****

Annexure- C

**Dr.Radhakrishnan Government Medical College, Hamirpur (HP).**

S.NO. OF TENDER : \_\_\_\_\_\_\_\_\_\_\_

FILE NO. :

Name of the party in whose:

Favour the Tender form has

been issued \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(SEAL OF THE OFFICER)

To

 The Principal,

 Dr.RKGMC, Hamirpur-HP

Dear Sir,

1. I am /we are hereby submit our tender for the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. I/We am/are enclosing herewith the DD/Banker Cheque No…………………… dated……………. , for **Rs.25000**/- drawn in favour of the **Principal, Dr.RKGMC, HAMIRPUR, H.P**.towards as EMD. **(TENDERS NOT ACCOMPANIED WITH EMD/BID SECURITY ALONGWITH THE TECHNOCOMMERCIAL BID SHALL BE SUMMARILY REJECTED**).

3. I /We have gone through all terms and conditions of the tender documents before submitting the same.

4. I/We hereby agree to all the terms and conditions, stipulated by **Principal, Dr. RKGMC, HAMIRPUR, H.P.**, in this connection including demonstration, delivery, installation and warranty and penalty etc. Quotations for each group are being submitted under separate covers, and sheets and shall be considered on their face value.

5. I/We have noted that overwritten entries shall be deleted unless duly cut & re-written and initialled.

6. Tenders are duly signed (No thumb impression should be affixed).

7. I/We undertake to sign the contract/agreement, if required, within 15 (Fifteen days) from the date of issue of the letter of acceptance, failing which our/my security money deposited may be forfeited and our/my name may be removed from the list of suppliers at **Dr. RKGMC, HAMIRPUR H.P**.

**NOTE:- ALL TERMS AND CONDITIONS SUCH AS TAXES etc., HAS BEEN INDICATED IN THE QUOTATIONS FAILING WHICH IT WILL BE PRESUMED THAT ALL THE RATES ARE INCLUSIVE OF ALL TAXES AND OTHER TERMS AND CONDITIONS ARE ALSO AS PER YOUR REQUIREMENTS**.

 Yours faithfully,

Signature of Tenderer alongwith full Address

WITNESS\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

WITNESS\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

WITNESS\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Instructions to Bidders**

1.1 Bids are invited, for and on behalf of **Principal, Dr.RKGMC, HAMIRPUR, H.P**.from established, reputed and experienced manufacturers or their authorized dealers/representatives for the various Machinery & Equipments/Material as per Technical Specifications as at **Annexure- A,** for **Dr.RKGMC, HAMIRPUR, H.P**

1.2 Bidders are requested to study the tender document and terms & conditions carefully. Submission of tender shall be deemed to have been done after careful study and examination of the tender document with full understanding of its implications.

1.3 The scope of work shall include Supply, Installation, Commissioning, & Satisfactory Demonstration. This will also include testing, packing, transportation, scheduling of transportation, transit insurance, delivery at sites, unloading, storage, job site storage, insurance, installation and any other services associated with the delivery of the equipment and materials providing warranty of services and operation and maintenance of other related equipment / items required for complete installation. The successful bidder will assume full responsibility of the complete system until final acceptance.

1.4 It will be imperative on each bidder to fully acquaint himself with all the local conditions and factors which would have any effect on the performance of the System. No request for the change of price, or time, schedule of delivery of stores shall be entertained after the purchase on account of any local condition or factor.

1.5 The bidders may have a survey including a site visit before furnishing the quotations. They have to apply for permission in this regard to the **Principal, Dr.RKGMC, HAMIRPUR, H.P**. The **Principal, Dr.RKGMC, HAMIRPUR, H.P.** will give such permission in writing, but the expenses, in connection with the visit and surveys etc., shall be borne by the bidders themselves.

1.6 The bidders will not form a part of the cartel and put in supporting quotations for some other company. This will debar the company for participating in other tenders floated or to be floated in by the purchaser. The authorities can compare the prices of other Bidders L2, L3 etc. also with the prices quoted in other tenders for same products and in case of discrepancy suitable action will be initiated.

1.7 No Gratification Clause: The bidders will give an undertaking that they will not try to gratify any person or use any other unfair means involved in the purchase of the quoted equipment. This will also debar the company for participating in other tenders floated or to be floated in by the purchaser and suitable action will be initiated against such defaulters.

1.8 Non Blacklisting Certificate: All the bidders will give an undertaking on non judicial Stamp paper duly attested that neither they nor their principals or the manufacturers have been blacklisted by any State / Central Government Departments/other organisations.

1.9 All the correspondences shall be addressed to the **Principal, Dr. RKGMC, HAMIRPUR, H.P**.

1.10 The Bid Documents are not transferable and the cost of the documents is not refundable under any circumstances.

**2. Bid Security/Earnest Money**

2.1 Bid Security/EMD amount should be enclosed along with the Techno-Commercial Bid for an amount of Rs.25,000/- in the shape of DD/Banker cheque duly pledged in the name of **Principal, Dr. RKGMC, HAMIRPUR, H.P**, failing which the tenders will be outrightly rejected. Bid Security/EMD, if already deposited against other tenders, shall not be adjusted against this tender.

2.2 The "Bid Security/Earnest Money ", in case of unsuccessful Bidders, shall be retained by the Purchaser, up-to a maximum period of One year from the date of opening of the Bids or till the finalization of the tender, whichever is later. The Bid security shall be refunded to the unsuccessful tenderers on their written request. No interest will be payable by the Purchaser on the Bid Security/EMD.

2.3 The Bid Security/Earnest Money shall be forfeited;

a) If a Bidder withdraws his bid during the period of bid validity specified by the Bidder in the Bid;

 or

b) In the case of the finally selected Bidder, if the Bidder fails;

i) to sign the Contract in accordance with Clause 13; or

ii) to furnish Performance Guarantee in accordance with Clause 5.8 or

iii) if, at any stage, any of the information/declaration is found false.

2.4 Bid security/Earnest Money in respect of the finally selected Bidder(s) will be discharged upon the Bidder(s) executing the Contract, and furnishing the Performance Guarantee, pursuant to Clause-5.8.

**3. Bidder’s Qualification**

 The "Bidder" as used in the tender documents shall mean one who has signed the Bid Form. The Bidder may be either the manufacturer of the equipment/ machinery/material for which prices are quoted on the Price Schedule or his duly authorized representative, in which case, he shall submit a certificate of authority as per Annexure- B. All necessary certificates and documents shall be furnished by the manufacturer/ representative of the firm. Manufactures/companies should authorize only one distributor for the State/for this particular tender and such specific authorization to this effect should be accompanied with tender document. Only one bid from a manufacturer firm shall be accepted and in case the manufacturer firm itself applies in the tender process, the bid of the authorized representative shall not be considered.

**4. Procurement and Submission of Tender Document**

4.1 The non-transferable Tender Document will be sold at counter on payment of tender fee of Rs.1,000/- (Rupees One Thousand only (non-refundable) through cash or MO/TMO or demand draft or by post Rs.1050/- by MO/TMO or Demand Draft payable at Hamirpur drawn in favour of the **Principal, Dr. RKGMC, HAMIRPUR, H.P.**

4.2 The non-transferable tender document can be obtained from the Office of **Principal, Dr. RKGMC, HAMIRPUR, H.P**.on or before **25th October, 2018 on any working day between 10.00 AM to 05.00 PM**

4.3 The sealed bids will be accepted upto 26**5th October, 2018 upto 1-00 PM** in the office of **Principal, Dr. RKGMC, HAMIRPUR, H.P.**

4.4 The Techno-Commercial Bids will be opened on 26**th October, 2018 at 2-00 P.M.** in the office of **Principal, Dr. RKGMC, HAMIRPUR, H.P**. The bidders or their authorized representatives may be present, who so desire.

4.5 After evaluation of the Techno-Commercial Bids and the technical presentation, the short listed bidders will be intimated accordingly.

4.6 The Financial bids of the short listed bidders will be opened in the Office of the **Principal, Dr.RKGMC, HAMIRPUR, H.P**.in the presence of prospective bidders/their authorized representative (The date of opening of financial bids will be communicated to the technically successful bidders separately).

**Note**: - The forwarding letter as at **Annexure- C** and other relevant documents as per check

List duly signed should invariably be returned along with the quotation furnished, failing which the tender shall be rejected.

5. **Bid Requirements**

5.1 The **Principal, Dr. RKGMC, HAMIRPUR, H.P**.invites two part Bids from eligible suppliers/bidders. The two part bid shall consist of Part-I Techno-commercial Bid and Part-II Financial Bid. Techno-commercial and Financial Bids for each (Machinery & Equipment/Material) as detailed at **ANNEXTURE-A,** should be submitted in two separate sealed envelopes superscribed “Techno-Commercial Bid” and “Financial Bid” respectively. The techno-commercial bid would be opened first. The Financial bid would be opened only in the case of those bidders who qualify and meet requisite parameters for technical evaluation. Further the

a) Techno-Commercial Bid shall comprise the following and to be submitted along with following documents:-

 i) Manufacturers' Authorisation Form (Annexure -B)

ii) Bidders particulars (Annexure-E)

iii) Bid Form (Annexure -F)

iv) Proforma of Guarantee for supply of spares during the post warranty period (Annexure-G)

v) Any other certificates/undertaking as per check list

b) Financial Bid in one cover (Annexure-D). Separate Financial Bid shall be submitted in respect of each equipment in a separate envelope.

5.2 Bidders are required to submit relevant documents viz. Compliance sheet, brochures, authority letters etc. with the technical offer of the concerned equipment and separate sealed envelope for each Department should be submitted.

**PLEASE NOTE THAT NO PRICE/COST SHOULD BE INDICATED IN THE TECHNOCOMMERCIAL BID. TENDERS SUBMITTED WITHOUT FOLLOWING THE TWO BID SYSTEM PROCEDURE WILL BE SUMMARILY REJECTED.**

5.3 Both the Techno-Commercial Bid cover and Financial Bid cover prepared as above are to be kept in a single sealed cover super -scribed with Tender Number.

5.4 The cover thus prepared should also indicate clearly the name and address of the Bidder.

5.5 Each copy of the tender should be a complete document and should be bound as a volume. Different copies must be bound separately.

5.6 The sealed cover as mentioned at Clause 5.3 above shall be deposited with the Principal, DR,RKGMC, Hamirpur.

5.7 The Bidder must quote for the equipment with all items and quantities as listed under the Schedule for Requirements. The bidder is required to quote only one model of the equipment. The bid is liable to be rejected in case more than one model is offered.

5.8 The finally selected Bidder(s) will be required to furnish Security amount for Contract Performance equal to 10% of the Contract Price, on award of Contract as per the prescribed Performa, in the shape of Bank Guarantee from any scheduled Indian Bank or FDR duly pledged in favour of the **Principal, Dr. RKGMC, HAMIRPUR, H.P.** and which shall be valid till warranty period. Failure to furnish security for the performance of contract, in time, would also entail forfeiture of EMD.

5.9 Bids not accompanied by EMD and Bids from representatives without letter of Authority from the manufacturers will be summarily rejected.

5.10 Telex/Fax bids, bids received through e-mail and incomplete bids will be summarily rejected.

5.11 Bidders should enclose, alongwith the Techno-Commercial Bid of their offers, the full details including proposed configuration of offers with full documentation, descriptive literature/leaflets supplementing the description and point out any special feature of their system. All documentation is required to be in English.

5.12 The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the bid.

5.13 All pages of the Bid being submitted must be signed and sequentially numbered by the Bidder and a certificate may be provided on the covering letter indicating the number of pages submitted along with the bid.

5.14 All information in the offer must be in English. Information in any other language must be accompanied by its authenticated translation in English. Failure to comply with this may render the offer liable to be rejected. In the event of any discrepancy between the offer in a language other than English and its English translation, the English translation will prevail.

5.15 The bidder must give an undertaking that the offered equipments have not been supplied anywhere at a less rate than offered rate in this tender.

5.16 The bidder must submit the list of installation of similar nature of equipments and will submit the copy of latest supply order alongwith satisfactory performance report.

**6. Period of Validity of Bids**

 Bids shall remain valid for One year from the date of bid opening (price bid) prescribed by the Purchaser. The Purchaser may reject a bid valid for a shorter period.

**7. Purchaser's Right to accept any Bid and to reject any or all bids**

 The Purchaser reserves the right to accept any bid and to annul the tender process and reject all bids at any time, without assigning any reason, prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Purchaser's action.

**8. Opening of Bids by Purchaser**

8.1 The bids will be opened in the presence of Bidders/representatives who choose to attend on the scheduled date and time as mentioned. The Bidders/representatives who are present shall sign a register evidencing their attendance. The Bidder's representatives shall furnish letter of authority from their principal to attend the bid opening. Financial bids of only those Bidders, whose bids are found technically suitable/qualified (after the presentation, demonstration etc., if any) will be opened. The decision of the sub-committee on technical suitability shall be final and shall not be opened for discussion. The bidders who do not qualify the technical evaluation shall be informed separately and their EMD and unopened financial bid shall be returned after award of the contract.

**9. Scrutiny of Bids**

9.1 The Committee will examine the bids to determine whether they are complete, whether any Computational errors have been made, whether required EMD has been furnished, whether the documents have been properly signed, and whether the bids are generally in order. The Committee may waive any minor infirmity, nonconformity or irregularity in a bid that does not constitute a material deviation and that does not prejudice or affect the relative ranking of any Bidder as a result of the technical and financial evaluation.

9.2 Prior to the detailed evaluation, the **Principal, Dr. RKGMC, HAMIRPUR, H.P**.will determine whether each Bid is acceptable qualitatively, is generally complete and is substantially responsive to the Bid Documents. For the purposes of this determination, a substantially responsive Bid is one that conforms to all the terms, conditions and specifications of the Bid Documents without material deviations, objections, conditional ties or reservations. A material deviation, objection, conditionality or reservation is one (i) that affects in any substantial way the scope, quality of performance of the Contract; (ii) that limits in any substantial way and /or is inconsistent with the Bid Documents or the committee’s rights or the successful Bidder's obligations under the Contract; or (iii) whose rectification would unfairly affect the competitive position of other Bidder's who are presenting substantially responsive Bids.

9.3 Arithmetical errors, if any, will be rectified on the following basis: If there is a discrepancy between the unit price and the total unit price as declared in the Price Schedule the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the supplier does not accept the correction of the errors, its bid will be rejected.

**10. Price Bid**

 The prices may be quoted in rupees only. All prices mentioned should be FOR destination **Dr. RKGMC, HAMIRPUR, H.P.** The bidder should note that price comparison shall be made on the basis of process offered in prescribed Performa at Annexure- D .L1 will be selected on the basis of all the components mentioned in the Annexure-D.

10.1 The bidder shall indicate the prices on prescribed PRICE BID PROFORMA at Annexure-D of the tender document. The Proforma should be duly signed & sealed by their authorized signatory (ies). Financial Bids not given in Proforma will be rejected out rightly.

10.2 The prices quoted by the Bidder and accepted by **Principal, Dr. RKGMC, HAMIRPUR, H.P.** shall hold good till the completion of the works or satisfactory installation of machinery/equipment and no additional claims will be admissible on account of any price variation or fluctuation in market rates.

10.3 Payments made consequent to any notified change in sales tax (both increase and decrease) shall be to the Purchaser's account. For such claims of variation, the Bidder shall produce the Government notification as documentary evidence. Price variation due to any other cause shall be on Bidder's account.

10.4 The finally selected Bidder will have to apply to the proper Government Authority for grant of requisite License for such items as required and the purchaser will only tender such assistance, as considered necessary.

10.5 The firm has to provide the break-up of expenditure of different quoted items as well as total expenditure clearly for the whole items.

10.6 Excise/Custom Duty, GST, Entry Tax and any other levy/surcharge in any shape or by whatever nomenclature may be included in the quoted amount unless, it is specially mentioned separately.

10.7 The warranty charges shall not be quoted separately otherwise the offer shall be summarily rejected. The price comparison shall be made taking into account on basic price and post warranty CMC for 10 years.

11. **Purchaser's Right to Vary Quantities at the time of Award**

 The Purchaser reserves the right to vary the quantities and/or services.

12. **Negotiation/Award of Contract Prior to the expiry of the period of bid validity**

 The Purchaser will notify the finally selected Bidder(s) in writing by registered letter or by cable or telex or fax, to be confirmed in writing by registered letter or by Hand in person, that its bid has been accepted. If a need for extension of the bid validity period arises, it should be extended by mutual agreement. Before the award of contract, the Office may hold negotiations with the bidder, whose bid has been determined to be substantially responsive to the bid documents and whose offers are the lowest one. The aim is to reach agreement on all points and sign a contract.

**13. Signing of Contract**

13.1 At the same time as the Purchaser notifies the finally selected Bidder(s) that its bid has been accepted, the finally selected Bidder(s) shall collect the supply order, agreement/ Contract proforma from the office of the **Principal, Dr. RKGMC, HAMIRPUR, H.P**.

13.2 Without prejudice to any legal remedy, failure of the finally selected Bidder(s) to comply with the requirement of Clause 2.3 (a) or Clause 2.3 (b) shall constitute sufficient grounds for the annulment of the award and forfeiture of the EMD, in which event the Purchaser may make the award to the next lowest evaluated Bidder or call for fresh bids.

**14. Payment:**

 Payment of items will be released in two instalments as under:-- 90% after the satisfactory installation of the Machinery/Equipment in the department and receiving of certificate to that effect from the concerned department. 10% after 2 month’s satisfactory functioning of the equipments in the department and receiving of certificate to that effect from the department.

**15. Other Terms and Conditions of Tendering Firms**

15.1 Printed terms and conditions to the Bidder will not be considered as forming part of their Bids. In case terms and conditions of the contract applicable to this invitation of tender are not acceptable to any Bidder, he should clearly specify deviation in his Bid.

**16. Inspection and Tests**

The Purchaser shall have the right to inspect and/or test the machinery/equipment for its conformity with the given Specifications.

16.1 In case any inspected or tested equipments fail to conform to the specifications, the Purchaser may reject them and the supplier shall either replace the rejected machinery/equipment’s or make all alterations necessary to meet specification requirements free of cost to the Purchaser.

16.2 The supplier shall provide installation and standard tests for the individual equipment before the delivery of the system at site.

16.3 The supplier shall test each individual equipment and the complete system after installation at site and prepare a test report. This shall be compared with the factory test report to ensure that there is no deterioration in the equipment parameters during storage, transportation and installation.

16.4 Leaflets and literature should invariably be attached for ready references along-with complete documentation of all the measurements conducted during installation period which shall be submitted by the supplier for future reference.

16.5 The technical problems faced during installation, testing and commissioning period and their solutions shall be submitted by the supplier at the time of handing over the completed works.

16.6 For the purpose of taking over the equipment/system supplied pursuant to this contract, an acceptance test shall be carried out at the Purchaser/Consignees destination site. The equipment which meets the acceptance test shall only be accepted by the Purchaser.

16.7 (a) Acceptance Test at site shall be conducted of individual equipment and complete system to ensure that individual equipment and complete system meets the technical specifications and other operational and technical requirements of tender.

 (b) The Purchaser shall have the right to reject any individual equipment or complete system, if in its opinion the same does not meet technical specifications, operational or technical requirements. The decision of the purchaser in this regard shall be final.

 (c) The delivery, installation or commissioning shall not be deemed to have been completed,

unless all the equipments and systems are accepted by the purchaser.

**17**  **Recommendations of the Committee shall be final.**

**18. Warranty/CMC (AFTER SALES SERVICES)**

18.1 Complete system including all accessories etc. (wherever applicable) should have comprehensive (labour & spares) onsite warranty for atleast five years; commencing from the date of issue of installation certificate by the institute. Post guarantee annual comprehensive maintenance contract (CMC) to cover equipment and all accessories supplied with the unit should be quoted separately for additional 5 years with year wise break up. The warranty charges shall not be quoted separately otherwise the offer shall be summarily rejected. The price comparison shall be made taking into account on basic price and post warranty CMC for 5 years.

18.2 Incremental Cost (if any) for, up-gradation, if required, should form part of the contract for the Warranty and Post Warranty period.

18.3 The Supplier (manufacturer) shall set-up a maintenance base to provide maintenance service, of the entire system being offered, at short notice during the warranty and post warranty period. The technical maintenance personnel of the supplier responsible for supervision and maintenance shall be available to reach the site(s) within 24 hours ‘notice.

18.4 If the performance of any individual equipment or system is not satisfactory, the same shall be replaced by the supplier free of cost.

18.5 If it is found that to meet the performance criteria, any extra equipment is required, the same will be provided free of cost by the supplier.

18.6 Any lacuna or lacunae noticed in the functioning of the installation as a result of any design feature shall be rectified by the supplier free of cost.

18.7 The Supplier shall fully associate the engineers and technicians of the Institute during installation, testing, commissioning, operation and maintenance period.

18.8 The bidder shall attach an undertaking on affidavit from the original manufacturer that the AMC/CMC INDICATING THE CMC CHARGES after warranty period shall be provided by the manufacturer OR HIS SOLE All India distributor directly on the rates and terms finalized with the bidder. The manufacturer shall be liable for the aforesaid service in case the dealership is changed/back out.

**19. Spare Parts**

19.1 The Bidder will undertake that supplies of necessary maintenance equipment and spare parts will be made available for all items/equipments and for the complete system for at least 12 years on a continuing basis. An undertaking in this regard should be made available from the original manufacturer. However, this does not relieve the supplier of any warranty obligations under the Contract.

19.2 The Bidder shall include in his tender, the details of essential spares, and their quantity and unit prices as per schedule of requirements.

19.3 In addition to the essential spares, Bidder shall indicate additional recommended quantities of spares for efficient maintenance of the equipment and the systems for a period of 7 years, after the completion of warranty period, to ensure that the quality and reliability objective is achieved. The details on which unit price and the total cost or recommended spares is based shall be included in the tender as an option. However, the cost of such recommended spares shall not be considered for tender evaluation.

20. **Previous Installations**

20.1 The names and address of the institutions/hospitals where the supplier has already installed/supplied the equipment indicating the dates of installations may be given (in India and abroad). He should also attach performance certificates to indicate his prompt after sales service.

20.2 On site functional assessment of the similar installation and equipment of the short listed Bidders will be undertaken, if necessary, by the Committee duly constituted by the **Principal, Dr. RKGMC, HAMIRPUR, H.P.**

21. **Delivery, Installation and Commissioning**

21.1 Delivery of the goods at the Institute premises shall be completed by the Supplier within 5-7 weeks from the date of Supply Order.

21.2 The installation, testing and commissioning of the proposed system shall be completed within 6-8 weeks from the date of Supply Order, failing which necessary action as deemed fit under rules, will be taken against the defaulter.

22. **Site Preparation**

22.1 The site for installation of the equipment shall be provided by the purchaser as per the required specification and environmental conditions before the installation of System.

22.2 Site Plan and System layout plan including civil/electrical work or other related works (if any) shall be prepared by the supplier keeping in view the actual condition of site.

23. **Incidental Services**

23.1 The supplier is required to provide at free of cost to Purchaser all Hardware and Software upgradation from time to time, during warranty and CMC period.

23.2 Further, any bugs/shortcomings detected by the purchaser/user as well as the supplier himself shall be rectified at free of cost to purchaser even beyond warranty period

24. **Property Rights:** The Supplier shall indemnify the Purchaser against all third party claims of infringement of patent, copyright, trademark, license of industrial design rights, software piracy arising from use of the store/goods or any part thereof in the Purchaser's country.

25**. Arbitration**

 Disputes, if any, shall be subjected to the sole arbitration of Principal Secretary/Secretary(Health) to the Government of Himachal Pradesh, whose decision shall be final and binding on the parties.

26**. Jurisdiction**

 The courts at Hamirpur will have the jurisdiction for trial of any matter, dispute or reference between the parties arising out of the contract. It is specifically provided that no court outside and other than Courts at Hamirpur shall have jurisdiction in the matter.

27. **Force Majeure**

 Any failure of omission or commission to carry out the provision of the contract by the supplier shall not give rise to any claim by either of the party to contract, if such failure of omission or commission arises from an act of God, which shall include all acts of natural calamities such as fire, flood, earthquake, hurricane or any pestilence or from civil strikes, compliance with any stature and/or regulation of the Government, lockouts and strikes, riots, embargo or from any political or other reasons beyond the supplier's own control including war (Whether declared or not) civil war or state or insurrection, provided that notice or the occurrence of any event by either party to the other shall be given within two weeks from the date of occurrence of such an event which could be attributed to Force Major conditions.

28. **Termination for default**

 The purchaser may without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, terminate the contract in whole or in part.

i) If the supplier fails to deliver or install system within the time period(s) specified in the contract, OR

ii) If the supplier fails to perform any other obligation(s) under the contract.

**29. Termination for Insolvency**

 The purchaser may at any time terminate the contract by giving written notice to the supplier, without compensation to the suppliers, if the supplier becomes bankrupts or otherwise insolvent (which shall be a breach of the contract on the part of the supplier), provided such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

**30.** **Termination for Convenience**

The purchaser may by written notice sent to the supplier terminate the contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the *Purchaser's convenience.*

**Note: Warranty of the units should be for one (1) year. Company Engineer must visit the functional unit after every 3 months even without call. As and when called for, Company Engineer Must report at the earliest if any malfunctioning occurs, failure to report within 24 hours will invite a penalty of Rs. 10,000/- per day.**

**CHECK List duly filled in to be attached with the Technical Bid**

|  |  |  |
| --- | --- | --- |
| **Sr.No** | **Particulars** |  |
|  | Undertaking for Non gratification as per clause 1.7  | Yes/No |
|  | Non-blacklisting certificate as per Clause 1.8  | Yes/No |
|  | Undertaking on affidavit from the original manufacture as per Clause 18.8 | Yes/No |
|  | Undertaking for the supply of spare part as per clause 19.1  | Yes/No |
|  | Whether a list of institution/organizations where your firm has supplied this item recently, is attached alongwith satisfactory performance certificate from those institution/ organizations. As per clause 20 | Yes/No |
|  | Certificate of having satisfactory service arrangement and fullytrained staff as per clause 32.2 | Yes/No |
|  | In case you are manufacturer, have you enclosed the certificate | Yes/No |
|  | Whether the prices has been quoted on the prescribed proforma. | Yes/No |
|  | Whether all the undertakings as required in the tender document are enclosed | Yes/No |
|  | Whether EMD as asked has been attached | Yes/No |
|  | Whether Tender Document duly signed by the authorized signatory attached | Yes/No |
|  | Whether the technical specification of the material are Attached. | Yes/No |

Authorized Signatory:

Name of the firm/bidder:

**To be enclosed with Techno-Commercial Bid**

**ANNEXURE-B**

**PROFORMA FOR AUTHORITY FROM MANUFACTURERS**

No....... Dated...........

To

Dear Sir,

Sub: Tender No........

We................…………. An established and reputed manufacturers of ………...............

having factories at……….........................and office at M/s.........................…..........(Name and Address of the Authorized representative) to represent us, to tender, negotiate and conclude the contract on our behalf with; you against Tender no.. .....................……………..No company/firm or individual other than M/s........…… ………………………. are authorized to represent us in regard to this business against this specific tender.

Yours faithfully,

Signature and seal

Name……………............

For & on behalf of M/s

.........…………………..........

(Name of Manufacturers)

Note: This letter of authority should be on the letter head of the manufacturing concern

and should be signed by a person competent and having the power of attorney to bind

the manufacturers.

**To be enclosed with Techno-Commercial Bid**

**ANNEXURE-E**

BIDDER PARTICULARS

Bidder Serial Number Allotted on Tender Document: \_\_\_\_\_\_\_\_\_\_\_

1. Name of the Bidder :

2. Address of the Bidder :

3. Name of the Manufacturer (s) :

4. Address(es) of the Manufacturer :

5. Name and address of the person :

To whom all references shall be Made regarding this tender inquiry.

Telephone :

Telex :

Fax :

e-mail address :

Witness :

Signature

Name

Address

Designation

Company

Date

Company Seal

**To be enclosed with Techno-Commercial Bid**

**ANNEXURE-F**

BID FORM Dated:

To

Sir,

Having examined the Bidding Documents of Tender No.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_undersigned offer to supply, install, commission, operate maintain\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and we undertake, if our bid is accepted, to complete delivery of all the items specified in the contract within\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_weeks calculated from the date of receipt of your Notification of Award and to complete the installation, testing commissioning.................. We also undertake to provide CMC and supply consumables on the rates offered/negotiated (in case our bid is accepted) for the entire period of 5 years from the date of satisfactory installation.

Signature and Seal

...........................

(In the capacity of)

Only Authorized to sign bid for and on behalf of......……………………

**To be enclosed with Techno-Commercial Bid**

**ANNEXURE-G**

**PROFORMA OF GUARANTEE FOR SUPPLY OF SPARES DURING POST**

**WARRANTY PERIOD**

To

Dear Sir,

In consideration of the (hereinafter referred to as "Purchaser" which expression shall unless repugnant to the context or meaning thereof include its successors,

administrators and assignees) having awarded to M/s…………………............ with its Registered/Head office at …………………….............. (hereinafter referred to as the "Supplier" which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assignees), a contract by issue of the Purchaser's letter of Award no………………........ dated entering into a formal contract to that effect with the Purchaser on .......……………….. vide agreement dated…………........ (hereinafter referred to as the contract). We the supplier hereby give a guarantee for the supply of all necessary spares demanded for the routine and emergency maintenance of being supplied by us to for a period of not less than 7 years after the warranty period of 5 years and life time spares thereafter in case asked for by the purchaser. We further clarify that for the first 5 years i.e. warranty period of 5 years, we are covered by the warranty clause as mentioned. For the remaining period of 5 Years and thereafter for the life time, a detailed list of spares will be supplied to the purchaser for the purpose of enabling him to decide spares needed for routine and emergency maintenance.

Dated.............................. day of...................20................

Witness:

(Name of manufacturers)

Signature and Seal

(Signature)

Name :

For & on behalf of M/s

**PRICE BID PROFORMA**

**ANNEXURE-D**

|  |  |  |
| --- | --- | --- |
| Sr.No | Name of equipment | Price quoted |
| 1. | Cost of Core Equipment. (Manufacturer/model/make etc. be specified) including all accessories as required in the technical specification with 5 years. warranty |  |
| 2. | Taxes/Duties : |  |
|  |  i) Custom Duties |  |
|  ii) CST/GST |  |
|  iii) Service Tax |  |
|  iv) Entry Tax |  |
|  v) Others(Pl. specify) |  |
| 3. | CMC (after 5 years warranty) |  |
|  | 1st year 2nd year 3rd year 4th year 5th year Taxes on CMC |  |

**It is certified that the cost of equipment shown above, has included all taxes/duties etc. and nothing above shall be charged over and above this cost.**

Authorized Signatory:

Name of the firm/bidder:

 **TECHNICAL SPECIFICATIONS**  **“Annexure- A”**

**Department of Radio-Diagnosis**

1. 100 mA Mobile X-ray Machine

|  |
| --- |
| The mobile x-ray equipment would be required to perform x-ray studies in emergency and Trauma Center and at the bedside in wards and ICU. The unit should be compact, lightweight and easily transportable. It should have following specifications: |
| Generator | A high frequency generator with the following features:a. Power : 4 KW or moreb. kVp Range: 40-120 KVp or morec. mAs Range : 250 m As or mored. m A Range : 10 mA to 100 mA or moree. Exposure Time : 10 ms to 5 sec.  |
| Digital display | kV and mAs parameters, system ON, System OFF, status and fault message on the kV and mAs are. |
| X-Ray Tube | Stationary/Rotating anode tube with focal spot 1.8X1.8 mm or less. |
| Tube Stand | The stand should be fully counterbalanced with rotation in all directions. |
| Collimator | Collimator rotation should be + 90 to -90 degrees with auto shut off lamp facility. |
| Cassette storage box | The equipment should have cassette storage box for minimum of 5 cassettes. |
| Electrical requirement | The unit should be operational on main voltage from single phase 180-240 v AC with automatic main compensation. |
| Ergonomics | The unit should have small foot print. The height of the column stand should be more than 150 cm for easy transportation in the lift etc. and areas with small height doors. The equipment should be light weight, not more than 160 kg. |
| Breaking System | The unit should have effective breaking system for parking. |
| Installations | The bidder should have installed same model successfully in India. The copy of the satisfactory performance certificate of same model to be enclosed along with the bid. |
| Certification | System shall have valid AERB certificate of the quoted model. The bidder to provide any other certificate required for importing the equipment in case of imported models. Onsite registration and approval of AERB form machine will be the responsibility of the supplier. |
| Product Data Sheet | All technical specification should be supported with original date sheet highlighting the page number in the compliance sheet. Photocopy/computer print will not be acceptable. |

The rates of the equipment should be quoted with 5 years onsite warranty and CMC for 5 years.

|  |
| --- |
| **Accessories:-** |
| Two sets of CR Cassettes of 14”x17” & 10”x12” size. |
| Lead Alphabets and numbers 3 sets. |
| BARC Approval light weight lead gowns with lead equivalent of 0.5 mm or better- 2 No.s with hangers  |
| Lead partition for Radiography. |

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**DEPARTMENT OF ANESTHESIA**

3. ETO Sterilizer

Technical Data:-

|  |  |
| --- | --- |
| Sterilization gas  | Ethylene oxide |
| Sterilization method | Cold sterilization of heat sensitive material |
| Operating temperature for sterilization cycle | 30 to 60 degree centrigrade |
| Print facility for record generation of batch No. , date, pressure & temp. on time coordinates | Yes, by an inbuilt printer unit |
| Eto sterilizer should be able to run minimum essential cycle programs | 1. Sterilization Cylce for heat sensitive objects that ensure temp. in the range of 30 to 60 degree centigrade, with protection of the operating personnel.2. aeration cycle/ programme to extract residual gas out of the sterilized objects after each sterilization cycle.3. automatic chamber evacuation cycle with subsequent venting before releasing the door lock for opening, thereby prohibiting exposure of the operating personnel by the Gas dissolving from the chamber walls during shut down period.4. Gas disposal arrangement/ catalytic converter  |
| Provision of pollution control device(such as catalytic converter or equivalent compliant with local pollution norms, if any) appropriate for safe disposal of ethylene oxide used in sterilization process. | Yes  |

**Configuration:**

|  |  |
| --- | --- |
| Type of installation  | In-wall installation  |
| Overall height  | 600mm +/- 10mm |
| Overall width  | 304mm +/- 10mm |
| Overall depth  | 304mm +/- 10mm |
| Inbuilt software facility for download data of sterilization cycle, records, batch No., date, pressure & temperature on times coordinates, using USB/RS232 port facility. |  |

**Sterilizer chamber details**

|  |  |
| --- | --- |
| Sterilizer chamber | Double walled, with smooth inner surface ( To minimize Gas Deposits) and made of corrosion and gas resistant material  |
| Material of Sterilizer Chamber  | Stainless steel: SS 304 Grade  |
| Insulation  | Sterilization chamber shall be insulated against heat emission and its jacket shall have water circulation cycle based cooling arrangement  |
| Sterilization Chamber Capacity  | 50lt +/- 10lt  |
| Availability of suitable vacuum pump and gas trap to separate and avacuate gas from sterilization chamber  | Yes  |

**Sterilizer chamber door**

|  |  |
| --- | --- |
| Type of sterilizer chamber door  | Hinged door  |
| Features of sterilizer chamber door  | Automatic operation ( with manual override facility in case of auto mechanism failure) with quick release arrangement  |
| Safety Features  | Safety interlocking facility in door to ensure sterilization process starts only when door is properly locked in position and also not to allow door opening during running of sterilization process |
| No. of Door  | One  |

**Accessories, consumable and warranty**

|  |  |
| --- | --- |
| Accessories  | Sterilization basket of suitable size 1 no. , EO GAS cartridges 20 Nos., packaging material with chemical indicator of all sizes- one roll each |
| Consumable : Steriliser Unit to be supplied with consumables including packing material sufficient to carry out sterilization cycles (No.)  | Sufficient for 20 sterilization cycles  |
| On site warranty  | 5 years  |
| CMC  | 5 years  |
| 1. Cartridges price to be quoted separately and price to hold good for 5 years. |

**Certification: Through appropriate agency**

**4. Heat Sealing Machine**

\* Hand held, Heat Vacuum Sealer 430-460 mm x 16-20 inch length with thickness of 1.3 mm.

\* Made for sealing of polyethyl Polypropyl and PVC material & lamination.

**DEPARTMENT OF ANESTHESIA, DR.RKGMC, HAMIRPUR**

|  |
| --- |
| 1. **ANESTHESIA WORKSTATION SPECIFICATION**
 |
| 1. The unit should be a cost effective, flexible anesthesia workstation for performing and monitoring inhalation anesthesia, suitable for Adult as well as Child upto neonatal age.
2. It should be capable of providing low-flow technique to minimize gas and anesthetic agent consumption for economic day-to-day operation. It should give and agent consumption data.
3. The Anesthesia Workstation should have in-built Ventilator with Coloured touch screen 15 inch TFT display, integrated CO2 absorber, in-built & integrated anesthesia Gas Monitoring Facility, vaporizers and 15” Multi parameter monitor. All these components should be the same manufacturer or brand with their label on each component.
4. The unit should be able to connect to Central pipeline & there should be provision of one PIN Index Yoke to connect to One Emergency Gas Cylinder of O2 & N2O each. Pipeline inlet for Oxygen, Air, Nitrous Oxide.
5. The unit should have Powder Coated Steel Trolley with 4 Wheels & 3 Drawers & the front wheels should have locking device. The unit should have Rail on one side to mount other equipment’s.
6. Gas delivery system with digital virtual display of the flowmeters for O2, N2O and Air. Total flowmeter tube for total FG.
7. Hypoxic guard to provide a nominal minimum 25% concentration of oxygen in O2/N2O mixture. It should have proven hypoxia guard design using the Pin-valve Mechanism or equivalent mechanism.
8. The machine to have Auxiliary Oxygen Flowmeter.
9. Clock and timer- Tourniquets, certain drug delivery, cross clamping of vessels-many operating room events need timing, to offer a handy clock and timer, right on the screen
10. Oxygen Flush : Range 25 to 75 L/min.
11. It should be equipped with self-test routines and automatic calibration of all sensors. The machine checks out should calibrate all the sensors, calculate the leak and compliance. Preferable to do even the vaporizer leaks test in the machine check out is needed.
12. The unit should have Common Gas Outlet for using open circuit & the unit should have easy change over from open circuit to closed circuit or vice-versa.
13. International Standards:- The unit should comply with international Standards Y should have CE Marking , AAMI ES60601-1, CSA C22.2 #601.1, EN/IEC 60601-1, ISO 80601-2-13 Quality Systems-Medical Devices. Fillers for Isoflurance & Sevoflurance
 |
| 1. **BREATHING SYSTEM (CLOSE CIRCUIT SYSTEM)**
 |
| 1. It should be integrated to the CO2 absorber of minimum 1.0 Kg & CO2 absorber should be Single/ Double chamber design having easy removal & re-fitting during the operation. Battery Backup upto 1 hr.
2. it should have the fully autoclavable at 134 deg C. It should have Pressure Graduated Metallic APL Valve, and Inspiratory Valve, Expiratory Valve and Bag to Vent switch to easily move from ventilator to manual bag ventilation.
3. The machine should have patient airway pressure monitoring giving the Pmax, Pmean, and Peep values.
4. Machine shall provide circle mode breathing circuit, Reusable closed ckt for adult and neonate
 |

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| 1. **Vaporizers**
 |
| it should have provision to connect Two Selectatec mount vaporizers & the unit should be provided with two vaporizers equivalent to TEC-7 type, One of Isoflurance& Sevoflurance form the same manufacturer. |
| 1. **Integrated Anesthesia Ventilator: in built Anesthesia Ventilator:**
 |
| 1. It should have integrated Microprocessor Controlled & Pneumatically Driven Ventilator with bellows and the same bellows should be useful for Pediatric & Adult Application, thus avoiding change of bellows.
2. The unit should have fresh Gas De-coupling or Continual fresh gas flow with fresh gas flow compensation during mechanical ventilation.
3. Modes of Ventilation: VCV, PCV,PCV-VF, SIMV+PSV (for VCV,PCV) PSV pro (with Apnea Backup).
4. Cardiac Bypass Mode during cardiac bypass procedure to stop the system from alarming, and turns off automatically, when the ventilator is turned back on. Complete Patient spirometry with all the 3 loops and save loop feature should be available.
5. Tidal Volume: Tidal volume delivery 5 to 1500ml (Volume Control, PCV-VG and SIMV volume 20 to 1500 ml; PCV modes 5 to 1500 ml).
6. Rate : 4 to 100bpm.
7. Peep: Off, 4 to 30cms H2O.
8. Settable I:E ratios, Pause, Trigger (0.2-10 L/min), Insp Pressure from 5 upto 60CMC H2O.
9. Ventilator shall be capable of 120+ L/min peak flow.
10. Compliance Measurement and Trending (Preferable): Measures and display the patient’s compliance to offer a view of the patient’s lung condition.
11. It should have a high contrast color 15 inch TFT Touch Screen Display.
12. Gas Monitoring: - The In-built Anesthesia Gas Monitoring Facility should base on side-stream technology; using infra-Red Photometry Principal & also it offer Automatic Anesthetic Agent Identification. (AGM Module should be swappable to plug in either Anesthesia machine of Patient Monitor.
13. Cardiac Output (optional)

Specifications:-CO2 Et. & In: Display : 0-10%, 0-76 mmHgAccuracy: +/-0.5 vol% or +/-12% rel.Reaction time: <500 ms 150ml/minN2O In & Et.: Display : 0-100Accuracy: +/-2 Vol% Or +8% relReaction time: <500ms 150ml/minO2 (paramagnetic) In & Et.: Display: 0-100% Reaction time: <500 ms 150ml/minAnesthetic agent:Halothane, Isoflurance : Display : 0-8.5 Vil%Enflurane, Sevflurane : Display: 0-10 Vol%Desflurane : Display: 0-22%Accuracy : 0-1.15% or +15% rel.MAC:- it should have display of MAC (minimum Alveolar Concentration).1. Alarms:- it should have clear alarms and user information as text messages. It is essential that unit should prompt user for corrective action rather than giving only alarm with no diagnostic message.
 |

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| 1. **SPECIFICATIONS FOR MULTI PARAMETER PATIENT MONITOR:**
 |
| 1. Parameters:- Should be capable of Monitoring Heart rate,SPO2, NIBP,ECG,2x Temp, RR and 2xIBP (Upgradable to 4).
2. Display:- Should have a Display of Minimum 15 inch Medical Grade high Resolution Active matrix TFT LCD with Touch screen on primary display.
3. Should operate through Rotary knop & Membrane keyboard.
4. Fields:- Should have 6 waveform fields.
5. ECG:- Should have provisions to connect 3 or 5 Lead ECG cables & Should be able to perform Multi-lead (upto 4) arrhythmia analysis at the bedside.
6. NIBP:- Should have NIBP measurement by Osillometric method with double lumen tubing. Should have Manual/ Automatic modes of measurement. Should have a measurement range of 20 to 250 mm Hg.
7. Invasive BP:- Should have 2 channel Invasive Blood pressure (IBP) measurement. – Should have waveform IBP 1 and IBP 2.
8. Temperature:- Should have provision for two temperatures with display of T1 and T2.
9. Respiration:- Should have Respiration by Impedance method.
10. SPO2:- It must use Low perfusion technology to measure oxygen saturation for accuracy during motion artifacts, low perfusion states like shock, bradycardia and hypothermia. Should have SPO2 measurement with plethysmograph, and SPO2 values with range 50% to 100%.
11. Alarm facility: Should have Alarm facility for HR limits, Arrhythmia, ST Segment Limit, and all other parameter limits.
12. Graphs & Trends: Should have 24 hr Graphical and Tabular Trend for NIBP, HR, SPO2, RR, IBP, IPB2, T1,T2, AWRR, ST, Segment.
13. Facility to store snapshots during critical events for waveform review at a later stage.
14. Audio visual and graded alarming system.
15. Dedicated software and parameters to monitor physiological parameters of patient’s in OR
 |
| **F . System Configuration Accessories, Spares and consumables:-** |
| Should be supplied with the following Standard Accessories 1. 3 Lead ECG cable- 2 Nos. 5 Lead ECG cable – 2 Nos.
2. SPO2 finger probe for Adult and Pediatric application- 1 each.
3. NIBP cuff for Adult and Pediatric application.
4. 2 IBP Transducers with cable.
5. 2 Temperature Probes.
6. Disposable Adult & Pediatric circuits 50 each.
7. HME filters- 50.
8. AGM Module.
9. Air, O2 & N2O Hoses.
10. Adult Ckt Resuable.
11. Pead Ckt Resuable.
12. Bag of different sizes.
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| **Environmental Factors:-** |
| * The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%.
* The shall be cables of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%.
* Shall meet IEC-60601-1-2: 2001(or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC directive.
 |
| **Power Supply** |
| * Power input to be 220-240V AC, 50Hz fitted with Indian plug.
* Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications. (Input 160-260 V and output 220-240 V and 50 Hz).
* Should provide suitable isolation Transformer with true online UPS with maintenance free batteries for minimum one hour back up should be supplied with the system.
 |
| **Standard, Safety & Training:-** |
| * Should be European CE & US FDA approval product.
* Shall meet the safety requirements as per IEC 60601.
* Particular requirement for the safety of electrocardiographic monitoring equipments.
* Manufacturer/ Supplier should have ISO certification for quality standards.
* Should have local service facility. The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.
* Back to back warranty to be taken by the supplier from the principal to supply spares for a minimum period of 10 years.
* Comprehensive onsite warranty for 5 years and provision of CMC for next 5 years.
 |
| **Documentation:-** |
| * Log Book with instruction for daily,weekly, monthly and quarterly maintenance checklist.
* The job description of the hospital technician and comply service engineer should be clearly spelt out.
* Complete workstation should be of same company, otherwise will be rejected.
 |

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| **DEPARTMENT OF ANATOMY** |
| Sr. no | Name of Machinery & Equipment | quantity | Specification |
| 1 |  Table with marble or stainless steel tops with a minimum size of ( 6”1” x 2” x3”) | 10 | Stainless steel with central drainage and bucketSize (6”1” x 2” x3”) |
| 2 | Hand saw, preferably metal | 3 | Stainless steel |
| 3 | Drill Machine | 1 | Electric  |
| 4 | Band saw for sectioning body and limbs | 1 | Size of cutting table 785 x585 mm approx. total table travel 1245 mm extension table 455 x760mm. size of wheel 455 mm approx. height 1700 mm approx. motor capacity 1HP Crompton/AUE. Supplied complete with one blade, starter, cord and plug. |
| 5 | Brain knife | 3 | SS ( 12” x9” x8”) |
| 6 | Mortuary cooler  | 2 (For 4 bodies) with 2cooling chambers each | Temperature range- 2degree to 8 degree C/ 10 degree to 20 degree C. Digital micro processor, LED/LCD Display, GI sheet, stainless steel, trolleys made of steel and sliding on telescopic rails. Automatic defrosting system, forced air circulation, internal drainage present, standard key locks, power supply 220volts/50 Hz |
| 7 | Dissecting instruments for cadaveric dissection | 10 | With forceps (fine , blunt, toothed & artery), scalpel with blade & blunt scalpel (small & medium size), scissors (pointed & blunt) |
| 8 | Embalming Machine | 1 | All SS cabinet, compact and portable, noise free ball bearing fitted polymer wheels, translucent tank for unhindered observation, Dial pressure gauge fitted on top for easy visibility. Heavy gauge moulded HDPE tank for lifelong rust free performance. Easily accessible pressure and flow regulator valve fitted on top. High pressure pump with power supply fitted. Collapsible handle for ease in handling. IV stand fitted for mounting of cannula tubing |
| 9 |  Articulated human skeleton Male & Female  | 5 (3 male & 2 female) | Full size – medical quality, articulated to show normal posture. skull comes with a 3 part with 32 teeth, a cut calvarium and movable spring held mandible the arms and legs are detachable and most natural movements can be demonstrated. The skeleton is mounted upright on metal rod with roller stand |
| 10 |  Articulated human skeleton (CHILD) | 1 | Good quality |
| 11 |  Disarticulated human skeleton | 15 | Comes with a three piece of skull and a spring held jaw complete with bones of vertebral column. Bones of one hand & one foot are loose. Other hand & foot are articulated sternum is cast in one piece and is complete with ribs. With simulated intervertebral disc. all other bones are loose. Skull with 3 parts & 32 teeth. 2 teeth are detachable for demonstration. Complete skeleton with total bones are packed in a heavy card board box. |
| 12 | Articulated Male Pelvis | 3 | Life size. Pelvis shape is long and narrow & superior aperture is heart like |
| 13 | Articulated Female Pelvis | 3 | Life size. Pelvis shape is short and broad & superior aperture is rounded |
| 14 |  Skull Calvaria cut and Jaw spring held | 4 | Bony skull, 6-parts |
| 15 | Skull complete  | 4 | Adult skull |
| 16 | Skull disarticulated 14 parts | 4 | Coloured skull dissecting |
| 17 | Joints ( Hip, Knee, Elbow, Shoulder, Hand, Foot, Wrist ) | 1 each |  with ligaments on stand and Functional movements |
| 18 | X-Ray View Box (single) | 2 | With LED light |
| 19 | X-Ray View Box (double) | 3 | With LED light |
| 20 | Histology slide boxes (each box should contain slides of Tissues specified in the list attached) | 50 | Glass slides |
| 21 | Microscopes, Binocular | 60 | Stand- Stable & sturdy C shaped stand with well-contoured modular base, corrosion resistant paint and heat resistant pads. Viewing Head- Binocular inclined tube, inclined at 45° rotatable through 360° and Dioptric adjustment. Eyepieces- Wide Field eyepiece WF 10x/18mm paired with eye guards Nosepiece- Low friction & fully Parfocal Quadruple Revolving nosepiece (Ball bearing type). Objectives- Achromatic,treated objectives: 4x/0.10,10x/0.25 40x(SL)/0.65, 100x(SL, Oil)/1.25 Stage- Double layer graduated mechanical rectangular stage size 142 x 133mm cross travel 76 (X) x 54 (Y) mm on ball bearing co-axial controls spring clip specimen holder ,Focusing Module-COAXIAL coarse & fine focusing mechanism, with tension control ring. Condensor- Moveable ABBE Condenser, NA 1.25 with aspheric lens & Iris diaphragm Illumination-Built In Illumination systemSuper bright white LED with intensity control regulator and battery backupPower-Power Input 220V AC. Standard Accessories Packed in Wooden box with: Operation Manual, Cleaning Cloth Dust cover |

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| --- |
| **Department of Physiology** |
| Sr. No. | Name of Machinery/ Equipment | Qty required | Specification |
| 1 | Microscope | 60 | Stand- Stable & sturdy C shaped stand with well-contoured modular base, corrosion resistant paint and heat resistant pads. Viewing Head- Binocular inclined tube, inclined at 45° rotatable through 360° and Dioptric adjustment. Eyepieces- Wide Field eyepiece WF 10x/18mm paired with eye guards Nosepiece- Low friction & fully Parfocal Quadruple Revolving nosepiece (Ball bearing type). Objectives- Achromatic,treated objectives: 4x/0.10,10x/0.25 40x(SL)/0.65, 100x(SL, Oil)/1.25 Stage- Double layer graduated mechanical rectangular stage size 142 x 133mm cross travel 76 (X) x 54 (Y) mm on ball bearing co-axial controls spring clip specimen holder ,Focusing Module-COAXIAL coarse & fine focusing mechanism, with tension control ring. Condensor- Moveable ABBE Condenser, NA 1.25 with aspheric lens & Iris diaphragm Illumination-Built In Illumination systemSuper bright white LED with intensity control regulator and battery backupPower-Power Input 220V AC. Standard Accessories Packed in Wooden box with: Operation Manual, Cleaning Cloth Dust cover |
| 2 | Sherrington starling Kymograph | 2 | Sherrington starling Kymograph/M electrical E-8 Sherrington Kymograph with special heavy duty motor, oil lapsed gear system speeds from 0.12mm/sec. to 640mm/sec in 8 steps, jerk free running instantaneous start and step clutch; stainless steel spindle with screw lift 15x15 cm  |
| 3. | Myograph Stand | 2 | Myograph Stand/Adjustable Stand with quick tangential adjustment, 38 cm, high stainless upright |
| 4. | Simple Key | 2 | Simple Key on vulcanite base |
| 5 | Short Circulating key | 2 | Short Circulating key switch type with table clamp |
| 6 | Pohl’scommutator | 2 | Pohl,scommutator with spill proof raised borders |
| 6. | Vibrating interrupter/ Variable interrupte | 2 | Vibrating interrupter/ Variable interrupte. The electrically maintained pendulum has its vibration controlled by a screw. Adjustment possible 4 to 100 contracts per sec. with heavy duty platinum contracts.  |
| 7. | Student Nerve Muscle Chamber | 2 | Muscle Trogh/Student Nerve Muscle Chamber 17 cmx9cmx3cm. (Lucas Moist Chamber) Perspex bath, cork lined bottom, pair of adjustable silver electrodes interchangeable muscle & heart lever fitments, clamp & drain |
| 8. | Muscle Lever | 2 | Muscle Lever for the use with M Muscle Chamber MF 211 |
| 9. | Muscle grip Clamp | 2 | Muscle grip for femur clamp/M Muscle Grip with6mm dia stem to fit boss heads |
| 10. | M Hook & Weight set | 2 | M Hook & Weight set, brass, Hook 10 gm plus 10 wts 10 gm each total 110 gm set. |
| 11. | M Frog Dissection Board | 2 | M Frog Dissection Board to fit 9 mm rods |
| 12. | M Frog Dissection Board | 2 | M Frog Dissection Board:23x15 cm lead lined with fixing elastic bands |
| 14. | STUDENT STIMULATION TRANSISTORISE D | 1 | Low Voltage units, for tapping 2 and 4 volts for stimulation M STUDENT STIMULATION TRANSISTORISE D ; Output 25 V DC in two steps, duration 5 or 1.5 ms, frequency 5 to 100 c/s in 11 steps. Modes, single, repetitive or an external trigger, for 230V , 50 Hz with simple Elcetrode, with copper wire poles ( INSTEAD OF LOW VOLTAGE UNIT) |
| 15. | Electric Time Marker | 2 | Electric Time Marker 100/sec./Electrical Time Marker 100 CPS with power supply |
| 16. | Tuning fork | 2 | Tuning fork time marker/ M Electricals N-100 Tuning fork to work on 4V, DC |
| 17. | M Simple electrode | 2 | M Simple electrode with copper wire poles |
| 19. | Enamel Bowl | 2 | Enamel Bowl 4” |
| 20. | Sprit lamp | 2 | Sprit Lamps SS |
| 21. | Copper wire | 2 | Copper wire double cotton covered-pkt of 10 mtr  |
| 22. | Kymograph paper | 2 | Kymograph paper Sheets 50 cm. x15 cm. wide pkt of 100 |
| 23. | Marey’s Tambour | 20 | Marey’s Tambour 28 mm. dia |
| 24. | M Venous cannula | 01 | M Venous cannula, corning glass (box of 5) |
| 25. | M Arterial cannula | 01 | M Arterial cannula, corning glass (box of 5) |
| 27. | Westergen Pippets | 06 | Westergen Pippets for ESR on stand (6 Pipettes) |
| 28. | Priestley Perimeter | 10 | M Perimeter Priestley Smith table Model used to measure the peripherial field of vision. The app comprises of a calibrated arc, revolving, chart holder. The object carrier which moves over the arc, contains five colours& five aperatures of different diameter calibrated scale. Adjustable chin rest. All fitted over a sturdy base with receptacle for keeping charts for table top us complete with 100 charts. |
| 29. | Sphygmomanometer | 50 | Sphygmomanometer with LED display |
| 30. | Stethoscope | 50 | Stethoscope |
| 31. | Stethoscope | 02 | Stethoscope Demonstration with triple ear pieces |
| 32. | Basal Metabolism Appartatus | 01 | Basal Metabolism Apparatus/ M Digital Benedict Roth Recording Spirometer. The 6 litre capacity spirometer has a four speed electrical recording unit having digital push button speed control with gravity writing ink pen, Valves are easily accessible, Soda lime container with screw connection in the centre chamber Drain cocks to all the tubes & container sampling cock for connecting the patient to spirometer or atmosphere complete with valves tubes mouth piece, nose clip ink writing pen & 50 charts |
| 33. | M Mosso’s Erograph | 08 | M Mosso’sErograph combining the advantageous features of both the Dubios&Mosso’sErgographs with recording unit with automatic ratchet recording system follows the Dubois design |
| 34. | M COMPASS AESTHESIOMETER | 02 | Brass with well-formed points & an adjusting screw giving movement of app 1 mm per half turn read on a scale |
| 35. | Thermanaesthesiometer | 02 | Therma naesthesiometer/ M HEAT & COLE SPOT HAMMER double pointed from stainless steel |
| 36. | Alogmeter | 02 | Alogmeter |
| 37. | Knee Hammer | 30 | Metal handle and striking end is made of rubber block with pointer and brush inside the hammer |
| 38. | M PNEUMOGRAPH OR STETHOGRAPH | 15 | Corrugated rubber tube with side clips & open link chain for use with any tambour |
| 39. | Bicycle Ergometer/M Bicycle Ergograph | 01 | Digital time speed, distance calorie hand pulse Heart rate monitor. Magnetic resistance system pedal with stirrups comfortable cushion seat- seat position adjustable-handle bar with hand pulse |
| 40. | Schematic Eye | 01 | Model Topography of the orbit Minutely detailed separated into 9 parts size: Height 30 cm x Width 38.5 cm x Thickness 26.5 cm |
| 41. | Hand Grip Dynamometer | 02 | M Digital Hand Grip Dynamometer with parallel grips& digital LCD read out for maximum excursion in kg facility for gender and age adjustment and withhold function capacity 90 kg. |
| 42. | Eldridge green lantern | 01 | Eldridge green lantern for colour perception |
| 43. | Maddox Rod | 01 | Maddox Rod |
| 44. | Newton’s Colour Disc on heavy base | 01 | Newton’s Colour Disc on heavy base |
| 45. | Tuning fork | 15 | 32-10000 Hz (set of 10)(256.512 Hz only) |
| 46. | Stop Watch | 15 | Table Model large display. Additional features alarm and count down time. |
| 47. | Centrifuge Digital | 01 | maximum speed 5200 RPM Microprocessor base Square MS body duly powder coated. Double walled light weight ABS Lid fitted with microprocessor base 2 lines 16 characters LCD panel for 0.59 minutes countdown timer, digital rpm meterand programmable speed controller. Supplied with 8x15 ml Swing out Head |
| 48. | M student Physiograph | 02 | M student Physiograph three channel with time & event channel cosole with 9 speed chart drive and stimulator Couple Strain Gauge, Pulse respiratory, temperature EKG & Bio Potential Transducers, Pressure muscle activity force respiration belt pulse respiration & temperature. Accessories EKG electrode EDG & EMG paste V-Pin junction box  |
| 49. | Student Physiograph | 06 | Student physiograph single channel with accessories  |
|  | Water Distillation steel with spare heating elements | 01 | Water Distillation steel with spare heating elements. |
| 50. | Laptop | 01 | Laptop i7-i8, 8 generation, 15.6” screen, 2 GB graphic card 6 to 8 GB DDR 4-5 RAM, 1 TB Hard disc  |
| 51. | Multimedia Projector with screen | 01 | Multimedia Projector with screen |
| 52. | ECG Machine | 02 | Multichannel automatic with display and recording and saving and transfer the data |
| 53 | ECG Machine | 2 | Single channel manual working |
| 54. | Beaker Glass | 10 | Beaker low form graduated Cap 100 ml  |
| 55. | Beaker Glass | 10 | Beaker Low form graduated Cap 250ml  |
| 56. | Beaker Glass | 50 | Beaker low form graduated Cap 500 ml  |
| 57. | Beaker Glass | 10 | Beaker low form graduated Cap 50 ml  |

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| **DEPARTMENT OF BIOCHEMISTRY** |
| **Sr.No.** | **Name of Machinery & Equipment** | **Quantity** | **Specification** |
| 1. | **Hot air oven** | 04 | Temp. Upto 250oC with accuracy +/- 1oCDouble wall, inner chamber of stainless steel. Elements on three sideChamber size approx. 16”X16”X16”No. of shelves – 2, capacity approx. 50ltrs with air circulation fan. |
| 2. | **Colorimeter** | 05 | Wavelength Range400 - 700 nm |
| Resolution%T: 1, Abs: 0.01, Conc.: 0.01, KFactor: 0.01 |
| Photometric Range%T: 0 - 100, Abs: 0 - 1.99,Conc.: 0 - 1999, KFactor: 0 – 1999 |
| DetectorWide range Silicon Photodiode/Photocell |
| Display16 x 2 line alphanumeric backlit LCD display |
| KeyboardSoft Touch Membrane Keys |
| Data StorageUpto 100 Samples |
| Light SourcesLED |
| Sample System10 mm pathlength matched glass test tube |
| Filters400, 450, 490, 520, 540, 570, 620, 680 nm |
| Power230 V ± 10% AC, 50 Hz |
| AccessoriesMatched Test Tube: A set of 5, Mains Lead, Operation Manual and Dust Cover. |
| 3. | **Student Microscope** | 05 | Binocular Medical microscope with coaxial and fine motion with inbuilt ligh-Binocular medical microscope with coaxial coarse and fine t source with intensity regulator-coaxial mechanical stage and having coated objectives-three nose piece 10, 40 100X oil immersion. 10X paired eye piece, with wide field eye piece. |
| 4. | **Semi Autoanalyser** | 02 | It should be Microprocessor controlled, Programmable, Semi Auto Analyser to perform routine biochemistry tests (including Endpoint, Fixed time & Kinetic chemistries), Enzyme Immunoassays (with Multi standard Curve Calibration & Memorisation) etc. - It should have facility to select more than 50 tests directly through tests keys. - It should offer a minimum of 175 user definable chemistry parameters. - It should have a Peltier controlled reading block and below 20 µl flow cell. - Flow cell with peristaltic pump should be part of the main unit. - Additionally analyzer should have facility to use both 6 mm glass cuvettes & 10 mm plastic cuvettes. - It should have minimum 8 narrow band static interference filters (not filter wheel) with wavelength selectable from 340 - 670 nm. - It should display Real Time Graph and plot at every one second each from start to finish of the test. - It should have a large high resolution graphic backlit LCD alphanumeric display and built-in full graphic printer for printing reaction curves and test results. - It should have programmable aspiration volume between 200 - 999 µl/ test. - It should have the facility to display the actual temperature on screen especially for fixed time and kinetic tests. - It should have facility to store minimum 1000 test results in the memory. - There should be facility to store Reagent Blank O.D. in the memory. - It should have built –in real time clock. - The unit should have facility for Quality Control Programme to use Three Levels of Controls and it should print the Levi-Jennings Plot on daily and monthly basis. - The software should be user friendly and guide the programmer step by step. - The analyzer should also be capable of performing coagulation assays - Flow Cell temperature Selection settings should be from 200C - 400C in steps of 10C - The analyzer should have facility to perform result recalculation facility soon after the kinetic tests gets completed. - The analyzer should have the provision to run 3 Replicates each of Standards & Samples. - The analyzer should perform Non Linear Calibration with upto 10 standards with Graphical display on Display and Printer - It should have the facility to print Patient reports in atleast 5 formats i.e. ID wise, Date wise, Date & ID wise, Date and Test wise, Patient Report with Demographics. - It should have the provisions for 5 fixed calculations items. - Analyzer should have the provision to key in Reference Range values for Male / Female & Child in a single programme.  -Analyzer should have USB connectivity with PC and Printer.- It should have a separate port to connect it to External Keyboard and port to connect to an Incubator. - The manufacturer / supplier should have a full-fledged service force and installation base for the quoted equipment. - The manufacturer should be able to supply kits locally against orders. |
| 5. | **Boiling Water Bath** | 02 | Boiling water bath with lid 12-16 holes.- rectangular double wall, stainless steel- size inside: (350-380) X (400-450) X (100-150) mm- holes of 70-90 mm- capacity 15-25 ltrs- digital temp. Indicator cum controller |
| 6. | **Constant temperature with bath tank capacity** | 01 | Constant Temperature Control Water Bath precision double walled- Glass window on both opposite sides- contact thermometer with relay, complete with stirrer- size : (400-450) X (240 270) X (220-240) mm- with digital temperature indicator cum controller instead of contact thermometer |
| 7. | **Laboratory Reagent Refrigerator** | 02 | Store general-purpose applications in Lab Refrigerators. All models feature advanced alarm options and reliable temperature stability to meet the demanding requirements of the laboratory environment.’

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| Capacity (Metric) | 386L |
| Temperature Range | 1° to 8°C |
| Voltage |  220V |
| Depth (Metric) Interior |  57cm |
| Height (Metric) Exterior |  198cm |
| Height (Metric) Interior |  125cm |
| Insulation | High-density, fluorine free insulation |
| Length (Metric) Exterior | 67cm |
| Shelves | 5 |
| Shipping Weight (Metric) | 110kg |
| Temperature Control | Digital |
| Width (Metric) Interior | 52cm |
| Width (Metric) Exterior | 66cm |

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| 8. | **Chromatographic unit for TLC** | 02 |

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| Sample Applicator :Microprocessor controlled spot and band applicator, volume selectable from 1 to 495 µl, useful for quantitative analysis & preparative work; accepts 100 or 500 µl syringe; spray on technique, individually programmable tracks. Foils or glass plates (upto 4 mm thick). Stationary syringe for steady spray on; removable sample syringe for easy cleaning to prevent cross contamination. |
| Chromatogram Development devices :All glass, small internal volume chambers, bottom divided into two halves; maximum 5-15 ml mobile phase/ run S.S. lit. appropriate size tanks for 20 x 20, 20 x 10 and 10 x 10 cm. plates. |
| Chromatography Visualisation / Derivatisation :UV cabinet, dual wavelength 254 nm & 366 nm, with guaranteed minimum intensity, as follows :UV lamp uw/cm² at distance 15 cm/100 cmShort wave UV (254 nm): :590 :13.4Long wave (366 nm) :420 : 9Visible light (Post chromatography development devices, battery operated, suitable for 20x20 cm Plates, low vol. of derivatising reagents regd., variable immersion speed and time complete with dip tanks and lids. |
| Scanning and Data Handling :Measurements by build-in fluorescence / absorbance in UV / VIS, high speed scanning up to 100 mm sec., wavelength range 190-800 nm, suitable for scanning both. TLC & HPTLC plates, laboratory made plates (4 mm thick) can be scanned, nitrogen flushing of Monochromator, fully automatic, special lens assembly for TLC or HPTLC measurements, autorecording or spectra of all spots on the track, D2/Hg/Halogen lamps built in spectrum scanning speed 100 nm/sec. Pilot slit image for accurate alignment of light beam & sample. Multi wave-length scanning Spatial resolution 25 to 200 nm. Any no. of spectra recorder; complete lamp warm-up before spectrum recorded per plate. Complete lamp warm-up before spectrum measurement. Measurjingrange 0 to 5.0 volts. Scanning slit size – 38 combinations 16 bit 2 channel A/D converter. |
| Data EvaluationData evaluation software for routine and research analysis; suitable for qualification and identification, Graphic User Interface, infinite method and data storage, manual or video integration. Fully automatic optimization of electronic parameters, corrected true spectra recording of all fractions for purity check & identification, base line correction / subtraction. Interface for scanner, video spot check. Spectra recorded after correction for background and lamp emission. Upto 99 peaks per track calculated. Impurity profiling as per USP/BP by individual peak calculation. 9600 data points/sec. Dual level context sensitive help. Options for specialized requirements.The scanner and data station must have a Spectrum library. This library must be upgraded and aid in identification of compounds by search, compare, co-relate etc. functions. |
| Validation of instruments should be routinely possible. System should be upgradable to gradient system. Since a little analytical research will be required to standardize. We except support from the suppliers in the form of literature survey, method development methods standardization double checking of analysis. |
| The computer should be of state of art technology and the configuration should meet the requirements of the system |
| Inkjet printer compatible with system should be provided. |

 Accessories &Consumables : One each of Mercury, Deuterium and Halogen lamp. Should be available with Indian agent

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| Power input to be 220-240VAC, 50Hz fitted with Indian plug |
| Suitable Automatic Voltage regulator/stabilizer meeting ISI specifications should be supplied. Broad specifications are : Automatic Type Input 150-280V , Output 220 V +/- 7 % , 50 Hz . Single phase , AC with automatic 2-4 sec Cut Off and 6-9 minutes restart delay.. Quick start arrangements for bypassing the start delay. Suitable MCB on input voltmeter and indicators on Front Panel. Input Poer Cable with 15 A Plug and six way output terminal strip for two outlets |
| Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system. |
| Resettable overcurrent breaker shall be fitted for protection |
| Comprehensive warranty for 2 years and 5 years AMC after warranty |
| Comprehensive training for lab staff and support services till familiarity with the system. |

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| 9. | **Centrifuge Machine** | 02 | Must have digital display of time, speed and temperatureBrushless maintenance free driveChamber must be of stainless steel materialRotor must be Autoclavable & fixedSpace for 16-18 tubesAutomatic imbalance detection Automatic rotor recognitionMax rmp upto 6500 |
| 10. | **pH meter** | 02 | **Range**0.000 to 14.000 pH**Resolution**0.1 / 0.01 / 0.001 pH**Accuracy**±0.002 pH + 1 LSD**Cal. Points**Up to 6 preset or 5 custom**Buffer Sets**USA, NIST, DIN, User 1, User 2, Custom**Range**±2000.0 mV**Resolution**0.1 mV**Accuracy**±0.2 mV**Temperature****Range (Meter)**0.0 to 100.0 ºC / 32.0 to 212.0 ºF**Resolution**0.1 ºC / 0.1 ºF**Accuracy**±0.3 ºC / ±0.5 ºF**Power Requirements**9 V DC adapter, 1.3 A (100/240 VAC) |
| 11. | **Electrophoresis** | 01 | Cast and run a gel in the same chamber with no tape or additional parts using the space-saving Mini Gel Electrophoresis Systems, with multiple comb and tray options.

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| Description | EasyCast w/buffer exchange ports |
| Type | Mini |
| Sample Range | 8 to 48 |
| Volume (Metric) Buffer | 800mL |
| Length (Metric) Gel | 14cm |
| Width (Metric) Gel | 12cm |
| Height (English) Exterior | 3.75 in. |
| Height (Metric) Exterior | 9.5cm |
| Length (English) Exterior | 9.63 in. |
| Length (Metric) Exterior | 24.5cm |
| Width (English) Exterior | 7.06 in. |
| Width (Metric) Exterior | 18cm |
| Certifications/Compliance | CE marked |

**Power Supply for Electrophoresis*** Simple to use, multi-purpose and lightweight
* Stackable design saves benchtop space
* Soft-touch key pad
* Three jacks

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| Product Size | Each |
| Voltage | 230V |
| Max. Voltage | 300V |
| Max. Current | 400mA |
| Hertz | 50/60Hz |
| Jacks | 3 sets of input jacks |
| Display | Voltage or current |
| Timer | 0 to 999 min. |
| Height (English) | 5.25 in. |
| Height (Metric) | 13.3cm |
| Length (English) | 10.25 in. |
| Length (Metric) | 26cm |
| Width (English) | 5.5 in. |
| Width (Metric) | 14cm |
| Item Description | Model EC300XL2; 230V 50/60Hz |
| No. of Jacks | 3 |
| Electrical Requirements | 230V 50/60Hz |
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| 12 | **Incubator**  | 02 | Electric incubator with thermostat- temp. range from 20oC to 90oC- double door with glass window.-Inner chamber of stainless steel sheet.- chamber size: (330-380)X(330-380)X(330-380)mm- capacity approx. 50ltrs with air circulation fans |
| 13. | **Analytical Balance** | 01 | Balance for your essential needs: 220 g capacity, 0.1 mg readability, backlit LCD, internal adjustment, metal baseSolid construction and high quality materials Simply Reliable.Efficient OperationThe easy-to-use interface enables direct access to applications. Coupled with easy cleaning, your daily tasks are fast and efficient.

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| Maximum Capacity | 220 g |
| Readability | 0.1 mg |
| Repeatability (Test Weight) | 0.1 mg (200 g) |
| Minimum Weight (USP), Typical | 0.16 g |
| Adjustment | Internal |
| Weighing Pan Diameter | 90 mm |
| Display | LCD |
| Settling Time | 2 s |
| Repeatability (typical) | 0.08 mg |
| Hygenic Design | Yes |

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| 14. | **Precision/Micro Balance** | 01 | Balance for your essential needs: 220 g capacity, 1 mg readability, backlit LCD, internal adjustment, metal base**Simply Reliable**,**Efficient Operation**The easy-to-use interface enables direct access to applications. Coupled with easy cleaning, your daily tasks are fast and efficient.

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| Maximum Capacity | 220 g |
| Readability | 1 mg |
| Interfaces | RS232 |
| Adjustment | Internal |
| Legal for Trade | No |
| Weighing Pan Diameter | 120 mm |
| Repeatability Low Load (typical) | 0.7 mg |
| Settling Time | 1.5 s |
| Repeatability (Test Weight) | 0.001 g (100 g) |
| Minimum Weight (USP, 0.1%, typical) | 1.4 g |
| Linearity | 50 g |
| Linearity ± | 0.002 g |
| Display | LCD |
| Resolution | 1 mg |
| Hygienic Design | Yes |

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| 15. | **Spectrophotometer** | 01 | * For routine to research analysis, instrument should offer real innovations that provide enhanced usability and performance - without added complexity.
* Double-beam geometry with 1nm spectral bandwidth for precision measurements
* Xenon flash lamp for instant measurements. System should have perpendicular beam geometry.
* Precision monochromator drive to deliver fast scanning data collection and wavelength accuracy
* Wide accessory selection should be available with various temperature control options, sample changers, sippers and solid sampling devices complete our analysis.
* Spectral Bandwidth(s): 1.0 nm
* Light Source: Xenon flash lamp with minimum 3-year warranty
* Detector: Dual Silicon Photodiodes
* Scan Ordinate Modes: =Absorbance, % Transmittance, % Reflectance
* Resolution: > 1.6 (peak-to-valley ratio; toluene in hexane)
* Range : 190 to 1100 nm
* Accuracy: ± 0.8 nm (full range 190 to 1100 nm) ± 0.5 nm (546.11 nm mercury line)
* Scanning Speed: < 1 to 5000 nm/min, variable
* Data Intervals: 10, 5, 2, 1.0, 0.5, 0.2, 0.1 nm
* Photometric Range: > 3.5 A
* Noise: < 0.00015A
* Stray light: > 2 Abs @198KCL.
* Quartz Cell – 10mm – 3ml capacity
* Training & Installation at our site should be done free of cost.
 |
| 16. | **ELISA READER & WASHER** | 01 | The system should be able to store Min 50 assay definitions.The system should be able to store Min 8 Microplate test formulas and 25 standard curves to reuse.Should have curves fitting options including Linear, Quadratic, 4P and point to point.Should have Wavelength range from 400 nm to 750 nm.Should have OD range between 0 to 3.0 with resolution of 0.001 OD.Should have Min 4 Filters with additional UV option.(405,450,492,620/630)Should be able to read the complete plate in Max 30 sec.Should have facility of external printer attachment.Should have a backup of Service Network within 80 Kms.**MICROPLATE WASHER**Should be a fully automatic microplate washer for rapid & Effective Washing of all types of ELISA including “Coated Cell Assays”.The system should be a self contained fully programmable unit compatible to microplates, stripwells or 96 well plates, 8 or 12 channel minifolds, with self cleaning and ready to run selected assay.The system should have a resolution of 10 μL, with accuracy of ±3%.The system should have repeatability of washing step with 300 μL is 5% CV.The system should have a residual volume of < 1μL per well.The system should have maximum dispense volume of 2 mL. Per well (8port)& 1.65 ml per well (12 port).The system should have maximum of 10 programmable cycles of wash/rinse.The system should have min 50 user friendly programmes.The full plate processing time should not be more than 180 second.The system should have programmable soak time upto 999 seconds.The system should have a backup of Service Network within 80 KMS |
| 17 | **Hot Plate with magnetic stirrers** | 02 | Speed50 to 1,500rpmTemperature Range (Metric)400°C (Max Temperature)Surface Area (English) Heating10.25 x 10.25 in.Surface Area (Metric) Heating26.0 x 26.0cmTop Plate MaterialCeramicVoltage230VHertz50/60HzShipping Weight (English)17.6 lb.Shipping Weight (Metric)8.0kgStirring Range50 to 1,500rpmDimensions (L x W x H)16.2 x 11.3 x 4 in. (41.1 x 28.7 x 10.2cm)Electrical Requirements230V 50/60HzPlug TypeEU/UK/AUS/CHN-styleMax. Temperature (Metric)400°CWarranty3 year warrantyType Hot plates Stirrers |
| 18. | **Electrolyte Analyser** | 01 | Instrument should be fully automatic ISE analyzer. The instrument should be capable of measuring Na+, K+, and Cl-. Measure Range :- Sodium – 20 --- 200 mmol/L  Potassium ---0.2 --- 40 mmol/L  Chloride --- 25 – 400 mmol/L Should be able to perform measurements on serum, plasma, blood, urine and QC samples with results reproducibility. Should have an in-built printer.Should have in-built QC management program.The reagent pack required should be the same for all parameters. Instrument should be easy to operate and simple in operation.  Memory to store 100 + results alongwith QC results.  Sample size should not be more than 100 µl.  Analysis time should not be more than 1 minute / sample.  Instrument should have stand-by mode.  Must be able to interface with computer An alphanumeric display should display measurements results, QC results and user menus. Batch Analysing Facility with autosampler of atleast 21 samples loading capacity alongwith STAT sample.  It should follow International Standards / Safety requirement, CE Mark FDA approved. Contd 2… : : 2 : : Demonstration compulsory.  Users list with the addresses and contact numbers to be provided.Training to MEC Engineers and Laboratory staff. Operating details service manuals should be supplied.  Power Supply: 220 V +/ 10%; 50 Hz +/ 3% UPS of 1 Hour capacity. Tropicalisation: Operating Room Temp.: Upto 320 . C Relative Humidity: Upto 85% non-condensing.. |
| 19. | **Urinometers calibrated**  | 20 | Non mercury urinometer, used for routine urinanalysis, hydrometer should read from 1000 to 1060 specific gravity Warranty for 3 years |
| 20. | **Densitometer with computer** | 1 | Warranty for 3 years |
| 21. | **Vortex mixer** | 2 | Warranty for 3 years |
| 22. | **Weighing machine** | 2 | Digital weighing machine with +/- 100gm variabilityWarranty for 3 years |
| 23. | **Accupipet- Variable Volume Pipette, 1-10ul**  | 3 | Variable Volume Pipette, 1-10ulWarranty for 3 years |
| 24. | **Accupipet- Variable Volume Pipette 10-100ul**  | 3 | Variable Volume Pipette, 10-100ul Warranty for 3 years |
| 25. | **Accupipet- Variable Volume Pipette, 100-1000ul**  | 3 | Variable Volume Pipette, 100-1000ulWarranty for 3 years |
| 26. | **Fixed Volume Autopipette 1000µl** | 3 | Fixed Volume 1000 µlWarranty for 3 years |
| 27. | **Fixed Volume Autopipette 500 µl** | 3 | Fixed Volume 500 µl Warranty for 3 years |
| 28. | **Fixed Volume Autopipette 100 µl** | 3 | Fixed Volume 100 µlWarranty for 3 years |
| 29. | **Fixed Volume Autopipette 10 µl** | 3 | Fixed Volume 10 µlWarranty for 3 years |
| 30. | **Fume Cupboard** | 1 | Fume hood 2’X2’X2’. Powder coated, counterbalance vertical sliding Perspex door, Fitted withgas cock, Water faucet, SS Basin &amp; flexible drain |
| 31. | **Stop Watch** | 3 | Handy built in stand/magnet/clip allows multiple-attachment options; free standing on a flat surface,-clipping to a pocket or hanging from a metallicsurface.• Easily readable digital display.• Programmable from 23 hours, 59 minutes, 59seconds.• Timer automatically counts up after set time iscompleted.• Memory recall function.• Alarm sounds for 1 minute |

**Note:-**

 **Following are the terms and conditions for items from S. No. 1-18**

* **Onsite Warranty for 5 years and CMC for 5 years after warranty period**
* **Spare parts should be available for next 10 years**
* **Quality preventive maintenance service should be provided during warranty**
* **Breakdown services should be attended within 24 hrs**
* **Prices of items which are not covered under warranty should be mentioned in price bid.**

DEPARTMENT OF OPHTHALMOLOGY, Dr.RKGMC&H- Hamirpur (HP)

Technical Specifications of the Equipments:-

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| **Sr. No.** | **Specifications of Equipment** | **Quantity required** |
| **1.** | **Slit Lamp Biomicroscope with Applanation Tonometer**1. Imported with original motorized Table.
2. Stepped illumination increase.
3. Ability to change magnification.
4. cobalt blue and red free filter
5. Eye pieces approximately 10X, 16 X.
6. Diopteric range ± 6 D to 8 D.
7. Adjustable IPD range.
8. With original imported compatible Applanation Tonometer.
9. Should be EUCE/USFDA certified and valid detailed electrical and functional safety test report from ERTI. Copy of the certificate / test report should be produced alongwith the technical bid.
10. The Equipment should be with 5 years onsite warranty and CMC for 5 years after warranty period.
 | **02** |
| **2.** | 1. **Scan**
2. Portable light weight; Digital with LCD display with touch screen
3. High Speed 10 MHz , Solid transducer Probe with fixation light
4. Auto and manual mode of operation with ability to calculate anterior chamber depth & lens thickness and vitreous.
5. Multiple IOL calculation formulae with provision of immersion facility.
6. Can measure from normal to short and extra long axial length
7. Hardware memory for multiple eyes
8. Built in thermal printer for hard copy data output
9. Standard deviation automatically calculated
10. One extra Probe for the instrument.
11. The Equipment should be with 5 years onsite warranty and CMC for 5 years after warranty period.
12. Should be EUCE/USFDA certified and valid detailed electrical and functional safety test report from ERTI.
 | **01** |
| **3.** |  **B-Scan Ultrasound**1. The unit should have a sealed probe of 10MHz for taking B scan images.
2. Should have facility for documenting image on vedio printer.
3. Should be able to provide standard vedioout put in RS-170, S vedio, RGB.
4. It should have about 256 shades of gray for enhanced resolution.
5. It should have the facility for storing 4 images and multiple users can customize the imagery system.
6. Should have adjustable gain ( 27-90dB)and image depth about 45mm
7. It should have facility to select different image depths, selectable from 2mm,3mm and 4 mm.
8. Scan angle should be about 52 degree sector.
9. The sealed probe should be detachable from the cable connected to the unit.
10. The unit should have the flexible display modes as under:- Single B, Single B with vector A, Vector A, Dual B, Dual B with Vector A, Quad B.
11. It should be upgradable in the future.
12. Should have the option of providing 20 MHz probe for high resolution in future.
13. Dust cover, original operator manual to be provided.
14. Onsite Warranty should be for 5 years.
15. CMC after onsite warranty should be for 5 years.
16. Should have safety certificate from a competent authority CE/FDA(US)/STQC S certificate or valid detailed electrical and functional safety test report fromERTI. Copy of the certificate / test report should beproduced along with the technical bid.
 | **01** |

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| **Sr. No.** | **Specifications of Equipment** | **Quantity required** |
| **4.** | **Phacoemulsification Unit** | **01** |
|  | Phacoemulsification system should be of the latest model with advanced features and facilities specified as follows:- **Fluidics:-**1. System fluid should allow the surgeon to target intaocular pressure in the eye for the system during the surgery.
2. System fluidics should detect and compensate for dynamic changes occurring in the fluidics system.
3. System fluidics should lead to excellent chamber stability via less variation in pressure during the procedure with:

-Only gravity-Highly noncompliant tubing.-Slow almost zero venting of air in fluidics system.1. Optical pressure sensor.

-Measures deflection of irrigation & aspiration pressure sensor diaphragm.- Read 2D barcode with calibration info.1. Dual segment pump with advanced Fragmented pump design.

-High capacity- Low pulsation.1. Should have the facility to use vacuum level of 650+mm of Hg and reach aspiration flow ratesof 60 CC/Min.

**Phacoemulsification:**1. **Best** in class phaco. Torsional Hand piece and facility with high efficiency balanced tip which accounts for the least heat generation at the wound site.
2. Capacity to perform MICS with sub 2 .0mm sizes as well as with the use of balanced tip and appropriate disposables.
3. The system should indicate the patient eye level during at all times during surgery.
4. The system should also give warning for the irrigation empty bag.
5. System should have ability to drive Torsional hand piece with an oscillating frequency of 32KHz.
6. The torsional hand piece should be able to drive latest generation phaco tips like Keman, Flared, min flared and aspiration bypass tips in both 1.1MM or 0.9 MM configuration.

**Other Features:-**1. Autosert – Motorized / Automated IOL injection.
2. Ergonomic wireless footswitch.
3. Facility for integration with Digital Surgical Guidance system and and also display of machine parameters and guidance parameters as heads up display in the microscope as well as by means of external accessory / adaptation described below.
4. Integration with surgical guidance system
5. The system should be able to drive 23 ga anterior vitrectomy probe with high speed cut rates of 4000CPM
6. System should have a wireless remote control for easy changing of functions etc. during surgery, a full-fledged graphic user interface complete with voice feedback when parameters are changed.
7. Should have safety certificate from a competent authority CE/FDA(US)/STQC S certificate or valid detailed electrical and functional safety test report from ERTI. Copy of the certificate / test report should be produced along with the technical bid.
8. Extra one hand piece should have to be provided with the equipment.
9. Onsite Warranty – 5 years.
10. CMC – 5 years after onsite warranty.
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| **5.** | **NdYag Laser** | **01** |
|  | 1. Laser wavelength 1064 nm
2. Aiming beam Laser diode with 670nm wave length. It should be with four point aim perfect focusing with astigmatic disorders.
3. Aiming beam offset +/-150 micrometer posterior and anterior focus shift.
4. Focus diameter 10 micron in air.
5. Pulse repetition frequency maximum 2 Hz.
6. Structure mode: Super Gaussian for highly precise beam profile.
7. Pulse duration < 4ns
8. Maximum laser energy within 10mj to 40 mj.
9. Minimum energy from 0.3mj to 10 mj.
10. Original Motorized Table.
11. Remote laser control unit so that laser parameters can be changed by assistant .
12. Should be integrated /mounted on slit lamp.
13. Should be CEUS/USFDA certified or valid detailed electrical and functional safety test report from ERTI. Copy of the certificate / test report should be produced along with the technical bid.

The Equipment should be with 5 years onsite warranty and CMC for 5 years after warranty period |  |
| **6.** | **Bipolar wet field cautery**1. Bipolar coagulation unit for Ophthalmology
2. Sterlisable cable
3. Bipolar Forceps extrafine for Ophthalmology angled, straight and bayonet
4. Output Bipolar range 10 to 50 W or More .
5. EUCE certified.
 | **01** |

DR RADHAKRISHNAN GOVERNMENT MEDICAL COLLEGE& HOSPITAL HAMIRPUR (H.P.)

DEPARTMENT OF ENT

Technical Specifications of the Equipments:-

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Specifications of Equipment** | **Quantity required** |
| **1.** | **ENT Treatment Unit:-**

|  |
| --- |
| 1. Should be with noice less and powerful suction.2. Should have in built LED Endoscopy Light source.3. Should be compac t and sleek desing 4. Should have spraying device with built in automatic microswitch.5. Should have high resolution Endoscopy camera with LED TV. |
|  **Along with following features:-** |
| **Standard equipments-Standard equipment:** |
|  |
| http://www.optofine.com/images/bullet.jpg  Spray gun (Straight 2pcs/bent 1pc) ×3pcs     http://www.optofine.com/images/bullet.jpg  Suction gun ×1sethttp://www.optofine.com/images/bullet.jpg  Inbuilt LED Light source.http://www.optofine.com/images/bullet.jpg  Pre-heater×1sethttp://www.optofine.com/images/bullet.jpg  Salve pot×2setshttp://www.optofine.com/images/bullet.jpg  Medical bottle×4setshttp://www.optofine.com/images/bullet.jpg  Instrument tray×2setshttp://www.optofine.com/images/bullet.jpg  Fiber opticHead Lighthttp://www.optofine.com/images/bullet.jpg  Fiber optic Cable. |
|  |
| **Optional Equipments-** |
|  |
| http://www.optofine.com/images/bullet.jpg  Single CCD Endosopy Camera.http://www.optofine.com/images/bullet.jpg  15” LED TVhttp://www.optofine.com/images/bullet.jpg  Doctors chairhttp://www.optofine.com/images/bullet.jpg  Sinuscope 0 degreehttp://www.optofine.com/images/bullet.jpg  X-Ray view |
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 | **1** |
| **2.** | **Nasal Micro Debridor:-** Microdebridor for ENT with standard accessories (one set) console: Console should be electrically operated and stand for the console should be provided.• Able to identify the connected hand piece.• Have the display of the speed and mode of motion i.e. Rotation/oscillation.• The built in irrigation and coolant facility.• Console foot switch should have the facility to change the rotation of the hand piece.• Feet switch control **Microdebrider hand piece**: Rotatable ( 2 Nos.) * Handpiece should be light weight for better handling and should be able to rotate the blade upto 360 degree during the surgery for precise disease removal.
* Microdebrider hand piece should have built in suction to be connected on line during the• surgical procedure. Microdebrider blade should have the online irrigation facility
* Should be able to attach the various blades and burs required for various procedures like• FESS, DCR, Polyps, laryngeal surgery, adenoidectomy.
* Handpiece blades should have the forward and reverse motion for burs and the oscillation• modes for the blades.

 **Blades should have** different types of operating blades as mentioned under 1. For FESS Tricut Blades 4mm.  2. For FESS Angled blades 40 degree.  3. Blades for adenoid work.  4. Blades for laryngeal and subgottis work (optional | **1** |
| **3.** | **Nasal Endoscope 00 & 700 of Stryker** **(as there is complete endoscopic unit of Stryker Company available with the Department except the above two endoscope)** | **1 each** |

Note:-

The equimpents should be EUCE/USFDA certified and valid detailed electrical and functional safety test report from ERTI. Copy of the certificate / test report should be produced along with the technical bid.

The Equipments should be with 5 years onsite warranty and CMC for 5 years after warranty period.

**Department of Pathology**

**Requirements in the Blood Bank**

1. **Equipment : Gel Card Centrifuge and Incubator Equipment**
2. **Name: Gel Card Centrifuge**

1. Should have Immunohematologic Gel-microcolum-Card-centrifuge to perform manual centrifugation step for Blood Grouping, Cross Matching, antibody screening or identification

2. Centrifuge head should have minimum 12 slots to accommodate 12 of immunohematologic Gel microcolum cards.

3. Should have Swing out suspensions for Gel card slots

4. Should have Aerodynamic compact construction with vibration free performance; Noise level should be less than 60dB.

5. Should have Microprocessor controlled programming with LCD screen displaying RPM or RCF, time and other functions should be displayed real time.

6. The lid of the centrifuge should be transparent and should have auto-locking during spinning

7. Should be compatible with Input voltage: 220/240V 50/60 Hz Ac

8. Should have an integrated voltage stabilizer or should come with external stabilizer.

9. Manufacturing should be compliant with ISO 13485, and ISO 9001

10. The card slots should be compatible with available micro column gel cards in the market.

11. Should be EUCE/USFDA certified .

12. The equipment should be with 5 years onsite warranty and CMC for 5 years after warranty period.

1. **Gel Card Incubator**

 1. Should maintain temperature at 37ºC

 2. Should have specifically designed for incubating cassettes / cards

 3. Should have microprocessor controlled programming with LCD screen displaying time and temperature

4. Should have audible alarms to indicate completion of incubation time.

5. Should have capacity to incubate 20 or more cassettes

6. Should have digital display of temperature

7. Electrical: 220 volts, 50 Hz 8. ISO 13485 compliant

8. Should be EUCE/USFDA certified.

9. The equipment should be with 5 years onsite warranty and CMC for 5 years after warranty period.

**III REAGENTS:**

* The rates of LISS reagent and Gel cards should also be quoted for 5 years.

The L1 will be decided on the basis of three components i.e. Equipment Cost + Reagents cost+CMC rates.

**2. Dielectric Tube Sealer**

|  |
| --- |
| **GENERAL** |
| 1 |  **USE** |
| **1.1** | Clinical purpose | Blood Bag Tube Sealer is a compact equipment to seal the Blood Bag pilot tubing. |
| **TECHNICAL** |
| **2** | **TECHNICAL CHARACTERISTICS** |
| 2.1 | Technical characteristics (specific to this type ofdevice) | The system should be heavy duty and be able to seal the blood bag etc quickly and effectively. Should be simple to handle. System should gently seal the tubing with no hemolysis using radio frequency. Should be capable of making wide seal of 2 mm thickness. System should run on both mains and battery (more than 10hrs back up and charger). Back up battery should seal more than 500 seals on PVC-tubes in continuous mode.**Construction:**Should be for bench-top use. Sealing trigger should be automatic. Should have extended portable hand unit sealing hand should be with coaxial cable of 1.5-2.0 meter. Should have indication lamps for "Sealing Process" on handle as well as main unit. No warm up time should be required. Should ensure easy separation of tubesegments after the sealing. Electrodes should be well protected by a cover. Sealing Time: Should not be more than 2 seconds. |
| 2.2 | Settings | Manual |
| 2.3 | User's interface | Manual |
| 2.4 | Software and/or standardof communication (whereever required) | Built in |
| **3** | **PHYSICAL CHARACTERISTICS** |
| 3.1 | Dimensions (metric) | NA |
| 3.2 | Weight (lbs, kg) | NA |
| 3.3 | Configuration | NA |
| 3.4 | Noise (in dBA) | NA |
| 3.5 | heat dissipation | NA |
| 3.6 | Mobility, portability | NA |
| **4** | **ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** |
| 4.1 | Power Requirements | input voltage 220-240V, 50Hz AC single phase or 380-400V AC, 50Hz three phase fitted with appropriateindian plugs and sockets. |
| 4.2 | Battery operated | System should run on both mains and battery (more than 10hrs back up and charger). Back up battery shouldseal more than 500 seals on PVC-tubes in continuous mode. |
| 4.3 | Tolerance (to variations,shutdowns) | NA |
| 4.4 | Protection | Suitable autovoltage corrector with spike protector should be available. |
| 4.5 | Power consumption | NA |
| 4.6 | Other energy supplies | NA |
| **5** | **ACCESSORIES, SPARE PARTS, CONSUMABLES** |
| 5.1 | Accessories & spareParts | Complete with comprehensive set of spare parts and a suitable capacity voltage stabilizer. The make, rating, model, description, specifications, price, quantity of each item shall be furnished separately. |

|  |  |
| --- | --- |
| **6** | **ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** |
| 6.1 | Atmosphere / Ambiance(air conditioning,humidity, dust ...) | The unit shall be capable of operating continuously in ambient temperature of 10 to 40 deg C and relativehumidity of 15 to 90%. |
| 6.2 | Additional Requirements | All equipments should specify Design qualifications, Installation qualifications, Operational qualifications andperformance qualifications, validation and calibration reports should have traceability towards applicablenational/ international standards. Performance, efficiency, other factors such as distortion etc. as applicable bealso furnished. Complete construction, details in respect of material specification, thickness, finish etc. are tobe furnished. |
| 6.3 | User's care, Cleaning,Disinfection & SterilityIssues | Complete unit to be easily washable and sterilizable using both alcohol and chemical disinfectant. |
| **7** | **STANDARDS AND SAFETY** |
| 7.1 | Product certifications | European CE or US FDA certified |
| 7.2 | Quality certifications | ISO 13485 certified |
| 7.3 | Electrical Safety | Equipment meets electrical safety specifications of IEC 60601-1 and 60601-2 (as relevant) |
| **8** | **TRAINING AND INSTALLATION** |
| 8.1 | Pre-installationrequirements: nature,values, quality, tolerance | NA |
| 8.2 | Requirements for sign-off | NA |
| 8.3 | Training of staff (medical,paramedical, technicians)OPTIONAL (Dependingupon scope of workorder) | Training of users in operation and basic maintenance shall be provided |
| **9** | **ON SITE WARRANTY AND MAINTENANCE** |
| 9.1 | OnsiteWarranty |  5 years |
| 9.2 | Maintenance tasks | 5 years CMC after the warranty period |
| 9.3 | Service contract clauses,including prices | Downtime: 48 hours or after penalty clause will be active.Local clinical staff / authorized officer on behalf of purchaser to affirm completion of installation |
| **10** | **DOCUMENTATION** |
| 10.1 | Operating manuals,service manuals, othermanuals | Necessary catalogues, technical write up in English shall be attached with the offer both in hard and softcopies. |
| 10.2 | Other accompanyingDocuments | List to be provided of important spares and accessories, with their part numbers and cost. Certificate ofcalibration and inspection to be provided. |
| **11** | **NOTES** |
| 11.1 | Service Support Contactdetails (Hierchy Wise;including a tollfree/landline number) | NA |
| 11.2 | Recommendations orWarnings | Any recommendations for best use and supplementary warning for safety should be declared |

**3.** **WATER BATH**

|  |
| --- |
| **GENERAL** |
| 1 |  **USE** |
| **1.1** | Clinical purpose | A water bath is a device used in the laboratories to incubate samples in water maintained at a constant temperature. |
| **TECHNICAL** |
| **2** | **TECHNICAL CHARACTERISTICS** |
| 2.1 | Technical characteristics(specific to this type ofdevice) | Water Bath with MICROPROCESSOR technology1) Bright temperature display (LED)2) Seamless, splash-proof keypad3) Splash-proof mains switch4) Audible and optical warning signal for the cut-off function5) Drain screw for conveniently emptying the bath6) Dry-running protection7) Removable bottom plate8) Working temperature range: 20 deg C to 99.9 deg C9) Temperature stability: ±0.2 °C10) Display: LED11) Display resolution: 0.1 °C12) Integrated programmer not available13) Heater capacity: 2000 W14) Bath opening / bath depth (W x L / D) 50 x 30 / 18 cm15) Filling volume: 8 to 26 Liters16) Ambient temperature 5 deg C to 40 deg C |
| 2.2 | Settings | Manual |
| 2.3 | User's interface | Manual |
| 2.4 | Software and/or standardof communication(whereever required) | Built in |
| 2.5 | Capacity | NA |
| **3** | **PHYSICAL CHARACTERISTICS** |
| 3.1 | Dimensions (metric) | Dimensions (W x L x H) 60 x 40 x 35 cm (max) |
| 3.2 | Weight (lbs, kg) | Weight 20 kg approx. |
| 3.3 | Configuration | NA |
| 3.4 | Noise (in dBA) | Noise factor should not exceed 60 decibels. |
| 3.5 | Heat dissipation | 2000 W |
| 3.6 | Mobility, portability | NA |
| **4** | **ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** |
| 4.1 | Power Requirements | input voltage 220/240V 50Hz |
| 4.2 | Battery operated | NA |
| 4.3 | Tolerance (to variations,shutdowns) | NA |
| 4.4 | Protection | NA |
| 4.5 | Power consumption | NA |
| 4.6 | Other energy supplies | NA |
| **5** | **ACCESSORIES, SPARE PARTS, CONSUMABLES** |
| 5.1 | Accessories & spare Parts | Complete with comprehensive set of spare parts and a suitable capacity voltage stabilizer. The make, rating, model, description, specifications, price, quantity of each item shall be furnished separately. |

|  |  |
| --- | --- |
| **6** | **ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** |
| 6.1 | Atmosphere / Ambiance(air conditioning,humidity, dust ...) | Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. |
| 6.2 | Additional Requirements | All equipments should specify Design qualifications, Installation qualifications, Operational qualifications and performance qualifications, validation and calibration reports should have traceability towards applicable national/ international standards. Performance, efficiency, other factors such as distortion etc. as applicable be also furnished. Complete construction, details in respect of material specification, thickness, finish etc. are to be furnished. |
| 6.3 | User's care, Cleaning,Disinfection & SterilityIssues | Complete unit to be easily washable and sterilizable using both alcohol and chemical disinfectant. |
| **7** | **STANDARDS AND SAFETY** |
| 7.1 | Product certifications | European CE or US FDA certified |
| 7.2 | Quality certifications | ISO 13485 certified |
| 7.3 | Electrical Safety | Equipment meets electrical safety specifications of IEC 60601-1 and 60601-2 (as relevant) |
| **8** | **TRAINING AND INSTALLATION** |
| 8.1 | Pre-installation requirements: nature,values, quality, tolerance | NA |
| 8.2 | Requirements for sign-off | NA |
| 8.3 | Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) | Training of users in operation and basic maintenance shall be provided |
| **9** | **ONSITE WARRANTY AND MAINTENANCE** |
| 9.1 | Onsite Warranty | 5 years |
| 9.2 | Maintenance tasks | 5 years CMC after the warranty period. |
| 9.3 | Service contract clauses,including prices | Downtime: 48 hours or after penalty clause will be active.Local clinical staff / authorized officer on behalf of purchaser to affirm completion of installation |
| **10** | **DOCUMENTATION** |
| 10.1 | Operating manuals,service manuals, othermanuals | Necessary catalogues, technical write up in English shall be attached with the offer both in hard and softcopies. |
| 10.2 | Other accompanyingDocuments | List to be provided of important spares and accessories, with their part numbers and cost. Certificate ofcalibration and inspection to be provided. |
| **11** | **NOTES** |
| 11.1 | Service Support Contactdetails (Hierchy Wise;including a tollfree/landline number) | NA |
| 11.2 | Recommendations orWarnings | Any recommendations for best use and supplimentary warning for safety should be declared |

**4. Table top centrifuge (Serology Centrifuge)**

|  |
| --- |
| **GENERAL** |
| 1 |  **USE** |
| 1.1 | Clinical purpose | Preparation of samples for clinical/lab analysis. |
| **TECHNICAL** |
| **2** | **TECHNICAL CHARACTERISTICS** |
| 2.1 | Technical characteristics(specific to this type ofdevice) | 1) Speed Range 500 to 4500 rpm on load with variable speed regulator.2) It should be fitted with digital timer 0-59 minutes and digital speed indicator; LED/LCD display3) The machine should be supplied with angle rotor head having 16 tubes of 15 ml capacity. It should besupplied with stainless steel tube carrier, rubber cushions, graduated glass tubes of 15 ml capacity graduatedplastic tubes of 15ml capacity.4) The lid should be double walled, made of steel sheet/ABS plastic injection moulding for extra safety.5) It should also be fitted with electronic lid lock which should not open when machins is in running condition.6) The Motor of machine should be fitted with anti vibration pads.7) Should be well packed in the thermo-cool box. |
| 2.2 | Settings | Manual |
| 2.3 | User's interface | Manual |
| 2.4 | Software and/or standardof communication(whereever required) | Built in |
| 2.5 | Capacity | Can accommodate 16 tubes at a time. |
| **3** | **PHYSICAL CHARACTERISTICS** |
| 3.1 | Dimensions (metric) | NA |
| 3.2 | Weight (lbs, kg) | NA |
| 3.3 | Configuration | NA |
| 3.4 | Noise (in dBA) | Noise factor should not exceed 60 decibels. |
| 3.5 | Heat dissipation | NA |
| 3.6 | Mobility, portability | NA |
| **4** | **ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** |
| 4.1 | Power Requirements | input voltage 220/240V 50Hz, 1/8 HP Motor of 220V AC |
| 4.2 | Battery operated | NA |
| 4.3 | Tolerance (to variations,shutdowns) | NA |
| 4.4 | Protection | NA |
| 4.5 | Power consumption | NA |
| 4.6 | Other energy supplies | NA |
| **5** | **ACCESSORIES, SPARE PARTS, CONSUMABLES** |
| 5.1 | Accessories & spare Parts | Complete with comprehensive set of spare parts and a suitable capacity voltage stabilizer. Also supplied complete instruction manual, cord and plug, dust cover, 12 spare rubber cushions, 2 spare fuse and 3 sets of carbons of motor. The make, rating, model, description, specifications, price, quantity of each item shall be furnished separately. |
| **6** | **ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** |
| 6.1 | Atmosphere / Ambiance(air conditioning,humidity, dust ...) | Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. |
| 6.2 | Additional Requirements | All equipments should specify Design qualifications, Installation qualifications, Operational qualifications and performance qualifications, validation and calibration reports should have traceability towards applicable national/ international standards. Performance, efficiency, other factors such as distortion etc. as applicable be also furnished. Complete construction, details in respect of material specification, thickness, finish etc. are to be furnished. |
| 6.3 | User's care, Cleaning,Disinfection & SterilityIssues | Complete unit to be easily washable and sterilizable using both alcohol and chemical disinfectant. |
| **7** | **STANDARDS AND SAFETY** |
| 7.1 | Product certifications | European CE or US FDA certified |
| 7.2 | Quality certifications | ISO 13485 certified |
| 7.3 | Electrical Safety | Equipment meets electrical safety specifications of IEC 60601-1 and 60601-2 (as relevant) |
| **8** | **TRAINING AND INSTALLATION** |
| 8.1 | Pre-installation requirements: nature,values, quality, tolerance | NA |
| 8.2 | Requirements for sign-off | NA |
| 8.3 | Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) | Training of users in operation and basic maintenance shall be provided |
| **9** | **ONSITE WARRANTY AND MAINTENANCE** |
| 9.1 | Onsite Warranty | 5 years |
| 9.2 | Maintenance tasks | 5 years CMC after the warranty period. |
| 9.3 | Service contract clauses,including prices | Downtime: 48 hours or after penalty clause will be active.Local clinical staff / authorized officer on behalf of purchaser to affirm completion of installation |
| **10** | **DOCUMENTATION** |
| 10.1 | Operating manuals,service manuals, othermanuals | Necessary catalogues, technical write up in English shall be attached with the offer both in hard and softcopies. |
| 10.2 | Other accompanyingDocuments | List to be provided of important spares and accessories, with their part numbers and cost. Certificate ofcalibration and inspection to be provided. |
| **11** | **NOTES** |
| 11.1 | Service Support Contactdetails (Hierchy Wise;including a tollfree/landline number) | NA |
| 11.2 | Recommendations orWarnings | Any recommendations for best use and supplimentary warning for safety should be declared |

**5. Blood Mixer and Collector (Blood Collection Monitor)**

|  |
| --- |
| **GENERAL** |
| 1 |  **USE** |
| 1.1 | Clinical purpose | The system is used to collect donated blood from the donor at the same time mixing the blood for qualitycollection of blood. |
| **TECHNICAL** |
| **2** | **TECHNICAL CHARACTERISTICS** |
| 2.1 | Technical characteristics(specific to this type ofdevice) | It is meant for stationary and mobile use. Gentle end to end mixing and control of collection time to give high quality blood suitable for all blood bags.**Construction:**LED indication on commencement of collection. LED indication and audible alarm at the end of collection. Indication of time taken for collection. Indication of blood flow with audio alarm when blood flow is higher or lower than desired. Continuous display of collected volume, flow and time during collection. Automatic clamping at termination of preset volume collection. Automatic release of bag when lifted. Continuous agitationof blood bags during collection: 12-16 rpm. Equipment carry case for BCM should be provided for portability. Input port cable with 15 Plug and six way output terminal strip for two outlets.Volume Settings: Pre-selection of volume to be collected. Tarring of bag volume before collection. Automatic storages and recall of set volume. |
| 2.2 | Settings | Manual |
| 2.3 | User's interface | Manual |
| 2.4 | Software and/or standard of communication (whereever required) | Built in |
| 2.5 | Capacity | NA |
| **3** | **PHYSICAL CHARACTERISTICS** |
| 3.1 | Dimensions (metric) | NA |
| 3.2 | Weight (lbs, kg) | NA |
| 3.3 | Configuration | NA |
| 3.4 | Noise (in dBA) | Noise factor should not exceed 60 decibels. |
| 3.5 | Heat dissipation | NA |
| 3.6 | Mobility, portability | NA |
| **4** | **ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** |
| 4.1 | Power Requirements | input voltage 220-240V AV, 50Hz, 440V three phase as appropriate fitted with indian plug. |
| 4.2 | Battery operated | Should operate on mains as well as rechargeable battery. On battery it should operate for a minimum of 5-8 hours. |
| 4.3 | Tolerance (to ariations,shutdowns) | NA |
| 4.4 | Protection | Resettable over current breaker shall be fitted for protection. |
| 4.5 | Voltage regulation | Suitable automatic voltage regulator/stabilizer meeting ISI specifications should be supplied. Broad specifications are: Automatic type input 150-280V, output 220V ±7%, 50Hz. Single phase, AC with automatic 2-4 sec cut-off and 6-9 minutes restart delay. Quick start arrangements for bypassing the start delay. Suitable MCB on input voltmeter and indicators on Front Panel. |
| 4.6 | Power consumption | NA |
| 4.7 | Other energy supplies | NA |
| **5** | **ACCESSORIES, SPARE PARTS, CONSUMABLES** |
| 5.1 | Accessories & spare Parts | Complete with comprehensive set of spare parts and a suitable capacity voltage stabilizer. The make, rating, model, description, specifications, price, quantity of each item shall be furnished separately. |
| **6** | **ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** |
| 6.1 | Atmosphere / Ambiance(air conditioning,humidity, dust ...) | Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. |
| 6.2 | Additional Requirements | All equipments should specify Design qualifications, Installation qualifications, Operational qualifications and performance qualifications, validation and calibration reports should have traceability towards applicable national/ international standards. Performance, efficiency, other factors such as distortion etc. as applicable be also furnished. Complete construction, details in respect of material specification, thickness, finish etc. are to be furnished. |
| 6.3 | User's care, Cleaning,Disinfection & SterilityIssues | Complete unit to be easily washable and sterilizable using both alcohol and chemical disinfectant. |
| **7** | **STANDARDS AND SAFETY** |
| 7.1 | Product certifications | European CE or US FDA certified |
| 7.2 | Quality certifications | ISO 13485 certified |
| 7.3 | Electrical Safety | Equipment meets electrical safety specifications of IEC 60601-1 and 60601-2 (as relevant) |
| **8** | **TRAINING AND INSTALLATION** |
| 8.1 | Pre-installation requirements: nature,values, quality, tolerance | NA |
| 8.2 | Requirements for sign-off | NA |
| 8.3 | Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) | Training of users in operation and basic maintenance shall be provided |
| **9** | **ONSITE WARRANTY AND MAINTENANCE** |
| 9.1 | Onsite Warranty | 5 years |
| 9.2 | Maintenance tasks | 5 years CMC after warranty period |
| 9.3 | Service contract clauses,including prices | Downtime: 48 hours or after penalty clause will be active.Local clinical staff / authorized officer on behalf of purchaser to affirm completion of installation |
| **10** | **DOCUMENTATION** |
| 10.1 | Operating manuals,service manuals, othermanuals | Necessary catalogues, technical write up in English shall be attached with the offer both in hard and softcopies. |
| 10.2 | Other accompanyingDocuments | List to be provided of important spares and accessories, with their part numbers and cost. Certificate ofcalibration and inspection to be provided. |
| **11** | **NOTES** |
| 11.1 | Service Support Contact details (Hierchy Wise;including a toll free/ landline number) | NA |
| 11.2 | Recommendations orWarnings | Any recommendations for best use and supplimentary warning for safety should be declared |

**6. Sterile Connecting Device & Wafers**

**Sterile Connecting Device**

1. Should accommodate and weld all types of blood bag tubing in use in our country.

2. The welding should be seamless.

3. Should be capable of joining wet-wet/wet-dry/Dry-Dry tubes.

4. Welding should not affect the quality of the tube in terms of its physical and chemical properties and it should not cause hemolysis.

5. It should have LED indicators to display the actual status of the ongoing procedural steps and audio-visual alarm system for any functioning irregularities.

6. The welding accessories should be available with the local agent throughout year.

7. Compatible UPS with half an hour backup.

8. Power supply 220V, 50Hz AC

9. Certifications:

* Product certification: CE Class II A or US FDA certified
* Quality Certification: ISO certified
* Electrical Safety: Equipment meets electrical safety specifications such as the of IEC (class 1)

10. The Equipment should be with 5 years onsite warranty and CMC for 5 years after warranty period.

**Wafers:-** The cost of Wafers cassette also quoted alongwith Sterile Connecting Device. The rates shall be freeze for 5 years from the date of contract.

**13. B.P. Apparatus Technical Specification**

 1. Measurement method –Electronic

 2. Measurement range:

a) Numerical display Pressure: 0 ~ 300 mmHg

 b) Pulse: 30 ~ 200 beats / minute

 c) Pressure bar display Pressure: 20 ~ 280 mmHg

3. Measurement accuracy

 a) Numerical display Pressure: ±3 mmHg 15

 b) Pulse: ±5 %

c) Pressure bar display Pressure: ±4 mmHg

4. Power supply- 2 x 1.5 V alkaline batteries (LR6 or AA)

5. Upper arm circumference -23 ~ 33 cm using the medium cuff

 6. Number of measurements- Approx. 2000 measurements,

 7. when AA alkaline batteries are used, with pressure value of 180 mmHg at room temperature of 23°C

8. Classification - Internally powered ME equipment

9. Continuous operation mode EMC IEC 60601-1-2: 2007

 10. Operating conditions +10°C to +40°C / 15%RH to 85 %RH 800 hPa to 1060 hPa

11 Storage conditions -15°C to +60°C / 10%RH to 95 %RH

 12. Dimensions standard

13. Weight standard

14. USFDA Approved with CE certificate.

|  |  |
| --- | --- |
| **Department of Orthopedics, Dr.RKGMC-Hamirpur** |  |
| **Battery Drill Set for Trauma and Joint replacements** | **Qty.** |
| Battery Handpiece, preferably modular | 2 |
| Power Module | 2 |
| Sterile Cover | 2 |
| Lid for Battery Hand piece | 2 |
| Battery Charger | 2 |
| Quick Coupling | 2 |
| Drill Chuck (drilling speed), with key | 2 |
| Quick Coupling for Kirschner Wires 1.0 to 4.0 mm | 2 |
| Attachment for Acetabular and Medullary Reaming | 2 |
| Sagittal Saw Attachment, Long | 2 |
| Quick Coupling for DHS/DCS Triple Reamers | 2 |

**Technical Specifications for Battery Drill – for Trauma and Joint Replacement Surgeries:**

* 1. Company should have relevant experience in successful execution of similar work at least in five Institutes of national importance and central government Institutes.
	2. **Company should be at least in its 5 years of operations at the date of submission of tender.**
	3. Bidder must enclose original literatures & technical data sheet in the support of the technical bid.
	4. Physical demo should be arranged at the time of requirement.
	5. Instruments quality should meet the international standard.
	6. Company should have **European CE certificates or USFDA certificates** of international standard.
	7. Company should provide material certificates.
	8. The Cannulated Battery Handpiece:
1. **Cannulation** with 3.8- 4.2 mm diameter
2. Weight of handpiece 1000-1400 gm with Battery
3. **Power of 150-200 W**
4. Continously **variable speed** without attachment 0-1500 rpm
5. **Separate forward and reverse triggers**
6. **Handpiece is compatible with radiolucent drive**
7. Instant change between clockwise and counterclockwise rotation
8. **Fully Autoclavable**
9. different locking options for attachments
10. should preferably have Reliable protection of soft tissue with integrated oscillation mode
	1. **Lid for battery Hand Piece:**
		1. Mode Selector Switch to select Drilling/Reaming, Saw, Oscillating Drill mode
		2. Made of Plastic/Stainless steel
		3. Should be **autoclavable**
	2. **Power Module:**
		1. Display indicating the battery capacity status
		2. Consists of Motor, Control unit and Battery cells
		3. Should have a button to diagnose errors in the system
	3. **Battery Charger :**
11. Should preferably have 4 charging bays
12. Should be capable of charging NiCd, NiMh and Lithium Ion batteries
13. Should display the charging status of the batteries
14. Keeps inserted batteries constantly fully loaded
	1. **Sterile Cover:**
		1. Made of Stainless steel
		2. **Fully autoclavable**
		3. For sterile transfer of Power Module to Battery Hand piece
	2. **Quick Coupling attachment:**
15. Cannulation of 1.8-2.2 mm diameter
16. Maximum Speed: approx.1500 rpm
17. Maximum Torque: 3 Nm
18. **Chuck attachment:**
	1. Cannulation of 3.8-4.2 mm diameter
	2. Chuck range from 0.5 to 10 mm
	3. Maximum Speed of 1500 rpm
19. **Quick Coupling for Medullary reaming:**
	1. Cannulation of 3.8-4.2 mm diameter
	2. Maximum Speed preferably upto 350 rpm
	3. Maximum torque preferably upto 15 Nm
20. **Sagittal Saw attachment:**
	1. It can operate on an oscillating frequency of 0 to 20,000 osc/min.
	2. The amplitude of oscillation should preferably be 4.5°
	3. 5 locking options for the saw blades in the attachment
	4. Saw Blade for TJR Surgery Length 81 to 116 mm, Usable L 60 to 95 mm, Width 12.5 to 25 mm, Thickness 0.89 to 1.47 mm
	5. Saw Blade for General Traumatology Length 46 to 90 mm, Usable Length 25 to 69 mm, Width 10 to 50 mm, Thickness 0.4 to 1.2 mm
21. **Quick Coupling for DHS/DCS Triple Reamer:**
	1. Cannulation of 3.8-4.2 mm diameter
	2. Speed up to 700 rpm
22. **Quick Coupling for K-wire:**
	1. Continuous adjustment facility for wire diameter from 1 to 4 mm
	2. Speed up to 1500 rpm
23. **Batteries**
	1. Lithium Ion/Nickel-cadmium battery with a minimum life of 1000 cycles
	2. No self discharging of batteries and no memory effect
	3. Maximum charging time : preferably 30-45 min
	4. Battery: 20-30 V
	5. Safe and easy handling in the operation theatre
24. **Warranty / Guarantee**:

**The vendor must quote onsite warranty of at least 5 year with a comprehensive maintenance contract (CMC) for 5 years.**

**Department of Orthopeadics, Dr.RKGMC-Hamirpur**

**Automatic Tourniquet System**

### Equipment Specifications for Automatic Tourniquet System with Hose and Cuffs Description of Function:

* 1. An automatic tourniquet system comprises variable pressure cuff apparatus for applying a variable pressure to a limb or artery of a patient in order to occlude blood flow to the limb for doing a bloodless and clean surgery. The control apparatus for determining the operative pressure for a patient and a variable pressure cuff apparatus for minimum effective pressure and time required for complete blood flow occlusion.
	2. Battery operated, light weight with LCD display control.
	3. System with hose and battery backup.
	4. Should have option for bier's block and bilateral procedures.
	5. Sizes of cuffs should meet individual requirement of thin and fat

patients, for arm & thigh as well as for children. Both Paediatric and adult cuff (2 each of all sizes) should be provided.

* 1. Small and Light Weight.
	2. Audible and Visual alarms when there is an unsafe conditions.
	3. Unit should perform self calibration check every time it is turned on.
	4. Cuff with lockout features, which should ensure that the cuff stays inflated even if unit is turned off.

### Technical Specifications:

* + 1. Cuff should have colour coding and puncture free technology if possible.
		2. If possible it should show the patient- specific ”Safe occlusion Pressure”.
		3. Line Voltage: 100-240v, 50/60Hz, auto-switch fitted with Indian style plug.
		4. Line Current: 670mA RMS @ 120V.
		5. Input Power: 53 Watts.
		6. Battery Type: Rechargeable, 12V, 4Ah.
		7. Battery Discharge Time: 240 mins. (4 Hrs).
		8. Battery Recharge Time: 24 hrs.
		9. Line Protection: 2 time delayed, 1.0Amp, 250V fuses.
		10. Cuff Pressure Range: 50-475 mm Hg.
		11. Pressure Accuracy: +/-3mm Hg.
		12. Pressure Regulation: +/-4mm Hg of set point.
		13. Max. Pressure: 475mm Hg Cuffs.
		14. Time Alarm Set Range: 5-240min; 1min increment.
		15. Timer Accuracy: 0.25%
		16. Weight: 7.4Kg
		17. Display: Back Lit 1/4 panel LCD
		18. LOP (Limb Occlusion Pressure): Used to measure the recommended pressure through Sensor.

**Warranty / Guarantee:**

Comprehensive warranty for 5 years with spares and 5 years CMC after warranty without spares.

**Standards, Safety and Training:**

1. Should have a European CE or US FDA approved certification.
2. May preferably be compliant with IEC 61010-1 / or any international equivalent viz. EN/UL 61010 covering safety requirements for electrical equipment for measurement control and laboratory use.
3. The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%.
4. The unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 70%.
5. Rechargeable battery operated system. Charger to be provided if integrated charger is not there.
6. User/Technical/Maintenance manuals to be supplied in English.
7. Certificate of calibration and inspection.
8. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/ paragraph number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.
9. List of important spare parts and accessories with their part number and costing.
10. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

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| **Department of General Surgery, Dr,RKGMC-Hamirpur** |
| Sr.No. | Name of item | Specification | Qty. required |
| 1 | Kidney Tray Large | Large | 1 |
| 2 | Towel Clip |  | 8 |
| 3 | Bp Handle No. 7 |  | 4 |
| 4 | Dissecting Tooth Forcep  | 16 cm | 4 |
| 5 | Dissecting Plain Forcep  | 18 cm | 4 |
| 6 | Dissecting Plain Forcep  | 23 cm  | 4 |
| 7 | Dissecting Tooth Forcep  | 23 cm  | 4 |
| 8 | Mosquito Artery Forcep  | Curved 14 cm  | 24 |
| 9 | Artery Forcep Fine  | Curved 18 cm | 24 |
| 10 | Artery Forcep  | Curved 16 cm | 24 |
| 11 | Artery Forcep Heavy  | Cvd 20 cm | 12 |
| 12 | Allis Forcep  | 15 cm | 12 |
| 13 | Allis Forcep | 20 cm | 12 |
| 14 | Babcock Forcep  | 18 cm | 12 |
| 15 | Kochers Clamp  | Cvd 20 cm | 12 |
| 16 | Kochers Clamp  | Straight 20 cm | 12 |
| 17 | Metzenbaum Scissor  | Curved 20 cm (1 Golden Handle) | 2 |
| 18 | Metzenbaum Scissor | Curved 15 cm  | 6 |
| 19 | Metzenbaum Scissor | Heavy Tip 19 cm | 4 |
| 20 | Mayo Scissor  | Straight 17 cm | 4 |
| 21 | Needle Holder  | 18 cm Fine Tip | 4 |
| 22 | Mayo Scissor  | Straight 19 cm | 4 |
| 23 | Needle Holder  | 18 Cm Heavy  | 4 |
| 24 | Needle Holder  | 20 Cm  | 4 |
| 25 | Needle Holder  | 27 Cm  | 2 |
| 26 | Intestinal Clamp  | Cvd (Atraumatic ) | 2 |
| 27 | Intestinal Clamp  | St. (Atraumatic ) | 2 |
| 28 | Deaver Retractor  | Small  | 8 |
| 29 | Deaver r Retractor  | Medium | 4 |
| 30 | Lengan bag Retractor  | M  | 4 |
| 31 | Lengan bag Retractor  | Small  | 4 |
| 32 | Periosteum Elevator  | Stainless Steel | 2 |
| 33 | Tray With Lid (6”x10” approx.) | Stainless Steel | 1 |
| 34 | Debakey Forcep  | 24 Cm  | 2 |

**Note: Warranty of the units should be for one (1) year. Company Engineer must visit the functional unit after every 3 months even without call. As and when called for, Company Engineer Must report at the earliest if any malfunctioning occurs, failure to report within 24 hours will invite a penalty of Rs. 10,000/- per day.**