 4.5mm Tap Sleeve & 3.2mm Drill Sleeve—1Pc., xvi) Large Plate Bender—pair—1Pair., **xvii)** Instrument Box with two trays length 300mm—1Pc.			
7	**BASIC INSTRUMENT SET**	BASIC INSTRUMENT SET <u>Content List:--</u> i) Universal Open Hand Drill –2Pcs., ii) Wire Tightner Cum Wire Twister—1Pc., iii) Guide Wire Introducer with Four Pegs—1 Pc., iv) Plier Cum Wire Bender Cum Wire Cutter –9" –1Pc., v) Wire Cutter Double Action Length 250mmm-1Pc., vi) Self Centering Bone Holding Forceps 150mm—1 Pair, vii) Self Centering Bone Holding Forceps 240mm—1 Pair, viii) Self Centering Bone Holding Forceps 280mm—1 Pair, ix) Reduction Forceps –Serrated—Speed Lock—170mm—2 Pair, x) Reduction Forceps –Serrated—Speed Lock—200mm—2 Pair, xi) Reduction Forceps –Serrated—Speed Lock—240mm—2 Pair, xii) Pattela Bone Holding Forceps –Four Prongs—1 Pc., xiii) Lane Bone Holding Forcep with Ratchet 200mm—2 Pc., xiv) Lane Bone Holding Forcep with Ratchet 170mm—2 Pc., xv) Lane Bone Holding Forcep with Ratchet 200mm—2 Pc., xvi) Bone Cutting Forceps (Straight) Double Action—190mm –1 Pc., xvii) Bone Cutting Forceps (Straight) Double Action—270mm –1 Pc., xviii) Bone Cutting Forceps (Curved) Double Action—190mm –2 Pcs., xix) Bone Cutting Forceps (Curved) Double Action—225mm –1 Pc.,	03 sets	1500.00	

		xx) Chisel with Fibre Handles 5,10,20,30mm --- 1 Pc. Each. xxi) Osteotome with Fibre Handle Straight 5.10.14.16.20mm—1 Pc. Each. xxii) Osteotome with Fibre Handle Curved 5.10.14.16.20mm—1 Pc. Each xxiii) Bone Currette Double ended 4mmx6mm –2Pcs. xxiv) Bone Currette Double ended 6mmx9mm –2Pcs. xxv) Langenback Retractor---Small—1Pc. xxvi) Langenback Retractor---Large—1Pc. xxvii) Bristow Retractor---1Pc. xxviii) Self Retaining Retractor—Small—2 pcs. xxix) Self Retaining Retractor—Medium—2 pcs. xxx) Self Retaining Retractor—Large—1 pc. xxxi) Periosteal Elevator Curved—6,10,14,20--- 1 Pc. Each xxxii) Bone Hammer 200,350,500gms--- 1 pc. Each			
8	**Large External Fixator**	***Large External Fixator*** • Rod of dia 11 mm in – Carbon fibre – lengths 100 – 400 mm – carbon fibre rod, curved for pelvis • Clamp, clip-on self-holding, MR-safe • Aperture for rods 11 mm • Schanz screw 5mm with lengths 125 – 200 mm • All instruments must be enclosed in a Vario with lid with an insert for Schanz Screws • The instruments should have Combination Wrench of diameter 11.0mm • The instruments should have Socket Wrench of diameter 11.0mm,cannulated • The instruments should have Combination Clamp, clip-on, self-holding, MR-safe • The instruments should have Clamp, clip-on, self-holding, MR-safe • The instruments should have Universal Chuck with T-Handle • The instruments should have Adapter for Seldrill™ Schanz Screw with diameter 5.0 mm • The instruments should have Compressor, open • The instruments should have Short Trocar with diameter 3.5 mm • The instruments should have Long Trocar with diameter 3.5 mm • The instruments should have Handle for Drill Sleeve • The instruments should have Short Drill Sleeve 5.0/3.5	03 sets	1200.00	

		• The instruments should have Long Drill Sleeve 5.0/3.5 • The instruments should have Short Threaded Drill Sleeve 6.0/5.0 • The instruments should have Long Threaded Drill Sleeve 6.0/5.0 • The instruments should have Connecting Rod 凑 5.0 mm, length 150 mm, Stainless Steel			

9	**Medium External Fixator**	**<u>Medium External Fixator</u>**
		
		• Rod of dia 8 mm in
		  o Carbon fibre
		  o lengths 120 – 320 mm
		• Clamp, clip-on self-holding, MR-safe
		• Aperture for rods 8 mm
		• Schanz screw 4mm & 5 mm with lengths 80 – 175 mm
		• All instruments must be enclosed in a Vario with lid with an insert for Schanz Screws
		• The instruments should have Combination Wrench with diameter 8.0 mm
		• The instruments should have Wrench, hexagonal with diameter 3.5 mm with T-Handle
		• The instruments should have Combination Clamp, medium, clip-on, self-holding, MR-safe
		• The instruments should have Clamp, medium, clip-on, self-holding, MR-safe
		• The instruments should have Drill Sleeve 4.0/2.5
		• The instruments should have Adapter for Seldrill™ Schanz Screw diameter 4.0 mm
		• The instruments should have Adapter for Seldrill™ Schanz Screw diameter 5.0 mm
		• The instruments should have Universal Chuck, small, with T-Handle
		• The instruments should have Short Trocar with diameter 3.5 mm
		• The instruments should have Long Trocar with diameter 3.5 mm
		• The instruments should have Trocar with diameter 2.5 mm
		• The instruments should have Handle for Drill Sleeve
		• The instruments should have Short Drill Sleeve 5.0/3.5
		• The instruments should have Long Drill Sleeve 5.0/3.5
		• The instruments should have Short Threaded Drill Sleeve 6.0/5.0
		• The instruments should have Threaded Drill Sleeve 4.0
		• The instruments should have Long Threaded Drill Sleeve 6.0/5.0
			03 sets	1200.00	

10	**Portable X-Ray Machine**	**Portable X-Ray Machine** Specification;--- MICROPROCESSOR BASED DIAGNOSTIC 50 mA X-RAY MACHINE with following features • X-RAY TUBE UNIT –Oil filled stationary anode X-ray tube unit with focal spot 2.2 mm x 2.2 mm • RADIOGRAPHIC OUTPUT –	01 pc	**5000.00**	

		mA Max mAs KV **50 250 45-55** **40 200 60-75** **30 150 80-85** • KV SELECTOR – Select KV from 45 to 85 KV in 5 steps each • SUPPLY VOLTAGE COMPENSATOR – Adjust supply voltage from 180 v to 250 v automatically • LIGHT BEAM DIAPHRAGM • Electronic DISPLAY – Digital display of mA , KVp & mAs • OVERLOAD PROTECTOR IN BUILT • mAs SELECTOR up to 250 mAs Portable Stand (can be dismantle Into smaller Parts)			
		PHYSIOTHERAPY DEPARTMENT			
1	**Combination therapy Unit**	**Specification** **Combination therapy Unit** >Dual channel combi unit for electro and ultrasonic therapy unit. >0.8/1 & 2.4/3 MHz Multi frequency ultrasonic therapy from same head & depth of penetration can be adjustable by mixing two frequency. >Transducer should water resistant head with visual contact indicator &1 to 5 cm2 in diameter. >Mounted with trolley with wheel for easy transfer. >Large colour touch screen monitor(8 inch to 12 inch preferable) for better control. >Patient encyclopedia with anatomical view(normal,muscular, skeletal). > Must have I/T curve and S/D curve plotting facility on screen. >On line help for various common disease. >Disease wise programmed & manual programmed (neuro-muscular diagnostic & treatment for paralysis, lymph edema,analgesia,muscle rehabilitation). >Current form - I.FT, Diadynamic , Russian, galvanic etc. >Should have vacuum application continuous & pulsed with adjustment of vacuum strength. >Must have free memory to save patient data. >Must have international standard with CE certified.	01pc	20000.00	
2	**Interferential therapy unit**	**Interferential therapy unit** > Large colour touch screen display with electrode placement help for better effect.	01pc	10000.00	

		>Spectrum programmed :square/rectangular,Triangle,Trapezoid. >Treatment mode- Two electrode bipolar static. Four electrode static interferential Four electrode dynamic vector. >Micro computer controlled base frequency & sweep frequency > On line up gradation facility with SD card. >Must have real time current sensing system with auto output off during poor contact for patient safety. >Should have preprogrammed indication menu, diagnostic programs. >Must have international standard with CE certified. >Should have IFT,tens,trabert, ultrariez,& high voltage current in electro therapy preferable.			
3	**Computerized Cervical & Lumber Traction Unit**	**Computerized Cervical & Lumber Traction Unit** >with bed and standard accessories-1)Traction straps,2)Head halter for cervical traction,3)spreader bar, 4)Pelvic strap,5)Chin strap. >Must have four section friction free Traction table with hight adjustable by hydraulic or electrically. >Table fitted with wheel for easy transfer. >Should have max output force up to 90 kg./198 lb,computerized automatic compensation. >Should have traction speed adjustable(slow,fast,normal). >treatment mode :continuous/intermittent, harmonized intermittent/progressive. >Safety system: multiple protection alarm. >Must have international standard with CE marking. >Should have treatment time 1-99 minutes. >Should have digital display. >Should have international safety standards.	01pc	5000.00	
4	**Electrical NV & Muscle stimulator**	**Electrical NV & Muscle stimulator** >Type of current:Galvanic,interrupted galvanic, Faradic, surged faradic, >IG Pulse width- At least 10,30,100,300 micro sec. 1,3,10,30,100,300 Milli sec. >Output voltage-0-30 volt & output current-100 Milli amp. >Timer: Digital timer. >Buzzer: preferable. Output indication by digital meter. Surged Faradic:In rest /contraction period: at least 2-6 sec.	01pc	2000.00	
5	**T.E.N.S Therapy unit**	**T.E.N.S Therapy unit** >with 4 channel. >Micro computer based model >Digital display	01pc	2000.00	

		>Separate display for each channel intensity &Timer. >Pulse for TENS International standard:1-200 Hz/sec >Pulse width International standard:50-200micro sec. >Output current 1 - 60 ma for each channel. >Should have preprogrammed indication menu >Must have real time current sensing system with auto output off during poor contact for patient safety. >Mounted with trolley with wheel for easy transfer. >Should have international safety standard with CE certified.			
6	**Shortwave diathermy atleast 400 watt(micro processor controlled)**	**<u>Shortwave diathermy atleast 400 watt(micro processor controlled)</u>** 1)High performance solid state generator with digital display. 2)High performance multi jointed arm 3)Continuous & pulsed mode(allows thermal & non thermal treatment) 4)Patient safety switch. 5)Must have CE certified. 6)Safety standard class 1 7)Captive & inductive applicator. 8)Frequency 27.12 Mhz 9)Must have disc electrode with adjustable arm. 10)Pad electrodes for larger ,smaller & irregular surface area(small sinus electrode preferable) 11)Strap & other standard accessory preferable(knee jt,low back, upper back.)	01 pc	8000.00	
		Gymnasium Equipments			
7	**Suspension frame**	**Suspension frame** with bed and all accessories	01pc	1000.00	
8	**Multi gym or**	**Multi gym or multi exerciser therapy unit**	01pc	2000.00	

	multi exerciser therapy unit				
9	**Quadriceps exercise table**	**Quadriceps exercise table** with quadriceps hamstring torsion arm. Foam padded table & torque unit with two lever arm, Adjustable resistance.	01pc	1000.00	
10	**Parallel bar adult**	**Parallel bar adult** (height adjustable)	01pc	1000.00	
11	**Static cycle**	**Static cycle** >Dual shock absorber. >Adjustable tension. >Digital meter showing- Distance, speed,& calorie.	01pc	200.00	
12	**Complex exerciser unit**	**Complex exerciser unit** should have suitable for shoulder elbow chest abdomen and lower limb exercise should be gradeable and adjustable for resistance foam padded table top on tubular frame the unit should be dimension 185-195 X 70-80 cm wide and the height should be 80 -85 cm complete unit consist of one table pan assembly and following attachement - ankle, hip, wrist,knee,abdominal and back exerciser it should include strap, harness,and over head pulley systems different iron weight plates starting from 0.25 kg and 1 kg total upto 30 kg pelvic rest 1 quadriceps rest 1 supination pronation wheel 1 wooden cabinet for storage	01pc	2000.00	
		Physical Fitness Equipments			
13	**Treadmill**	**Treadmill** - >Motorized at least 125 kg capacity, >AC motor : capacity >_2.0 H.P (peak>_4.0 H.P) >speed 1-18 kph, >Incline 0-16%, >convenient hand controlled speed &incline. >Quick speed, quick incline. >Easy incline, 5 program upland running. >Diverse speed & incliner program. >Self stop.	01pc	2000.00	
		OCCUPATIONAL THERAPY			

14	**Fluidotherapy**	Fluidotherapy it should be used for double extrimity simaltaneously operated in pulse or continious mode treatment time adustable adustable air speed machine should mounted with wheel or trolley safety standard class 1 digital display should have dry heat media (cellulose particles) with the machine as accessories	01pc	1000.00	
		For hand exercise & rehabilitation			
15	Finger Goniometer	Finger Goniometer	01pc	500.00	
16	Goniometer	Goniometer	01pc	500.00	
17	Peg board	Peg board	01pc	500.00	
18	Wrist circumductor	Wrist circumductor	01pc	500.00	
19	Grip exerciser	Grip exerciser	01pc	500.00	
20	Finger exerciser Table	Finger exerciser Table	01pc	500.00	
21	Finger dexterity board	Finger dexterity board	01pc	500.00	
22	Hand Gym kit board	Hand Gym kit board	01pc	500.00	

		General exercise items		500.00	
23	Over head pulley	Over head pulley	01pc	500.00	
24	Inclined sanding board	Inclined sanding board	01pc	500.00	
25	Horizontal sanding board	Horizontal sanding board	01pc	500.00	
26	Shoulder wheel	Shoulder wheel	01pc	500.00	
27	Balance board	Balance board	01pc	500.00	
28	Foot placement ladder	Foot placement ladder	01pc	500.00	
29	Bolster set	Bolster set	01pc	500.00	
30	Wedge board set	Wedge board set	01pc	500.00	
31	Quadriceps table	Quadriceps table	01pc	500.00	
32	Stand in frame	Stand in frame	01pc	500.00	
33	Trampoline	Trampoline	01pc	500.00	
34	ADL training kit	ADL training kit	01pc	500.00	
35	Low rise exercise platform	Low rise exercise platform	01pc	500.00	
36	Cp prone stander	Cp prone stander	01pc	500.00	
37	Cp chair	Cp chair	01pc	500.00	
38	Wheel chair for transfer training	Wheel chair for transfer training	01pc	500.00	

39	Multiple gym exerciser	Multiple gym exerciser	01pc	500.00	
DEPARTMENT OF MICROBIOLOGY ESI-PGIMSR, JOKA					
1	**Real time Polymerase Chain Reaction (PCR) System with Qualitative and Quantitative detection**	**SPECIFICATIONS** **Real time Polymerase Chain Reaction (PCR) System with Qualitative and Quantitative detection** a. The Real time PCR System must have International and/or National quality and safety certification, e.g. CE and/or UL/cUL and/or ISI certified and IVD certified. b. The Real time PCR System should be an **open platform system**, and must have provisions for using third party kits and reagents for the molecular diagnosis of infectious diseases. c. The Real time PCR System must at least have the following In vitro Diagnostics approved kits available **from the same manufacturer which are pre-validated on the quoted model** : i. Human Immunodeficiency virus ii. Hepatitis B virus iii. Hepatitis C virus iv. Cytomegalo virus v. Ebstein Barr virus vi. Herpes Simplex virus vii. Mycobacterium tuberculosis d. There should be provision for using the system as simple Thermocycler for qualitative molecular detection of infectious diseases. e. The Automated Real time PCR System should be accompanied with a desktop or laptop computer and printer system (required for the functioning and data storage and printing of reports) with original operating system and free software support	01pc	36000.00	

for the lifetime of the machine.

f. The Automated Real time PCR System should have already been installed in at least two (02) reputed Academic and / or Medical institutions and / or reputed accredited diagnostic laboratories in the Eastern region of India.

g. Technical Parameters:

Features	Specification
Thermal Cycler Mechanism	Air based heating and cooling mechanism for maximum uniformity with even heating and cooling.
Sample Layout	Should be flexible for the tube input volumes having capability of running **96 or more** samples.
Additional Intra-assay Centrifugation	Any additionalstep of centrifugation of tubes while performing the assay should **NOT** be there.
Uniformity	Should have uniform temperature distribution. Should maintain iso-optical detection in all wells for maximum uniformity. Temperature uniformity should be in the range of ±0.02^{o}C.
Chemistries	Should come with standard chemistries for gene expression, quantification, mutation scanning, genotyping and methylation studies.
Temp Range	Up to 99℃
Light Source	Different LED's with 5 different wavelengths with minimum cross-talks (one LED with one wavelength). The assay should not be based on onesingle wavelength of light.Should be able to detect all wells equally with same optical path length.
Light Source Lifespan	Warranty on light source for **minimum of 10 years.**
Excitation Plexing	Should be minimum 5 plex. Should have capability of further increasing the multiplexing beyond 5-Plex in singe tube.
Dynamic Range	Should be of 10 orders of magnitude
Reaction Volume	10 µl-100 µl

		Passive Reference Required? — Should NOT require any passive reference dye **Tube Format** — Should be able to mark the caps of the tubes. Should have flexible tube format**. NOT CAPILLARIES**. **Software** — Unlimited user Software license with maximum feature should come **absolutely free of cost for the life of the machine**. **In vitro diagnostics Approval** — Real Time In vitro Diagnostics approved validated kits on quoted model as mentioned above should be available with instrument manufacturer. Instrument should also be In vitro diagnostics certified for use in diagnostic laboratory.			
2	**Automated (Multicapillary) Capillary Electrophoresis System**	**Automated (Multicapillary) Capillary Electrophoresis System:** a. The automated multicapillary electrophoresis System must have International and/or National quality and safety certification, e.g. CE and/or UL/cUL and/or IVD certified and/or ISI certified. b. It should be a fully automated capillary electrophoresis system for fragments of DNA and RNA, which is based on high throughput nucleic acid analysis of at least 60 samples in one run within 30 minutes. c. System should comewithReady-to-rungelcartridgesallowing samplesto be analyzed replacing laborintensiveagarosegel electrophoresiseliminating the need for handling carcinogenic compounds likeethidium bromide. d. Post PCR samples should be directly analyzed for fragment analysis using the system without prior purification of samples. e. The instrument should be usable for genotyping, restriction digestion, qualitative monoplex or multiplex PCR, PCR-based cDNA library screening and other routine molecular biology applications. f. System should work with an input volume of equal or less than 1 µl offering a high sensitivity ofupto 1000pg.	01pc	36000.00	

		g. Instrument should come with user-friendly analysis software including an accompanying Laptop with original operating system and free software support and upgradation for the lifetime of the instrument. h. The Real time monitoring of the sample analysis should be visible on the computer screen. i. Operating temperature : 20-28°C j. Excitation Source : light-emitting diode (LED) k. Detection Source : Photomultiplier Tube l. The instrument must eliminate the need for a separate Gel Doc system after Electrophoresis. m. The instrument should be able to provide Standardized and accurate analysis with a resolution down to 5 base pairs.			
3	**Biosafety Cabinet: Class II Type A2 with accessories**	**Biosafety Cabinet: Class II Type A2 with accessories:** a. The Biosafety cabinets must have International and/or National quality and safety certification, e.g. CE and/orUL/cUL-listed and/or ISI certified. b. Class II Type A2 biological safety cabinet with factory installed programmable UV light for surface disinfection. c. Standard 4 ft model: Exterior dimension preferably not to exceed, 52 X 64 X 33 inch (W X H X D) ± 10% d. Double Blower system; Brushless DC motor technology for saving energy consumption. e. SmartFlow Indicator, with Digital airflow verification technology (The balance of downflow and inflow should control the cleanliness and containment – preventing room contamination from reaching the BSC work surface and keeping any biological hazards in the BSC work area from escaping out the front opening.)	02pc	10000.00	

		f. Ergonomic design with 10° Slopped front, preferably with Armrest. g. Supply / exhaust air filter specification: H14 HEPA or better. The HEPA or ULPA filters shall capture contamination in the room air and in air drawn from the BSC work area to create clean downflow and the exhaust air. h. Service Valves (through side walled access ports) i. Receptacles in the Rear Wall: load capacity of up to 5A j. Smart Clean front window Design easily lowered for cleaning of inner surface & protects operator. k. The provider must provide at least two (2) ergonomically designed compatible, height adjustable hydraulic or screw turn low back support revolving stools with each Biosafety cabinets for user operations.			
4	**Micropipettes (0.5-10µL set, 10-100µL set, 100-1000µL set) with disposable Tips and autoclavable boxes.**	**Micropipettes (0.5-10µL set, 10-100µL set, 100-1000µL set) with disposable Tips and autoclavable boxes.** a. Each set shall contain 3 adjustable volume Fully autoclavablemicro pipettes of the following ranges: i. 0.5 - 10µl ii. 10 - 100µl iii. 100 - 1000µl b. Six (06) reusable T.I.P.S boxes with 96 Pipette tips in each boxes; Three pairs of boxes are to be compatible to the above three different sets of Micro pipettes. c. The boxes and the tips should also be fully autoclavable. d. The micropipettes should have Spring Loaded Tip Cone for improved ergonomics which should be tight fit to the tip. e. Adjustment opening to adjust the pipettes to a specific liquid and volume.	02 sets	2000.00	

		f. Control Button with very low operating force, positioned for perfect ergonomics. g. Ejector withvery low operating force, positioned for perfect ergonomics. h. Volume Display: 4 Digits with magnification. i. There should be quick connection clip toremove lower part easily.			
5	**Vortex Mixer**	**Vortex Mixer (with accessories):** a. Digital vortex Mixer for Molecular Biology Applications with International and/or National quality and safety certification, e.g. CE and/orUL/cUL-listed and/or ISI certified. b. Should be ideal for applications demanding repeatable results. c. Variable speed control at least from 500 to 3000 rpm. A higher range is allowable. d. Touch keypad controls and LED display for speed and time. Not merely Analog controls, for ensuring reproducibility in molecular diagnostics. e. Microprocessor control to maintain set speed for consistent mixing. f. Timer displays elapsed time; auto shutoff at end of cycle. g. Should be allowable to be used in 220 to 240 V and 50/60 Hz electrical supply. h. Should have robust durable electrical connectivity conforming to standard Indian sockets. i. The following accessories have to be quoted along with the vortex mixer, which can be steadily fitted and connected with the mixer: I. 24 to48 numbers vertical Microtube Holder for mixing 0.25 to 2.0mL microcentrifuge tubes / PCR tubes or high-density foam inserts to accommodate 24 to 60 microtubes. II. Vertical tube holder for mixing at least four (04) 50 ml tubes together.	01pc	**1000.00**	

		III. Vertical tube holder for mixing at least four (04) 5 ml (09 to 13 mm diameter) tubes together.			
6	**Molecular grade DNAse RNAse free Water Purification System**	**Molecular grade DNAse RNAse free Water Purification System** a. The entire water purification system should be equipped with three part equipments, quoted together by the same bidder, including: i. A Pretreatment Water filtration reverse osmosis system ii. A Pretreatment Iron, hardness and particleremoval system iii. A Molecular grade Water purification system proper. b. The Pretreatment Water filtration reverse osmosis system (i) and the Pretreatment Iron, hardness and particle removal system (ii) must have National and/or International quality and safety certification, e.g. ISI and/or CE and/or UL/cUL certified. c. The Molecular grade Water purification Systemproper (iii) must have International and/or National quality and safety certification, e.g. CE and/or UL/cUL and/or ISI certified. d. The Pretreatment Water filtration reverse osmosis system (i) and the Pretreatment Iron, hardness and particle removal system(ii) should be able to be connected in series connection, directly from the pipeline ground-water feed and should be able to deliver output water quality compliant to the acceptable limit of the feed water of the Molecular grade Water purification system proper(iii) as mentioned below in tight fitted series connection. e. The Pretreatment Water filtration reverse osmosis system (i) and the Pretreatment Iron, hardness and particle removal system(ii) should be able to deliver at least 15litres of water per hour to the Molecular grade Water purification system proper(iii).	01pc	**30000.00**	

		f. The Pretreatment Water filtration reverse osmosis system (i) and the Pretreatment Iron, hardness and particle removal system (ii) should at least be equipped with the following technology: i. * 2 Stage pretreatment system ii. * 5 micron and 1 micron wrapped type depth filter iii. * 3 Pressure gauges iv. * Less than 50 Db noise levels v. * Automatic low/high pressure cut off vi. * DC pump with 0-2 pressure at 120L /hr vii. * Inlet screen filter to DC pump viii. * Optional filters : 0.5 micron ix. * Optional filters : Activated carbon g. The Molecular grade Water purification system proper (iii) should be able to deliver the required quality of pure and ultrapure water from its feed water acceptance level of: 1) 2000micro Siemens conductivity 2) Fouling Index (SDI) < 12 3) Total Chlorine < 3 ppm and 4) TOC <2000 ppb h. The Molecular grade Water purification system proper (iii) should beable to deliver reagent Grade Type 2 water (pure quality) and Reagent grade Type 1 standard water (ultrapure quality) as defined by standard international quality control organizations like ISO:3696 standards and / or Clinical and Laboratory Standards			

Institute-Clinical Laboratory Reagent Water standards and / or ASTM standards.

i. The Molecular grade Water purification system proper (iii) should have two different points of delivery. It should be able to deliver through one point of delivery, reagent Grade Type 2 water (pure quality) bacteria and pyrogen free water, which may be used for basic laboratory needs, such as buffer and reagent preparation, microbiology media preparation, histology and rinsing of glassware of the following grade:

Type 2 Pure grade Water outlet	
Parameter	**Value**
Resistivity, Mega Ω @ 25 °C	10 – 15
Programmable water flow rate / minutes	01
TOC, ppb (µg/l)	< 30
Bacteria, cfu/ml	< 10, reducible to < 0.1 *
Particulates > 0.22 µm, Particulates/ml	< 1 *
Silica rejection	99.9%
Pyrogens (endotoxins), EU/ml	< 0.001 **
RNases, ng/ml	< 0.01 **
DNases, pg/µl	< 4 **
(*) With special filter for microbiological grade water (**) With special filter for molecular grade water	

		j. The Type 2 water (pure quality) production system / chamber of the Molecular grade Water purification system proper (iii) should be enabled at least with the following technologies: 1) Pretreatment cartridge 2) Reverse Osmosis with a high flux polyamide membranewith 94- 99% ion rejection backed by Pump with temperature feedback mechanism so that the flow rate should be 3 ltr/hr at room temperature . 3) Electro Deionization with auto regeneration by electric current, eliminating the need for chemical regeneration or replacement of DI resin cartridges with carbon beads at cathode of the EDI module to prevent scaling inside of the module 4) Activated Carbon cartridge 5) UV lamp with 254 nm Wave lengthbefore entering the tank 6) Recovery loop with capillary tube and diaphragm valve to minimize water wastage 7) Carbon beads at cathode of the EDI module to prevent scaling of the module 8) Permeate divert valve which will divert low quality water to the drain 9) Coaxial resistivity cell with a flow through design and a cell constant of 0.01cm-1 10) Display both compensated and non-compensated temperature accurate within ±0.1°C. 11) The reservoir tankshould be blow moulded, cylindrical PE reservoir with a conical bottom and opaque walls with a minimum of 30 litres capacity. 12) Sensor rod float switch, programmed to have high and low level cut-off			

based on water level in the tank.

13) The reservoir tank should possess a tank vent filter made of soda lime, activated carbon and 0.22 micron hydrophobic membrane to trap contaminants present in atmospheric air.

14) The Point of Delivery units should be of adjustable height and rotating arm-adjustable to any glassware.

15) There should be multicolour monitor displaying resistivity, TOC, level of water in reservoir, volume dispensed etc.

k. The Molecular grade Water purification system proper (iii) should also be able to deliver through a different point of delivery, Type 1 water (ultrapure) DNA, RNA, DNAse, RNAse free water for molecular biological applications, suitable for genomics applications (quality at least equivalent to DEPC-treated water) and cell culture of the following grade:

Type 1 Ultrapure Molecular grade Water outlet	
Parameter	**Value**
Resistivity, Mega Ω @ 25 °C	Around 18.2 (> 18)
Programmable water flow rate / minutes	~0.05 to 2
TOC, ppb (µg/l)	< 5
Bacteria, cfu/ml	< 0.1 *
Particulates > 0.22 µm, Particulates/ml	< 1 *
Pyrogens (endotoxins), EU/ml	< 0.001 **
RNases, ng/ml	< 0.01 **

DNases, pg/µl	< 4 **
(*) With special filter for microbiological grade water (**) With special filter for molecular grade water	

l. The Type 1 water (pure quality) production system / chamber of the Molecular grade Water purification system proper (iii) should be enabled at least with the following technologies:

1) Water source feed should be a closed connection from the Type 2 water reservoir tank eliminating any possibilities of contamination.

2) Re-filtration through two stage mixed bed ion exchange and activated carbon cartridge to remove ionic and organic contaminants to trace levels.

3) Low pressure mercury vapour lamp made of quartz with 185/254 nm dual wavelength UV lamp.

4) Should contain high-precision resistivity meters with following features-

a. Coaxial electrodes to warrant cell constant stability.

b. Low cell constant (0.01 cm-1) for optimum measurement accuracy of low ionic contamination

c. Temperature measurement with a 0.1 °C resolution for proper report of temperature compensated resistivity

5) Should contain a built in TOC monitorwith a Quartz celland UV lamp which should accurately measure online TOC from 1- 999 ppb.

6) To prevent deterioration of water quality during periods of non-use, the ultrapure water system will be able to recirculate water to maintain high water quality.

		7) Special filter packs for ultrafiltration and DNAse RNAse removal at the point of delivery or dispensing unit. 8) Controllable & user login password protected dispensing unit for Type 1 ultrapure water with ultrafiltration cartridge at the collection end with Log Reduction Value between 5.6 and 7.65 over challenge range of 220 and 22000 Eu / mL. m. To avoid maintenance errors and to improve traceability, the internal primary consumable water purification cartridges should have a built-in RFID tag. n. To comply with Standard requirements, the resistivity meter shall be able to display the non-temperature-compensated resistivity.			
7	**Automatic Electronic Laboratory Balance**	**Automatic Electronic Laboratory Balance** a. The Electronic Laboratory balance should have International and/or National quality and safety certification, e.g. CE and/or UL/cUL-listed and/or ISI certified. b. The maximum weighing capacity should be 500 grams with a tare range of 0 to 500 gm. A higher range is allowable. c. The minimum readability should be 0.1 mg differences. d. The balance should be fitted with durable electrical connectivity compatible to Indian electrical standard sockets and operable in 220 to 240 V and 50/60 Hz electrical supply. e. The balance plate should be covered with High draft shield fibre / glass covers with mounted front and rear fibre / glass panels, including sliding doors. f. The balance should have digital electronic display and preferably soft touch controls for Power, Tare and calibration options.	01pc	**400.00**	
8	**Carbon**	**Carbon dioxide (CO_2) Incubator:**	01pc	400.00	

	dioxide (CO_2) Incubator	Technical specifications 1. CO_2 Incubator with work chamber volume approx. 150 to 190 liters / 5.3 to 6.5 cu. ft (± 10%). 2. Air jacketed heating system with temperature control by microprocessor. 3. Temperature range from ambient +3 ^{o} C to + 55 ^{o} C. 4. Temp. Deviation with respect to time is $\pm$ 0.1K. 5. Continuous air Contamination prevention by in chamber Class 100 HEPA Air Filtration. 6. Event based Decontamination with in-built moist heat High temperature cycle, w ease operability, preferably single switch operation of sterilization cycle. The built automatic decontamination facility to remove bacteria, fungi, spores, mycoplasma without removing sensor, fan or any other fitting. The system should employ automa decontamination routine at moist heat of 90^{o} C or equivalent. 7. CO_2 control by Microprocessor based & by heat resistant Thermal Conductivity detector to withstand heat of decontamination. 8. CO_2 range 0 to 20% or better and CO_2 accuracy $\pm$ 0.1% by volume. 9. System should have Interactive Control with Touch screen for rapid access of important information for each critical parameter in the Incubator. 10. Humidity range should be 95% rH or higher. Recovery time for humidity loss duri door opening for 30 seconds upto 96% rH of initial value should not be more than minutes. 11. At least 3 nos. stainless steel perforated shelves should be supplied. 12. It should be supplied with access port to allow any cable, plug or tubing to easily inserted into or out of the chamber. 13. Interior chamber should be made of stainless steel with electropolish finishing of inn surface with rounded corners on all sides for easy cleaning. The shelves and f impeller also should be made of stainless steel and should not have nuts or bo			

		for shelf supports to reduce the scope of growth of contamination. No plastic pa should be inside to avoid VOC. 14. Built-in audible and visual water level alarm should be available when the wa reservoir (water tray less system to avoid contamination) needs to be refilled ensure a constant high level of humidity and to prevent cultures from drying o 15. Independent electronic over temperature protection with separate sensor should available for sample protection. 16. The system should have large digital display for both temp. & CO2 simultaneously. 17. System should have at least two doors, one main door and one glass doors. 18. Suitable for 230V, single phase 50Hz operation. 19. Suitable servo voltage stabilizer with high voltage low voltage cut off circu auto reset with delay timer and spike eliminator etc. 20. Double stage CO_2 pressure regulator with stainless steel diaphragm. 21. 18Kg CO_2 Cylinder filled with CO_2 gas 99.5% or better purity required for operati of CO_2 Incubator, along with cost of refill should also be quoted.			
9	**Hot air oven**	**<u>Hot air oven</u>** <u>Technical specifications</u> 1. Should be CE certified internationally quality control approved instrument. 2. Corrosion-resistant galvanized steel chambers. 3. Digital display and timer facility 4. Upper temperature cut off (automatic) 5. Microprocessor temperature control. 6. At least 2 tilt proof wire-mesh shelves 7. Chambers and heating elements should made of corrosion resistant steel. 8. Chambers should be easy to clean. 9. Volume minimum 75 litres 10. Operating temperatures from 50° to 250°C.	02 pcs	2500.00	

		11. Easy to use, microprocessor-controlled touch button operation.			
10	**Automatic Evacuation-replacement system for the culture of anaerobes, capnophiles, and microaerophile**	**<u>Automatic Evacuation-replacement system for the culture of anaerobes, capnophiles, and microaerophile:</u>** 1. Automatic evacuation-replacement system with at least One to Three (1-3) gas inlet connections: CO_2, H_2, and O_2 and One to Four (1-4) jar outlet connections. 2. The System should be internationally quality control certified, e.g. CE / ISO / ISI certified. 3. The System should have pre-programmed functions with easy to use, preferably single touch key operations for preparing Anaerobic, Microaerophilic and Capnophilic culture conditions. 4. Following associated transparent Polymethylmethacrylaat (PMMA) jars with Gas tight fit by means of a snap-shut adaptor on the lid of the jar and stainless steel petri dish holders of the following dimensions are required to be supplied along with: a. **Two (02) equivalent jars:** Diameter and height: Ø =123mm, h=240mm (±10%) Volume: 2.75 L (±10%) Contents: 1 stack of 12 Petri dishes with Ø 9-10cm (±10%) b. **Two (02) numbers of Petridish holders:** Petri dish holder for 12 Petri dishes with Ø 9/10cm made of stainless steel c. **Two (02) equivalent jars:** Diameter and height: Ø =175mm, h=240mm (±10%) Volume: 5.65 L (±10%) Contents: 1 stack of 12 Petri dishes with Ø 14.5cm (±10%) d. **Two (02) numbers of Petridish holders:** Petri dish holder for 10 Petri dishes with Ø 14.5cm made of stainless steel	01pc	4000.00	

		e. **One (01) number micro well plate holder:** Holder for micro-well plates of 9 x 13 cm, made of stainless steel f. **One (01) equivalent jars:** Diameter and height: Ø =230mm, h=240mm (±10%) Volume: 9.66 L (±10%) Contents: 3 stack of 12 Petri dishes with Ø 10cm (±10%) g. **One (01) number of Petridish holder:** Petri dish holder for 3 x 12 Petri dishes with Ø 9/10cm, made of stainless steel, to be fitted in the height of 240 mm jar. 5. **Palladium coated catalyst pouches ideal for the big jars:** a. SIX (06) Sets of catalysts, ideal for the big size jars are to be provided along with, which can be easily re-used by reactivation in Hot air oven. 6. **Reducing valve:** To reduce the pressure in the gas cylinder to the system working pressure, a reducing valve has to be provided with the gas cylinder(s). This must be a 2-step reducing valve, preferably calibrated and supplied by the same manufacturer, which has manufactured the Automated evacuation-replacement system. The working pressure should be adjustable to 1.8 Bar or 26 psi. 7. Option of user programming function (free user programming of oxygen level, gas mixture and evacuation level) should be there. 8. Option for Preprogrammed recipe for oxygen level, gas mixture and evacuation level should be there. 9. The bidder should also quote for 18Kg CO_2, H_2, and O_2 Cylinders filled with CO_2, H_2, and O_2 gases 99.5% or better purity required for operation, along with cost of refill should also be quoted.			
		DEPARTMENT OF DENTAL			
1.	**Chair Unit**	**Specifications of dental Equipments /Instruments of newly Developed upcoming Dental Surgery**	01 each	10000.00	

		1. **<u>Chair Unit</u>** : Electrically operated programmable chair, both hand and foot control operation, over hanging delivery unit, spittoon with auto flush, High and low intensity operating light, motorized suction (with auto drain) X-ray viewer, three way syringe, zero backache doctor's stool. **a) <u>Light cure unit</u>** : Light emitting diode (LED) **b) <u>Air rotar with Controlled box :</u>** along with **(i) <u>Air compressor</u>:** Minimum 1.5 HP, Oil free **(ii) <u>Air rotor Hand piece</u>**: 2 to 3 Lakhs RPM			
2	**Dental Electro Surgery Unit with multiple tips**	**Dental Electro Surgery Unit with multiple tips**	01 pc	1000.00	
3	**Automatic dental X-ray film developer –IOPA (Intra oral Peri apical radiograph) automatic processor**	**Automatic dental X-ray film developer –IOPA (Intra oral Peri apical radiograph) automatic processor**	01 pc	1000.00	
4	**Lead apron for use along with dental X-ray unit**	**Lead apron for use along with dental X-ray unit**	01 pc	**100.00**	

5	**Electric High Speed Micro motor**	**Electric High Speed Micro motor** of about 35000 RPM with reverse forward switch, foot control, with Both straight and contra angle Hand Piece.	01 pc	**5000.00**	
6	**Ultrasonic Scalar**	**Ultrasonic Scalar** : with four tips	02 pcs	**100.00**	
		DEPARTMENT OF BLOOD BANK			
1	***Automated Immunohematology detection system***	***Specification*** ***Automated Immunohematology detection system by Gel Card Technology.*** 1. Semi-automated immunohematology analyzer incorporated with centrifugation, reading and interpretation abilities for the tests performs by the column agglutination technology for transfusion related cross matching on anti human globulin and enzyme phase (to detect both IgG & IgM antibodies), blood grouping, partial Rh-D typing, antibody screening &identification in a single step. 2. The following range of investigations must be provided in the system. i. ABO Blood grouping with partial D screening. ii. Weak anti D test with ICT method. iii. Antibody screening and identification. iv. Single antigen test cards and antisera for Rh-C/c, E/e, $C_{w,}$ Kell, F_ya, F_yb, Jk_a, Jk_b, $Lewis_a$ $Lewis_b$, $Lutheran_a$, $Lutheran_b$, MNS, etc. v. Special gel cards for antihuman globulin test positive IgG, IgM, IgA, C3d, C3c etc. vi. Provision for acid elution method. vii. Special blood grouping cards for donor and recipient for DVI variant. viii. Syphilis antibody detection. Detail procedure for all compatible methodologies mention as above must be provided. 3. Automated card reading and report generation with bar code security.	01 pc	**20000.00**	

		4. Expression of results in grades of agglutination. 5. Capacity for 20 – 24 gel cards with 'V' bottom tubes in single run. 6. Peltier heating of incubator with programmable controls for 15 minutes and digital display of temperature. 7. Centrifugation force with 80 – 84G. 8. Clear transparent top for centrifuge and incubator with rust and corrosion resistant body. 9. The system must be devoid of any wash phase. 10. Incorporated capabilities for validation storage and reproduction of results. 11. Parallel computer connection with bidirectional portability and appropriate software to be provided along with the equipment. 12. Compatible printer for printing of different data and customized report to be provided along with the equipment. 13. A quality control system must be incorporated in the equipment for all the lab. 14. i. Provision for 2 and 3 red cell panel for antibody screening, 11 cell panel for antibody identification and pooled 'O' cell with known phenotype for donor screening as per NACO Guidelines. ii. Provision for NaCl/Enzyme and cold agglutinins cards, modified bromelin solution, papain, cell stab, cell thaw and cell freeze reagent. 15. CE/ISI compliance of the system.			
2	***BLOOD BANK REFRIGERATOR***	***BLOOD BANK REFRIGERATOR*** ***Nomenclature:*** Frost Free See-Through Door Blood Bank Refrigerator approx. 300 Litre capacity. ***Description:*** **1.**Uniform temperature maintains within temperature range of 4°C ± 2°C with ± 1°C variation. **2**. The system should have provision to prevent moisture condensation in humid weather.	02 pcs	**10000.00**	

		3. The cabinet constructed of minimum 10 gauge steel, CFC free urethane refrigerant insulation, seal self-closing single glass door, key- lock, mounted on durable castor wheels, provision of automatic evaporation of condensate **4.** Internal CFL lighting with control mounted switch as standard. **5**. Built-in temperature sensor, recorder and control unit. **6**. There should be visual display of line, Power, Compressor, Heater, System OK, Battery Indicatior, Chart Change and alarm for audio-Visual display of Tempearture, Door open, Powder failure, sensor faliure. **7**. Battery back-up for two hours for temperature recorder in case of power failure. **8**. In-built calibrated digital temperature sensor. 9. Sliding trays (stainless steel), removable type. 10.CE Certification. ***N.B.*** This specification is not meant for Laboratory grade commercial or modified commercial refrigerator . **Essential accessories must be supplied with the main consignment :** 1. Power cord Indian type. 2. Seven day electronic chart recorder with battery back-up. 3. UPS of appropriate capacity and CVT (if not in-built provided)			
		DEPARTMENT OF PATHOLOGY			
1	**Fully Automated Urine Analyzer**	**Fully Automated Urine Analyzer** 1. Random access system for physical, chemical and sediment analysis on urine specimens. 2. Multiparameter Chemistry analysis of at least 10 parameters including: (a) Specific gravity (b) pH (c) Albumin (d) Glucose	01 pc	40000.00	

		(e) Ketone Bodies (f) Bilirubin (g) Urobilinogen (h) Blood/Hemoglobin (i) Micro albumin (j) Nitrite 3. Analysis of standard urinary sediments consisting of different cells, casts and crystals. 4. Throughput-60/hour including sediment analysis in random access mode. 5. Microprocessor based photometric analysis of chemical parameters and flat flow cell technology with high speed and 800-1000 frame imaging for sediment analysis. 6. Interconnected parallel pc with appropriate soft ware for – • Retrival of analysis data • Display of analysis data • Image display of formed elements • Storage of data of results and others atleast 10,000 in number 7. Bar coded facility for reagent and sample identification 8. Laser colored printing of results and data 9. Power back up with UPS for at least 2 hours 10. Accessories a. Sample rack to hold 50 samples-05			

		b. Reagents for start up- 1000 analysis c. International certification for medical equipments			
2	**Bone decalcifier automated, electrolytic decalfication system**	Bone decalcifier automated, electrolytic decalfication system, holding capacity for 30 cassettes and at least 700ml decalcifying solution, digitally controlled.	01 pc	2000.00	
3	**LBC**	**Specifications for LBC** 1. Automated system for processing of Gynaecological and non- gynaecological cytology samples for liquid based cytology along with automated stainer. 2. Should have ability to make single slides which is uniform and reproducible. 3. Should have a controlled membrane transfer technology to make a thin smear with uniform distribution of cells. 4. System should allow residual material to be used for ancillary testing such as HPV, CT/NG, Immunocytochemistry, Special Stains, cell blocks etc. 5. Should have an automated slide stainer with an ability to run at least 30 slides in half an hour. 6. UPS with two hour power backup. 7. CE certificate Accessories: 1. Microscopic slides- 2 boxes of 100 slides 2. Filter- 2 box to process 200 samples 3. Solution -2 box to process 200 samples 4. Preservative solution -2 box to process 200 samples 5. Staining kit for staining at least 200 smears **6.** All the standard accessories to be provided with the equipment.	01 pc	30000.00	
4	**Patient and data managemen**	**<u>Patient and data management system for laboratory services</u>** 1. Fast processing system with high end security having several different modules for patient and data management of the laboratories.	01 pc	40000.00	

	t system	2. Should have the ability to generate unique identification number of the patient starting from lab registration, sample collection, testing and report delivery with generation of bar code id, and stickers. 3. An integrated token system for the patients while waiting for sample collection. 4. Computer with bar code reader in registration, sample collection, different labs (clinical pathology, Cytopathology, hematology, histopathology, different sections of biochemistry and microbiology) 5. Easy to operate 6. Ability to store data of at least 5000 patients per day. 7. Data to be accessible on mobile, laptop, tablets etc and the ability to deliver SMS to target people(patients as well as doctors). 8. Result modification before final report delivery. 9. Can be integrated with other automated lab equipments. 10. New features can be upgraded time to time as per requirements **11.** Accessories for the system to be supplied along with the software.			
5	**Automated Cover Slipper**	**Automated Cover Slipper** 1. Fully automated unit with a through put of 400 slides/hr. at least 2. Should be compatible with different sizes and thickness of cover slip as written below. (a) Size – 40mm, 50mm, 55mm, 60mm. (b) Thickness – 0.13 – 0.17mm. 3. Should be compatible with different solvent like xylene, d-limonene and	01 pc	**40000.00**	

		aliphatic hydrocarban –based substitute and mounting medium like DPX etc. 4. Should be able to handle both histology and cytology sample simultaneously. 5. Should have an in-built filter to remove any vapors or fumes. 6. Easy to operate with different program setting and a touch screen panel. 7. Should be able to accept slides from different automated slide stains. 8. UPS for 1hours back up. 9. International CE certification for medical equipment. Accessories – 1. Cover slips of different sizes & thickness – 500 each. 2. Dust cover. 3. Standard accessories with the main equipment.			
6	**Human morbid tissue materials**	**Specification for human morbid tissue materials**			
	Cardio-Vascular	Mitral stenosis Atheroma aorta Lt. ventricular hypertrophy Fibrinous pericarditis Dilated Cardiomyopathy Infective endocarditis	2 each	**500.00**	

	Respiratory	Lobar pneumonia Bronchiectasis Emphysema Pulmonary Tuberculosis fibrocaseous & miliary Bronchogenic carcinoma Silicosis Bysinosis	2 each	**500.00**	
	Gastro-Intestinal	Peptic ulcer Typhoid ulcer of S.I.	2 each	**100.00**	
	Renal	Granular contracted kidney Large white kidney Hydronephrosis Renal cell carcinoma Renal stone	2 each	**200.00**	
	Vascular	Syphilitic Aortits	2 each	**50.00**	
	Bone	Osteomyelitis-sequestrum TB spine Osteogenic sarcoma Giant cell tumor	2 each	**200.00**	
	Female Genital	Fibroid uterus Carcinoma cervix	2 each	**100.00**	
	Hepato-Biliary	Micro-nodular cirrhosis Fatty liver Metastatic liver HCC	2 each	**200.00**	
	Female Breast	Carcinoma breast	2 each	**50.00**	
	Male Genital	Carcinoma Penis Seminoma of testis Benign hyperplasia of Prostate	2 each	**100.00**	
	Lymph Node	TB Lymph Node Hodgkins LN	2 each	**50.00**	

DEPARTMENT. OF RADIOLOGY ESI-PGIMSR, JOKA					
1	**MULTISLICE CT SCANNER**	**TECHNICAL SPECIFICATION FOR MULTISLICE CT SCANNER** Spiral CT Scanner system for high resolution whole body scanning. The instrument must be capable of acquiring minimum 128 slices per 360 degree rotation. **TECHNICAL SPECIFICATION** **1) SCAN TIME:** 1. The scan time for one gantry rotation of complete 360 degree should be less than equal to 0.40 secs. 2. Rotation time of Cardiac Applications should be less than equal to 0.35 secs. **2) GANTRY:** 1. Aperture of 70 cm or more. 2. Tilt from console must be present. 3. Bidirectional inter-phone must be present. 4. Should have FOV of at least 50 cm or more. 5. Auto positioning LASER light with 1 mm positioning accuracy. **3) GENERATOR:** 1. 70 KW or more. 2. Continuous X-Ray exposure. 3. High frequency X-Ray Generator. **4) X-RAY TUBE:** 1. X-Ray tube voltage should be 80-135 KV or more. 2. X-Ray tube current should be 20-600 mA or more (preferable).	01 set	100000.00	

		3. Anode heat storage capacity should be 7.0 MHV or more. 4. Anode heat dissipation/cooling rate 1000 kHU/min.or more. **5) X-RAY DETECTOR:** 1. Solid state /Ceramic detector type. 2. 128 slices per rotation. 3. 700 or more number of physical detectors per row. 4. 35 mm or higher coverage per rotation in Z-axis. 5. Detector element size minimum 65 mm or less. **6) PATIENT TABLE:** 1. Remote control from Console. 2. Load Capacity of 200 kg or more. 3. Horizontal movement range 170 cm or more. 4. Motor driven couch top movement. 5. Scannable range 170 cm or more. 6. Couch top material Carbon fibre. **7) IMAGE QUALITY:** 1. Spatial resolution at least 21 lb/cm at 0% MTF. 2. Low contrast resolution at least 4.0 mm at 0.3%. **8) ACQUISITION & PROCESSING WORKSTATION:** 1. High performance computer for date acquisition, image reconstruction and routine			

		post processing.(2 in number 18 inches or more, high resolution LED monitor with image area matrix dimention of 1024 X 1280). 2. Fast advance processor in the industry available. 3. RAM: 6 GB or more. 4. HDD: Should store at least 8, 00,000 images in compressed mode. 5. DVD/CD writer: CD (700 MB & DVD(4.7 GB) 6. DICOM Viewer- automatically included in every CD/DVD for Viewer' PC **9) STANDARD SOFTWARE INCLUDING CONSOLE:** 1. MPR 2. 3D SSD 3. VRT for advance 3D application. 4. MIP 5. CT Angio 6. Virtual endoscopy software for visualization of vessels and air filled structures. 7. Dose management to control and reduce dose. 8. Automated arrhythmia conversion software. 9. Vessel measurement. 10. Small volume quantification. 11. Injector synchronization system. 12. Brain and body perfusion analysis.			

		13. ECG synchronization volume acquisition. 14. 3D cardiac scanning and reconstruction. 15. Axial/spiral perfusion for 80 mm or more. 16. Paediatric and infant based protocol shall be available based on infant weight. **10) SPECIAL PROCESSING SOFTWARE FOR WORK STATION:** 1. Cerebral perfusion study with stroke protocol. 2. MIP, Volume MIP, MIP state viewer. 3. 3D SSD rendering software. 4. Curved MPR reconstruction. 5. CT Angio with quantitative vessel analysis. 6. Virtual analysis. 7. Brain & body perfusion software. 8. Autobone removal software. 9. Lung nodule assessment software. 10. Liver segmentation software. 11. Complete Cardiac package with ECG gated studies. 12. Calcium scoring and cardiac function analysis. 13. Cardiac post processing. 14. Quantification of stenosis and plaque analysis. 15. Automatic vessel measurement.			

16. Single click Coronary tree extraction.
17. One touch volume rendering of the whole heart.
18. Calcuim and Coronary Angio reporting.
19. ECG gated dose modulation.

11) REAL TIME CT FUROSCOPY:

12) ACCESSORIES:

1. Dual head cardiac injector with 500 sets of syringes and connecting tubes.
2. Dry laser camera with
    1. Resolution: 16 bits /50 odpi or more with minimum three ports.
    2. Support multiple film sizes one of which must be 14" X 17".
    3. Through put of 120 films or more per hour.
    4. DICOM 3.0 compatible.
3. Lazer colour printer
    1. DICOM 3.0 complaint.
    2. Resolution at least 1200 X 1200 dpi.
    3. Throughput minimum 30pages /min. (media types A-4, A-5, B-5 plain and bond paper)
    4. Two sets of patient positioning accessories.
    5. ECG monitor on the gantry.
    6. 3 numbers of Patient trollies.
    7. True on line UPS with 60 minutes back up of appropriate KVA. The CT scanner

		in addition should be supported by a separate suitable high capacity stabilizer for the complete system as a standby protection in the event of failure of the UPS. 8. The Biphasic defibrillator with adult and paediatric probes. 9. Pulse oxymeter with adult and paediatric probes. 10. 10. Crash cart for medicine. 11. Light weight 12 number of lead aprons. 12. 2 number of view box. **13) CIVIL WORK:** 1. Turnkey work to be quantified for room size of The Vendor may visit the installation site before bidding to access the turnkey cost. 2. Lead glass of appropriate size between the machine room and control room for radiation protection. 3. 2 Ton Air-conditioner, 3 in number for CT room and One 2 Ton Air-conditioner for control room and two 2 Ton Air-conditioner for Radiologist reporting from and storage room. 4. Dehumidification-Appropriate dehumidifier for CT scanner room and control room. **14) QUALITY STANDARD:** Product quality certificate of appropriate authority must be submitted with the offer. The system offered should carry a NOC from AERB for installation on India.			
2	**500 MA X-RAY MACHINE**	**Technical specification of 500 MA X-RAY MACHINE** A 500 mA. Multipulse High frequency X-Ray machine for Radiography.	01 set(against condemnation)	40000.00	

		RATINGS: 50KW High frequency X-Ray generator for radiography . **Radiography Parameters:** 35 to 125KVor150 KV Multi steps as many as possible Small Focus – 100 mA & 200 mA Large focus – 300mA, 400mA and 500mA mAs – 1.25 to 200 mAs in multiple steps as many as possible. **Control:** Floor or Wall mountable control panel, ON and OFF switches Automatic safety system to block unwanted exposure factors beyond tube ratings. Digital display of active KVP, mA and mAs. Hand switch with flexible long retractable cord. Compact durable soft touch keypad. Table or Vertical Bucky selection and table top radiography switch. Ready and X-Ray on switch with indications. **Tube Unit:** Rotating anode tube unit with dual focus x-ray tube insert. Anode Speed:- Minimum 2800 rpm. Focal spot:- Dual focus, Small focus:- 0.6mm to 1 mm Large focus:- 1.2mm to 2.00 mm Protection:- Totally thermal Protection. HV/HT cable compatible with X-ray tube. Motorized tube movement with all round tube angulation preferable **Collimater:** Manual light beam diaphragm. **Tube Stand: Floor to ceiling stand and with counter balanced tube head 360 degree rotation (rotatable+/- 180 degree), tube rotation with column axis all round movement (Longitudinal, Transversal, UP & Down), mounted on floor ceiling rails for convenient movement. Safety lock in case of wire shortage.** **Ceiling suspension tube preferable.** **Table:** Motorized table with 6 way movement (table height adjustment) . Motorized bucky with grid ratio 8:1 (80 to 100 lines per inch). Stainless steel cassette tray with electromagnetic brakes. Stain free laminated table top. **Operating Voltage:** 400-440 volt AC 50 HZ. Three Phase. **Chest Stand:** Motorized or manual Vertical Bucky Stand with counter balanced. Head to Toe Vertical travel (455mm to 1900mm). Electromagnetic locking method (lock released when switch is pressed). Also separate Cassette holder attachment with the Vertical Bucky Stand for direct exposures. **Accessories:-** Compression Band, Hand Grip & foot step.			

		Unit should have the AERB approval.			
		DEPARTMENT OF PAEDIATRIC			
1	**NEONATAL RESUSCITATION UNIT WITH WARMER**	**<u>NEONATAL RESUSCITATION UNIT WITH WARMER:-</u>** **NEONATAL RESUSCITATION UNIT (MICRO-COMPUTER CONTROLLED) WITH WARMER** **SPECFICATION:-** a) Controlled Resuscitation system. Oxygen Administration facility, Low Pressure suction and warming with infrared Radiant Heat Source. b) Inline Manometer, c) Oxygen Administration Facility: i) Oxygen Flow control facility with flow meter (o to 15 lit/min).ii) Oxygen Pressure Adjustment valve, iii) Humidifier Bottle, iv) Facility to keep Oxygen cylinder, v) Connecting hose for wall Outlet. vi) Silicon Autocluvable Resuscitation Bag with 00 and 01 size of Masks. d) Slow Suction: This is a specially designed electrically operated slow suction. Apart from others, it is non-motorized slow suction. The suction pressure can be adjusted as per requirement.(0-110 mm Hg.) e) Servo Control System to maintain an optimum skin temperature. f) Precise cradle Temperature control. g) Manual Warming Facility. h) Stop Watch- additional Facility provided to note down timings during monitoring various vital signs of baby, e.g. temp. Heat rate, Respiration Rate. i)Reminder Timer.	02 pcs (against condemnation)	**4000.00**	

		j) Apgar Timer with Birth Time Recorder. k) a) Power Source: 230 +/- 10% volts. 50 Hz. B) Control Method: Micro-Computer Controlled intelligent proportionate Power Control. c) Heater Capacity: 600 Watts. d) Light Source: 60 watts bulb to examine babies. e) Power Consumption: 850 watts. m) **Temperature Controller Specifications:-** I. Skin Mode Control: From Body Temperature to 38 C. II. Air Mode Control: From Room Temperature to 39 C. III. Resolution: 0.1 C. IV. Accuracy: +/- 0.2 C. n) Alarms: (Audio visual with auto Reset facility) Alarm Condition Message on Display Skin + I.C. HI Skin - I.C. LO Air +1.5 C HI Air - 3 C LO Skin >38C OVER Air<39C OVER Skin/Air Sensor Failure Fail Heating system Failure HEAT OFF o) Safety Cutoff; When Skin Temperature exceeds 38C. When Cradle Temperature exceeds 39C. p) Power Failure Alarm: Audio –visual. q) Distance between Heater source and Baby: 88 (34.5)			

		r)Dimensions: Height X Width x Depth-cm (inch) 203 (80) X 63.5(25) X 100 (39.5) s) Baby Tray: Length 72 (28.3) x width 45 (17.7) t) Should have 1 drawer system attached with the equipment for storage facility. w) It should be in compliance with ISO 9001:2000. Should have Q.A. International Certification Limited.			
2	**DOUBLE SURFACE LED PHOTOTHERAPY**	**DOUBLE SURFACE LED PHOTOTHERAPY** **Specification:-** Wide Effective Area. Unit should have blue cool led light source with wave length of 450-460 nm. Long Life->20,000 Hrs. No UV / IR Radiation. No Heat Generation. Low Power consumption. Negligible Maintenance Cost. Light Weight & Compact. Height and Angle Adjustment facility. Mounted on Castor Wheels for Easy Mobility. Can be used in Conjunction with any make radiant Warmer. Digital time Totalizer. Irradiance> 60 u/W/cm2/nm.at 45 cm from the light source. Wavelength 450-460 nm (peak 455 nm free of UV and IR radiation. Height adjustable from 1198+/-20 mm to 1680+/-20 mm **UNDER SURFACE SOURCE UNIT:** Unit should have blue cool led light source with wave length of 450-460 nm. Free of UV/IR radiation. Light intensity is variable from 7-60 um/nm/cm2.at a distance of 45 cm. Infant care Trolley in Stainless Steel Specification:- • **Mechanical Specification**:-	02 pcs(against condemnation)	**2000.00**	

		Convenient working level with 6 mm thick imported acrylic collapsible side support, accessible from all sides. Acrylic Tray with Foam mattress. IV Pole & Facility to take X-ray. Head up /down facility. Stand with separate Infant care trolley. Mounted on 4" castor wheels for easy mobility. Infant care Trolley with transparent acrylic bed and bubbles mattress for baby. Fabrication in mild steel, baby bed area in Stainless steel.			
3	**CPAP MACHINE**	**<u>SPECIFCATION OF CPAP MACHINE</u>** SYSTEM: Valve based continuous flow CPAP and IPPR. Bubbler based bubble CPAP. DISPLAYS: Digital and Analog Display of CPAP pressure in CPAP Mode. Continuous Digital display of Delivered pressure in IPPR Mode. ALARMS; CPAP High and low Alarms (Audio Visual) PRESSURE GAUGE: -20 to 100 cm H_2O GAS MIXNG: Air-Oxygen Mixer using calibrated Rotameters. AIR SOURCE: Inbuilt Air Compressor (Optional) (20 to 90 PSI). O_2 SOURCE: Inlet for Oxygen Gas (20 to 90 PSI). POWER: 230V A.C. 50 Hz. Asccessories: Warmidifier, Breathing Circuits(Disposable). CPAP Interface, Nasal Prongs, Dummy Test Lung.	02 pcs(against condemnation)	**2000.00**	
DEPT OF EYE ESI PGIMSR, JOKA KOLKATA					
1	**VISUAL FIELD RECORDING INSTRUMENT**	**TECHNICAL SPECIFICATION FOR VISUAL FIELD RECORDING INSTRUMENT (PERIMETER SYSTEM)** **Specification:** Stimulus intensity 0.03 -10,000 Asb Stimulus Duration 0.1 – 9.98 secs Stimulus Wavelength Broadband visible light Maximum Bowl illumination 31.5 ASB	01 pc	**10000.00**	

		GPA Software **Testing features:** **Threshold Testing Library** **Central Field Testing Patterns:** 30-2, 24-2, 10-2 Macula **Peripheral Field Test Patterns:** 60-4, Nasal Step **Screening Test Library** **Central Field Patterns:** C-40, C-64, C-76, C-80, C-Armaly **Peripheral Field Test Patterns:** P-60, DD-81, FF-120, FF-135, FF-246, FF-Armaly, Nasal Step **Specialty Test Library** Esterman monocular Esterman binocular Superior 36 Superior 64 **Stimulous / background color** White on white User defined test storage **User features:** **Fixation Monitoring** Heiji Krakau blind spot monitor Video eye monitor Trial lens Holder Remote video eye monitoring capability **Operator interface** Help Menu Touch screen on CRT Motorized chin rest **Printer** Printex Thermal printer, table mounted **Patient data input** Name, Birth Date, ID, Trial Lens, VA, Pupil size IOP, C/D ratio, Diagnosis Code, Procedure Code, Comments			

Department of Biochemistry

1	**SEMI AUTOMATED BIOCHEMISTRY ANALYZER**	**SPECIFICATION FOR SEMI AUTOMATED BIOCHEMISTRY ANALYZER.** **I. *Item :*** **Semi Automated Biochemistry Analyzer with UPS 0.5 KVA.** II. ***Analysis Option:*** a. Absorbance b. 1 point end linear & non linear. c. 2 point end linear & non linear. d. Rate linear & non linear. e. Immunoturbidimetry. **OPTICAL SYSTEM** III. ***Light Sources:*** Pre aligned Quartz halogen lamp. IV. ***Wave Length:*** Automatically Selectable narrow band interference quartz filter within wavelength of 340 -700 nm -- fixed seven or eight filters and two optional filters as per users choice. V. ***Measurement Time :*** Selectable. **CUVETTE SYSTEM** ***Cuvette :*** a. Flow cell Cuvette. b. External rectangular Cuvette. ***VII. Cuvette Temperature:*** Peltier control & programmable at **25˚C, 30˚C** and **37˚C.** ***VIII. Aspiration System:*** Motor driven pump. ***IX. Aspiration Volume:*** Programmable. ***X. Cuvette Blanking:*** Automatic. **FUNCTIONS** ***XIII. Programmable Parameter:*** **About 100 user defined** test programs including routine biochemical parameters, enzymes, immunological markers, truly open system, selection through key- board. ***XIV. Calibration:*** Automatic against standard / calibration. ***XV. Quality control:*** a. 2 levels of control (at least) b. Levey - Jennings diagram. c. Manual entry of QC result. ***XVI. Memory Storage:*** a. Minimum 200 patients result. b. Calibration result. c. Quality control result for 01 month. **OPERATOR INTERFACE** ***XVII. Display:*** a. Graphic LCD. b. Display of reaction curve, absorbance, temperature. c. Display of result of real time. d. Graphical display of reaction time.	01 pc	**6000.00**	

		e. Calibration curve graphical display. ***XVIII. Key board:*** a. Chemical and moisture prevented single touch alphanumeric membrane key panel. ***XIX. Printer:*** ***a.*** Built in thermal printer with full graphic facility. b. Parallel full page ink printer with formatting options. **SOFTWARE** ***XX. Reporting format:*** a. Conventional b.SI unit(Optional/Interconvertible). ***XXI. Recalculation :*** Recalculation of result following modification of calibration, measurement timings and wavelength. ***XXII. Automatic Flagging:*** a. Absorbance and linearity cheek. b. Reagent stability. c. Substrate depletion. ***XXIII. Peripheral interfacing:*** ***a.*** Parallel ports for external printer , key- board and PC. Software PC Compatible. **ADDITIONAL** ***XXV .Power Cord :*** Indian Type 3-pin power cord locally available and replaceable . ***XXVI: Dust Cover :*** Washable dust-covers for main unit and key-board, etc. ***XXVII: Working Manual :*** Working Manual by manufacturer in original			
2	**HbA1c analyzer**	**Specification for HbA1c analyzer** Analytes HbA1c and detect abnormal haemoglobins Principle HPLC Technology Sample Volume Less than or equal to 3ml. Sample loading Should load about 10samplesper lot with continuous loading facility CV% <3% Throughput < 8 minutes per sample Assay time 2-3 minutes for HbA1c Assay Should be able to detect correct A1c values in the presence of commonly occurring abnormal haemoglobin variants. Primary tube sampling Facility should be there Controls Company should provide external and internal normal and abnormal control. Calibrators In- kit external calibrators Program mode Dual program mode to perform either HbA1c or HbA2/HbF/HbA1c without changing reagents or columns	01 pc	**2000.00**	

		Check facility Should be able to check all system parameters (cartridge, reagent, waste etc) Certification System should be NGSP/DCCT certified and traceable to IFCC reference method. Approvals Both CE and FDA approvals Installations Must have > 500 installations across major cities all over the country			
3	**Fully Automated Electrolyte Analyzer**	**Fully Automated Electrolyte Analyzer with all the necessary accessories having following features, with UPS 0.5 KVA** **Measured Parameter** ➡ Sodium ➡ Potassium ➡ Chloride **Features** ➡ Sample volume 75 -125 µl ➡ Analysis Time within 90 second ➡ Sample throughput 40 – 50/ hour ➡ Sample Type –Whole Blood , serum, Plasma , urine , and QC. ➡ Fully Automated calibration of all parameters . ➡ Individual switch off / on facility of the parameters preferable. ➡ Data display on built in LCD display screen. ➡ Data print out on fast flow thermal printer. ➡ Memory for QC result , Patient samples and error reports. ➡ Built in programmable stand –by mode facility for economical operation ➡ Flagging of abnormal results and user programmable ranges..	01 pc	**2000.00**	

		➡ Interface – RS 232. ➡ Operational Manual. ➡ Built in voltage stabilizer for the voltage range from 100 – 240 VAC/ 50 HZ **Consumable Kit** Reference electrode 01 No Reference Housing 01 No. Sodium electrode 01 No Potassium electrode 01 No. Reagent, Conditioner and cleaning solution 01 Pack each as starter ➢ Warranty 12 Months from the date of Installation. ➢ Installation & Local Training Free of Charge at site			
		I. ***Item :*** **Fully Automated Microprocessor Controlled ISE Electrolyte Analyzer with built-in voltage stabilizer for voltage range 100-240VAC/50Hz and on-line UPS 0.5 KVA.** II. ***Measured Parameters:*** a. Sodium b. Potassium c. Chloride All the parameters to be analyzed from samples of whole blood, plasma, serum, urine and body fluids. **III. *Measuring System:*** Ion Selective Electrodes, for individual analytes, individually replaceable and/ or reference electrode. Individual switch-on/off facility of the parameters is preferred.			

		IV. ***Measurement Time :*** Maximum 90 seconds. **V.** ***Operating Temperature:*** Peltier control at **37˚C**, workable at ambient room temperature**.** **VI.** ***Aspiration System:*** Automated prompt-guided sipping of sample. Motor driven peristaltic Pump. Automated sample probe cleaning. **VII.** ***Aspiration Volume:*** **75 – 125 µl.** **VIII.** ***Disposal of Waste:*** Closed system of sample waste disposal. **FUNCTIONS** **IX.** ***Throughput:*** **40 to 50 samples per hour**. **X.** ***Calibration:*** Automatic calibration of all parameters. **XI.** ***Quality control:*** External Standard / Quality Control **XII.** ***Memory Storage:*** **a.** Patients result. **b.** Calibration result. **c.** Quality control result for 01 month. **d.** Error reports. **OPERATOR INTERFACE** **XIII.** ***Display:*** **a.** Built-in LCD backlit display. **b.** Display of alphanumeric characters. **c.** Display of result in real time. **d.** Built-in programmable stand-by mode facility. **XIV.** ***Key panel:*** Chemical and moisture prevented single touch membrane key panel. **XV.** ***Printer:*** **a.** Built in fast flow thermal printer with full graphic facility. **b.** Parallel full page laser printer with formatting options. **SOFTWARE** **XVI.** ***Reporting format:*** **a.** Factory set, individual parameter-wise in built-in printer. **XVII.** ***Automatic Flagging:*** **a.** Out-of-range results. **b.** User programmable reference ranges of all individual parameters.			

		CONNECTIVITY **XVIII.** ***Peripheral interfacing:*** **RS-232** Parallel ports for external printer and PC. **ADDITIONAL / CONSUMABLES TO BE SUPPLIED ALONGWITH THE MAIN EQUIPMENT** 1. **One set of Start-up Reagent Pack,** , Electrode Cleaning Solution, Deproteinizer, Multilevel control **2. Operating Manual in original manufacturer's version:** one number **3. UPS on-line, capacity 0.5 KVA:** one number. **4. Power cord Indian type:** one number. **5. Washable eco-friendly dust cover:** one number.			
DEPARTMENT OF ANATOMY					
1	***CADAVER STORAGE TANKS (Full SS)***	***CADAVER STORAGE TANKS (Full SS)*** ***(Accommodate full human cadavers- at least 2 in each tank)*** ***Specification*** ***1. OVER ALL SIZE: 72" (L) x 60" (W) x 24" (H) WITH CASTER*** ***2. FOUR SIDES ENCLOSED BY 1.6 MM SS SHEET*** ***3. BOTTOM SHELVES MADE OF 1.6 MM SS SHEET*** ***4. BOTTOM STRUCTURE MADE OF 40 X 40 X 6 MM ANGLE FRAME*** ***5. LIDS MADE OF 1.2 MM SS SHEET (DOUBLE SHEET MOULDED) WITH ONE HAVING HANDLE-6.*** ***6. INSIDE ONE HAVING BOWL FOR DRAINAGE WATER. WHEN GET THE SOLUTION*** ***7. RAISED INSIDE THE CABINET THEN CLOSED THE ADJUSTABLE KNOB.*** ***8. MOUNTED ON 200 MM CASTER (HEAVY DUTY)*** ***9. EVERY JOIN WITH ARGON WELDING.*** ***10. FINISH WITH GLOSSY POLISH.***	06 pcs	**15000.00**	

DEPARTMENT OF PHARMACOLOGY					
1		Automatic electric recording drums	**1**	500.00	
2		Cannula-made of corning glass (Arterial- hollow bulb with three arms, Venous–hollow glass tube- 4-5cm length & 3-4 mm diameter Syms cannula)	**10 each**	500.00	
3		Four Unit isolated organ bath palmer F.67 For Internal Organs with stirring arrangements, made of transparent acrylic sheet, chemically welded to make leak proof. Complete with uprights, organ & oxygen tubes, capillary tubing, and frontal lever etc.Temperature by immersion heater and control by thermostat.	**1**	500.00	
4		Dissection instruments and injection syringes as required Sets containing surgical standard scissors-2, curved scissors-2, pointed scissors-2, artery forceps-2, Mosquito artery forceps-2, scalpel handle-2, plain forceps-2, toothed forceps-2, small retractors-2, etc. Probes-2, hooks-2. To be supplied with proper cover and box.	**1**	500.00	
5		X-blocks as required(Open and Closed) Machined from solid Brass rod, richly chromium plated to hold 9mm, 6mm and 12.5 mm rods	**10 each**	500.00	
6		Hook grip rods as required- Should be suitable to fit in an X-block	**25**	500.00	
7		Plain stand	**25**	500.00	
8		Jackson's Enterograph - a) hollow metallic tube about 15 cm in length and 15 cm in diameter. b) hook welded at its lower end c) a pulley fixed at the lower end	**1**	500.00	
9		Hair Aesthesiometer-Palmer W.290	**1**	500.00	
10		Manometers mercury Palmer C-200	**3**	500.00	
11		Copper Trays (10"x8"x1")	**25**	500.00	
12		Microscopes ordinary - With fixed bright filed two lens condenser and iris diaphragm, heavy metal stand with triple nose piece. Coarse adjustment by rack and pinion and fine adjustment by precision grade slow motion arrangement in a beautiful storing cabinet - Total magnification 675 x Eye pieces H10x, H15x Objectives 10x, 45x (spring loaded)	**2**	500.00	
13		Chemical Balance – Sensitive Balance beam scale, capacity: 120g/0.01g 220g/0.01g 320g/0.01g 1200g/0.01g 2200g/0.01g 3200g/0.01g. Power AC/DC with lithium battery. Display: LCD/LED with back light. Fan size: diameter 130mm.	**1**	500.00	
14		Operating lamps- Standard quality	**1**	500.00	

15		Skin and Rectal Thermometer Barun -	**1**	500.00	
16		Starling's or Heart Lever:-This lever is used to record the contraction of heart. The differences between this & other isotonic levers is that fulcrum lies at one end beyond the point of attachment. It consist of a frame carrying a light lever arm with holes and notches supported by a fine adjustable nickel silver spring attached to an adjustable hook.	**2**	500.00	
17		Microscope with mechanical Stage and oil immersion	**2**	500.00	
18		B.P. Apparatus Mercury. sphygmomanometer, Desk el	**2**	500.00	
19		Stethoscope - Traditional	**2**	500.00	
20		Gimbal lever - obviates extremely careful adjustments as the writing lever always falls towards the paper	**2**	500.00	
21		Simple lever stout construction duly chromium plated frame with stop at one end interchangeable 1/4" stem the lever fits thorough axle pivoted between centers and a thumb screw on the axle permits the lever to be adjusted for length	**2**	500.00	
22		Brodies' Universal lever- the axie is screwed has two nuts between which interchangeable levers are centered while screwing up the central screw the stem screws into the head with various positions with adjustable spring support one plain lever one notched lever with holds and one shorts lever.	**2**	500.00	
23		Frontal writing lever - This lever is designed in such a way that the writing point rotates freely about its axle. This helps in reducing the tension between the smoked paper and the recording tip. The contraction are recorded as straight line	**2**	500.00	
24		Fixit lever - the levers can be fixed to the spindle in the center p f which a vulcanite spindle on one of these pins lever fits, sliding through the frame is a rod carrying a spring that can be caused to bear against the roller its turning while other adjustment are made.	**2**	500.00	
25		Water bath 4 hole electrically heated	**1**	500.00	
26		Standard power tables	**1**	500.00	
27		Colorimeters	**1**	500.00	
28		Cautery machine, electric Blendsone	**1**	500.00	

29		Condon's Drop Recorder-Palmer B-75	**1**	500.00	
30		Jacquets graphic chronometer	**1**	500.00	
31		Long Extension for paper palmer A-130	**1**	500.00	
32		Metronome Palmer B-5.	**1**	500.00	
33		Chemical Balance-ordinary Apothecary's Best quality with divided doors show case, capacity 250gms. Sensivity 1-2mgm having all stone agates fitted in open graduated beam	**1**	500.00	
34		Pneumograph Palmer E	**1**	500.00	
35		Museum drugs specimen boxes rectangular, acrylic with cover. Sizes:- 9"x5"x4"(inch)& 6"x4"x3"(inch)	**50 each**	500.00	
36		Microscope lamps - standard quality	**2**	500.00	
37		Multimeter	**1**	500.00	
38		Temperature controlled water bath 37 O C.	**1**	500.00	
39		Cycle ergometer	**1**	500.00	
40		Operating Table- JKA-172 : Suitable for Rabbits, Rats, Guinea Pigs and such like small animals. Top is of Stainless Steel and provided with adjustable head holder, tie-cleats, cut-back at the head-end with warming chambers.	**1**	500.00	
41		Instrument Trolley (30"X18"X30")	**1**	500.00	
42		Instrument Trolley(48"X24"X30")	**1**	500.00	
43		Weighing machine upto 150kg	**1**	500.00	
44		Manometer mercury glass U-tube (5 mm bore , two vertical limbs 30 mm height half filled with mercury (upto 250 mm of Hg)	**2**	500.00	
45		Tracheal cannula metal (z-shaped & y- shaped)	**2 each**	500.00	
46		Bull dog clip	**10**	500.00	
47		Rat holder- single u and ring pattern 38 mm with Universal joint	**2**	500.00	

48		Mercury manometer –Meriam, All Manometers are fabricated from true-bore Borosilicate glass, floats are perfectly, lapped to eliminate leakage and are fitted with feather weight stainless steel capillary. Standard Mercury Mercury Manometers: Without stopcock, with adjustable scale.	**2**	500.00	
49		Autoclave electric-small	**1**	500.00	
50		Deionizer-small	**1**	500.00	
51		Sterilizer electric size 12”x8”x6”	**1**	500.00	
52		Stimulator electronic Arthus Thomas- Selectable pulse per second in different steps and pulse with, continuous variable volt in multiple of 1 and 10 with internal, external and single pulse mode	**1**	500.00	
53		**Flame Photometer**	**1**	500.00	

DEPARTMENT OF ANESTHESIOLOGY (MANICKTALA)

1	**Monitor for Continuous Measurement of Cardiac Function**	**A. Monitor for Continuous Measurement of Cardiac Function:** 1. It should be arterial line based continuous monitoring device for Cardiac output, Cardiac Index, Systemic Vascular Resistance and Stroke Volume. 2. It must be supplied with good quality display device and ten Flotrac and necessary catheter system. 3. The device should be compatible with Flotrac sensor system 4. Necessary accessories should be supplied for systemic vascular resistance measurement 5. It must be CE and/or FDA certified	01 pc	14000.00	
2	**Monitor for continuous measurement of body tissue oxygenation and oxygen delivery status**	**B. Monitor for continuous measurement of body tissue oxygenation and oxygen delivery status:** 1. It should be auto-calibration based arterial-venous line based measuring device to provide continuous measurement of ScVO2, SvO2 , Extra vascular Lung water index and Ejection fraction as well as End Diastolic volume of heart 2. The monitor should be supplied with 10 (ten) relevant and related sensors for	01 pc	**8000.00**	

		measurement of hemodynamic variables 3. Suitable display and storage device for data should be supplied 4. It should be CE and/or FDA certified			
3	**Brain Function Monitor for depth of anesthesia**	**C. Brain Function Monitor for depth of anesthesia:** 1. It should be Density Spectral Array (DSA) based and Bi-hemispheric EEG power dependent monitoring device to provide easy-to-interpret status of depth of anesthesia. 2. It should also be able to provide measurements of SpO2, EtCO2, continuous hemoglobin, Perfusion Index & Pressure Volume Index. 3. Waveform and/or Digital system of display as appropriate 4. Device should be FDA and/or CE certified	01 pc	**12000.00**	
4	**Instant Hand held blood pH and Lactate monitor**	**D. Instant Hand held blood pH and Lactate monitor:** 1. Portable, cartridge based hand held device capable of measuring blood pH, Lactate and other variables such as Troponin, Ionised Calcium, Prothrombine Time, Creatinine Kinase-MB and Brain Natriuretic Peptide 2. Measurements should be quantitative in nature 3. It should be supplied with wireless based printer and electronic simulator for calibration **4.** It must be FDA and/or CE certified	01 pc	**6000.00**	
5	**Lumber Puncture Simulator with Epidural block trainer**	**E. Lumber Puncture Simulator with Epidural block trainer:** 1. The device should be a 3D image guided one suitable for training of epidural needle insertion 2. It should be based on real time motion picture based capturing system with display of procedure on screen 3. The system should be capable of evaluation of trainee's performance	01 pc	**16000.00**	

		4. All relevant interfaces and accessories should be supplied with the simulator 5. It must be FDA and/or CE certified			
6	**Spinal Injection Trainer**	**F. Spinal Injection Trainer:** 1. Mounted trainer should be able to be used multiple times 2. It should be supplied with three sets of accessories like fluid bags and simulators 3. One vertebrae must be visible for proper identification of performance site 4. Trainee should be able to be guided by perceptible tissue resistance while going through different levels of tissues 5. It should be CE and/or FDA certified	01 pc	**2000.00**	
7	**Central Venous Catheter Simulator**	**G. Central Venous Catheter Simulator:** 1. Simulator should have life like anatomical structures for identification of parts related to central venous catheter insertion 2. It should allow trochar and guide wire insertion for complete training 3. Device should be supplied with five replaceable skin pads for each site of training 4. It should be supplied with all accessories like artificial blood (two units), fluids, spare vessels (two numbers), battery and other relevant items 5. Facility to check correct position of catheter placement should be there 6. It should be CE and/or FDA certified	01 pc	**8000.00**	
8	**Cricotracheotomy trainer**	**H. Cricotracheotomy trainer:** 1. It should be able to train routine as well as percutaneous tracheotomy procedure 2. It should have easily palpable anatomical land marks for identification of	01pc	**2000.00**	

		structures 3. Trainer must be steady in nature and should be supplied with five sets of spare skin for cricotracheotomy 4. It should be CE and/or FDA certified			
9	**Peripheral Nerve Stimulator/ Locator**	**I. Peripheral Nerve Stimulator/ Locator:** 1. The device should be able to locate nerves percutaneously through electrical stimulation based technique 2. It should be able to be used with monopolar as well as bipolar based stimulation technology 3. Current intensity preferably be between 0 to 60 mA and stimulating impulse upto 1ms 4. Should be able to measure and display actual current passing through tissues 5. It must be supplied with insulated cannula , ten in number each for size 22, 24 & 25 G as well as re-chargble battery and charger. 6. Needle quality should be able to give best image under ultrasound guided procedures 7. It should be FDA and/or CE certified	03 pcs	**5000.00**	
10	**Multi-frequency based deep heat generator**	**J. Multi-frequency based deep heat generator:** **1. Equipment should be multi-frequency based dual outlet heat generator using long waves with a emission frequency range between 450 to 500 KHz** **2. It must have coupling system of capacitive and resistive therapy system for heat generation at different depth of application area** **3. Electrode pairs and handle tips with various diameters such as 30,50 and 70 mm must be supplied with the equipment**	01 pc	**16000.00**	

		4. Power must be 100 W/KOhm or more **5. It should be CE and / or FDA certified**			
11	**Airway management Trainer:**	**K. Airway management Trainer:** **1. Trainer must have good quality land marks of upper airway and pulmonary structures for proper identification during intubation training.** **2. It should allow various techniques of intubations and different methods of airway related activities like application of suction, Sellick's maneuver, observation of pupil and carotid pulse palpation** **3. It should be supplied with two sets of artificial lungs** **4. It should be FDA and/or CE certified**	01 pc	**2000.00**	
12	**Handheld instant hemoglobinometer with facility to measure Methaemoglobin**	**L. Handheld instant hemoglobinometer with facility to measure Methaemoglobin:** 1. It should be able to be applied to patients of all age groups and necessary probes/accessories to be supplied in two in numbers for each age group 2. It should work even in low perfusion status and should be least interfered by electrical disturbances 3. It should be able to provide pulse variability index, blood hemoglobin and methemoglobin level non-invasively on continuous as well as point of care basis 4. Perfusion index should be between o.o2 to 20% 5. Waveforms and/or digital display mode of presentation 6. It should be FDA and/or CE certified	01 pc	4000.00	