

### OFFICE OF THE CHIEF EXECUTIVE OFFICER, SHRI MATA VAISHNO DEVI SHRINE BOARD,

Central Office, Jammu Road, Katra (J&K) – 182301 Fax: +91- 1991-232120

E-mail: nes purchase@maavaishnodevi.net, aceog@maavaishnodevi.net

### Notice Inviting e-Tender e-NIT No. CO/Pur/NE/612/3702, Dated: 25.07.2024

e-Tenders on the prescribed format are invited on behalf of Shri Mata Vaishno Devi Shrine Board through its Chief Executive Officer from the reputed suppliers / manufacturers for finalization of Rate Contract for the Supply, Installation, Testing, Commissioning and post-warranty Comprehensive Annual Maintenance Contract for a period of 05 years of Machinery and Equipment required for establishment of Anatomy, Physiology, Pathology, Community Medicine, Biochemistry, Forensic Medicine & Toxicology, Microbiology Departments of Medical College, Kakrval

S.	Particulars	EMD	Tender Fee
No		(in Rs.)	(in Rs.)
1.	Supply, Installation, Testing, Commissioning and post-warranty Comprehensive Annual Maintenance for the period of 05 years of Machinery and Equipment required for establishment of Anatomy, Physiology, Pathology, Community Medicine, Biochemistry, Forensic Medicine & Toxicology, Microbiology Departments of Medical College, Kakryal. (Group A – High End Medical Equipments)	10.00 Lakh	2,500/-

The e-NIT consisting of Qualifying Information, Eligibility Criteria, Specifications, indicative Bill of Quantities, (B.O.Q), set of Terms & Conditions of Contract and other details can be seen / downloaded from the websites:- http://jktenders.gov.in &www.maavaishnodevi.orgas per followina:

Publishing Date	25.07.2024 at 4:30 PM
Download Start Date	25.07.2024 at 4:45 PM
Pre-Bid Conference	02.08.2024 at 12:00 Noon
Bid Submission Start Date	03.08.2024 at 12:00 Noon
Bid submission End Date (Online)	14.08.2024 at 02:00 PM
Submission of Hard Copy (end) date	14.08.2024 upto 04:00 PM
and time	
Date of Opening of Technical Bid	16.08.2024 at 04:00 PM (In Office of the Asstt.
(Online)	Chief Executive Officer (G), SMVDSB, Katra)

The tender must accompany an earnest money in the form of CDR / FDR / TDR of the amount mentioned above drawn from any Nationalized / scheduled Bank duly pledged to the Accounts Officer, Shri Mata Vaishno Devi Charitable Society, Katra and Tender Fee of Rs. 2,500/- (Two Thousand Five Hundred only) either in the form of DD pledged to Accounts Officer, SMVDCS, Katra or can be deposited in the official account of Shri Mata Vaishno Devi Charitable Society Branch J&K Bank Katra, Account No. 50100417566279, IFSC -HDFC0002344. The bidder shall mention UTR No. in the prescribed Technical Bid Form at Annexure-'A'. Complete bidding process will be done online on e-Tender portal www.jktenders.gov.in. However, the bid document shall be available on official website of SMVDSB (www.maavaishnodevi.org) for reference only. The tenders be submitted strictly in accordance with the provisions of the detailed e-NIT. The bidder shall submit the hardcopies of the uploaded documents in the Tender Box kept at Central Office, SMVDSB, Katra by or before 14.08.2024 upto 04:00 PM.

### Instruction to Bidders regarding e-Tendering process:

- 1. The interested bidder can download the e-NIT / bidding document from the website <u>www.jktenders.gov.in</u>&<u>www.maavaishnodevi.org</u>.
- 2. To participate in bidding process, bidders have to get (DSC) "Digital Signature Certificate" as per information Technology Act-2000, to participate in online bidding. This certificate will be required for digitally signing the bid. Bidders can get above mentioned digital certificate from any approved vendors.
- 3. The Bidders, who already possess valid (DSC) Digital Signature Certificates, need not to procure new Digital Signature Certificate.
- 4. The bidders have to submit their bids online in electronic format with Digital Signature. The bids cannot be uploaded without Digital Signature. No Proposal will be accepted in physical form.
- 5. Bids will be opened online as per time schedule mentioned in the e-NIT.
- 6. Before submission of online bids, bidders must ensure that scanned copies of all the necessary documents have been attached with bid.
- 7. The SMVDSB will not be responsible for delay in online submission of bids whatsoever reasons may be.
- 8. All the required information for bid must be filled and submitted online.
- 9. Bidders must attach scanned copies of all documents& EMD as specified in the tender documents.
- 10. The details of cost of documents, EMD specified in the tender documents should be the same, as submitted online (scanned copies) otherwise bid will not be accepted.
- 11. Bidders are advised to use "My Documents" area in their user on http://jktenders.gov.in, e-tendering portal to store important documents like Balance sheet, GST Registration Certificate, Tax Clearance Certificate, IT certificate, and other related documents etc., and attach these certificates as non-statutory documents while submitting their bids.
- 12. Bidders are advised not to make any change in BOQ (Bill of Quantities) contents or its name. In no case they should attempt to create similar BOQ manually. The BOQ downloaded should be used for filling the item rate as prescribed and it should be saved with the same as it contains.
- 13. Bidders are advised to scan their documents at 100 DPI (Dots per Inch) resolutions with Black and White, PDF \ Scan properly.
- 14. The guidelines for submission of bid online can be downloaded from the website <u>http://www.jktenders.gov.in&www.maavaishnodevi.org</u>
- 15. The Tenderer(s) should carefully study the document and prepare his tender with consideration of all provisions of the document. He should fully acquaint himself / herself with site conditions and all other factors which may influence preparation of his tender.

Sd/-

# (Dr. Gopal K Sharma) Asstt. Chief Executive Officer

### No: - CO/Pur/NE/612/3702 Dated: 25.07.2024 Copy to the:

- 1. Chief Executive Officer, SMVDSB, Katra.
- 2. Addl. Chief Executive Officer, SMVDSB, Katra.
- 3. Accounts Officer, SMVDCS, Katra.
- 4. Dy. Manager (IT), SMVDSB, Katra with the request to generate link for pre-bid conference to be held on 02.08.2024.
- 5. Concerned file / Master file.



OFFICE OF THE CHIEF EXECUTIVE OFFICER, SHRI MATA VAISHNO DEVI SHRINE BOARD, Central Office, Jammu Road, Katra (J&K) - 182301 Fax: +91- 1991-232120 Tel.: +91-1991-232189 E-mail: nes purchase@maavaishnodevi.net, ddm@maavaishnodevi.net

### Notice Inviting e-Tender e-NIT No. CO/Pur/NE/612/3702, Dated: 25.07.2024

Notice inviting E-Tender on the prescribed format duly affixed with SUBJECT: Revenue Stamp worth Rupees Six only are invited on behalf of Shri Mata Vaishno Devi Shrine Board through its Chief Executive Officer are invited the reputed suppliers / manufacturers for finalization of Rate Contract for the Supply, Installation, Testing, Commissioning and post-warranty Comprehensive Annual Maintenance for the period of 05 years of Machinery and Equipment required for establishment of Anatomy, Physiology, Pathology, Community Medicine, Biochemistry, Forensic Medicine & Toxicology, Microbiology Departments of Medical College, Kakryal:

### 1. **REQUIREMENT:**

For and on behalf of SMVDSB, through its CEO, SMVDSB, e-Tender affixed with e-Stamp under Two Bids System are invited are invited from the reputed suppliers / manufacturers for finalization of Rate Contract for the Supply, Installation, Testing, Commissioning and post-warranty Comprehensive Annual Maintenance for the period of 05 years of Machinery and Equipment required for establishment of Anatomy, Physiology, Pathology, Community Medicine, Biochemistry, Forensic Medicine & Toxicology, Microbiology Departments of Medical College, Kakryal. The detailed Tender Document with full description and Terms and Conditions is available at www.jktenders.gov.in&www.maavaishnodevi.org

### 2. TENDER SCHEDULE:

Publishing Date	25.07.2024 at 4:30 PM
Download Start Date	25.07.2024 at 4:45 PM
Pre-Bid Conference	02.08.2024 at 12:00 Noon
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Bid submission End Date	14.08.2024 at 02:00 PM
(Online)	
Submission of Hard Copy	14.08.2024 upto 04:00 PM
(end) date and time	
Date of Opening of Technical	16.08.2024 at 04:00 PM (In Office of the Asstt.
Bid (Online)	Chief Executive Officer (G), SMVDSB, Katra)

### 3. **ELIGIBILITY CRITERIA:**

- All the demanded equipment should have United States Food and Drug a) Administration (USFDA) / European CE certification Notified Body/CE and ISO 9001:2015, ISO 13485:2016, ISO 8655-1:2022, ISO 7153-1: 2016, ISO 14001:2015, ISO 14937:2009, ISO 45001:2018, ISO 50001:2018, WHO-GMP, IEC 61010-1:2010, Production Capacity certificate) besides others mentioned in the specifications.
- The bidder must have an experience of minimum 03 years for the supply of b) medical machines / equipments to Government Medical Colleges, Government Universities/ Institutes of National Importance as on 31 March, 2024.

- c) Average Annual turnover of the bidder should be more than **Rs. 4.00 Crore** for the last three financial years (**2021-22**, **2022-23 & 2023-24**) as per the annual audited balance sheet and profit & loss account of the relevant period duly authenticated by a Charted Accountant (The turnover of the sister concern firms / subsidiaries shall not be considered by Shrine Board).
- d) The bidder must have sound financial background and a certificate from Chartered Accountant for positive Net Worth be submitted for the last three financial years (2021-22, 2022-23 & 2023-24). Further, in case the final accounts i.e. Profit & Loss, Balance Sheet for FY- 2023-24 is under audit process, the bidder may attach the P&L, Balance Sheet for F. Y. 2020-21.
- e) The bidder should be an Income Tax Payee.
- f) The bidder must be an authorized distributer / dealer / supplier of the medical machines / equipments.
- g) The Authorized signatory of bidder must attach / upload an affidavit on stamp paper duly attested by 1<sup>st</sup> Class Magistrate to the effect that:
  - i. The documents catalogue etc. enclosed with the e-tender are genuine and have not been tampered or fabricated.
  - ii. The firm has not been blacklisted in the past by any Govt/ Private institution of the country.
  - iii. If anything found wrong at any stage, I will be personally responsible for the same.
- h) The bidder must attach / upload the copies of following with bid document:
  - i) Pan card
  - ii) GST registration certificate.
  - iii) Income Tax Return, Balance Sheet, Profit & Loss Account for the last three years.
  - iv) Declaration Certificate: Declaration Certificate that no case is pending with the police / court against the bidder / firm / company /Agency and not been suspended / blacklisted by any PSU / Government Department / Financial Institution / Court etc (as per annexure C).
  - v) No Deviation Certificate: No Deviation Certificate (as per Annexure D).
  - vi) Undertaking (as per Annexure-E).
  - vii) Authorization Certificate from Principal Manufacturer, if applicable (as per Annexure-F).
  - viii)Assurance Certificate from Principal Manufacturer, if applicable (as per Annexure-G)

## 4. **PROCEDURE FOR SUBMISSION OF TENDER:**

Bidders are invited to submit Bids for "e-Notice Inviting Tender (e-NIT) for the procurement of Machinery and Equipment (High End) required for establishment of Anatomy, Physiology, Pathology, Community Medicine, Biochemistry, Forensic Medicine & Toxicology, Microbiology Departments of Medical College, Kakryal" in two parts viz. Technical Bid (Annexure-'A') and Financial Bid (refers to BoQ Online only) as per enclosed proforma along with supporting documents, application fee, EMD etc. The Tenderers are required to submit their tenders under 2 bids system with Cover-I (Technical Bid) and Cover-II (Price Bid).

## A. Cover-I (Technical Bid)

(This cover shall contain): -

(i) **<u>Annexure-'A'</u>** form duly filled in along with relevant documentary proofs.

- (ii) Scanned copies of EMD in the shape of CDR / FDR pledged to Accounts Officer, SMVDCS. However, EMD in original shall be submitted along-with the technical bid document.
- (iii) Tender Fee of Rs. 2,500/- either in the form of DD pledged to the Accounts Officer, SMVDCS, Katra or to be deposited in the official account of Shri Mata Vaishno Devi Charitable Society, Branch J&K Bank Katra, Account No. 50100417566279, IFSC – HDFC0002344(in IFSC Code "0" stands for Zero). The bidder shall mention UTR No. in the prescribed Technical Bid Form at Annexure- 'A'
- (iv) Tender Document containing Instructions, <u>Terms and Conditions duly</u> <u>signed</u> on each leaf by the Tenderer, along with documentary proof wherever required.
- B. Cover II (Price Bids):
  - (i) The bidder shall quote price separately for the <u>Supply, Installation, Testing</u> and <u>Commissioning of machinery</u> / equipments and <u>Comprehensive</u> <u>Annual Maintenance for a period of 05 years after the expiry of Warranty</u> / <u>DLP period</u>. The prices have to be submitted <u>online</u> in the form of BOQ only.
  - (ii) The bidding firm shall have to quote all-inclusive rates F.O.R. site (including taxes, freight, transportation, loading / unloading, etc. i.e. without any exclusions). A single cumulative price (including SITC & CAMC for 5 years) shall serve as the competition platform for the technically qualified bidders.
  - (iii) The price bid should be absolute and unconditional.
  - (iv) Conditional bids shall be rejected.
  - (v) The price bid shall be opened in favour of bidders who qualify in the technical bid. Rates are required to be quoted strictly as per prescribed BOQ/item of works.
  - (vi) Price bids not conforming to above standards or suffering from any flaw shall be rejected

### 5. SELECTION CRITERIA:

- i. In the first stage of evaluation, offer shall be rejected, if found deficient as per the requirements of Tender / Bid Processing Fee and other eligibility criteria. Only bids confirming the e-NIT conditions shall be further taken up for evaluation. Evaluation of the technical Bid will start first. The bidder qualifying the technical bid shall only be admitted in process of financial bid evaluation.
- ii. Financial bids of the technically qualified bidders shall be opened and the bidder offering lowest rates cumulatively for the cost of SITC of machinery / equipments and cost of CAMC for the period of 05 years shall be emerged as L-1 bidder and can be considered for the allotment of the contract. In-case of the tie in rates, revised sealed bid can be obtained on the spot and the bidder offering lowest rates shall be considered for the allotment of the contract. Incase of tie in the second instance as well, it shall be decided by the process of "draw of lots".
- iii. The Shrine Board reserve the right to negotiate the quoted rates, terms & conditions with the lowest tenderer or any of the other tenderers on quality basis to ascertain the suitability of the acceptance offer.

### 6. **PRE-BID CONFERENCE:**

A pre-bid conference will be held on <u>02.08.2024 at 12:00 Noon</u> at Conference Hall, SGC, Katra. The prospective bidders are requested to preferably send their queries at-least 02 days in advance before scheduled pre-bid meeting on e-mail ID nes\_purchase@maavaishnodevi.net. Further, in case, any of the prospective bidder(s) intends to join the pre-bid conference through online mode, they shall forward their request on the official e-mail ID nes\_purchase@maavaishnodevi.net by or before 31.07.2024. Shrine Board reserves the right to modify the terms & conditions of e-NIT after the pre-bid conference in view of any practical modalities which may emerge during the pre-bid meeting.

### 7. **GENERAL TERMS & CONDITIONS:**

- i. The list of medical machines / equipments alongwith detailed specifications (Annexure-B).
- ii. The quantity of the material is indicative in nature and can be increased or decreased during the period of Contract.
- iii. The Technical Bid should be accompanied by a copy of e-NIT with each page duly signed by the authorized signatory of the bidder(s), who has signed the tender document, as a token of acceptance of the terms and conditions of the e-NIT otherwise, bid(s) shall not be considered.
- iv. The validity of the bid shall remain valid for 90 days from the last date of submission of bid document.
- v. For imported goods, prices shall be quoted in any freely convertible currency say Dollar, Euro, GBP or Yen. As regard price(s) for allied services, if any required with the goods, the same shall be quoted in Indian Rupees only if such services are to be performed/undertaken in India. Commission for Agent, if any and if payable shall be indicated in the space provided in the price schedule. The prices for comparison (only) shall be taken as the prevailing rates on the day of opening of tenders.
- vi. The documents, asked in original should be page marked and bearing signature with seal on each and every page.
- vii. The tenderer supplying indigenous goods or already imported goods shall quote in Indian Currency only.
- viii. Tender where prices are quoted in any other way shall be treated as nonresponsive and rejected. It will be mandatory on part of the tenderer to ensure that the rates quoted are not variable as are quoted in other Govt. Institutes of J&K State at least during the current financial year. If at any stage it is found that the supplier has executed the supplies or has quoted the rates lower than the approved ones, the differential amount shall be recouped from the supplier and further orders shall be placed on lower rates only.
- ix. The rates quoted should be F.O.R. Katra and inclusive of all taxes, duties, other charges like packing, transportation etc. Including entry tax, if any. No separate Tax/Levies shall be allowed. The rates should be quoted in accordance with the BOQ through online mode only.
- x. No conditional tender shall be accepted. The authority reserves right to accept or reject any tender/ quotation without assigning any reasons thereof.
- xi. The approved firm shall be bound to deliver ordered Machinery and Equipment within 8 weeks or a period mutually agreed up by the authorities.
- xii. The successful tenderer shall be responsible for execution of the supplies strictly in accordance with the contract in full and shall not in any case assign or sublet any part thereof. Deviation, if any can lead to forfeiture of Earnest money with holding of other deposits in Accounts Section as a whole or even black listing of the suppliers/ firms/ dealers/original manufacture.
- xiii. If in case the tenderer fails to supply the material within the delivery period, the order will be liable to be treated cancelled and earnest money shall be forfeited.
- xiv. Rates should be quoted for the superior quality material only with Nomenclature/ catalogue duly marked with seal & signature of the firms.
- xv. In case any Tenderer, if charges higher rates for any item(s) more than the MRP, the action like forfeitures of earnest money/security money/ performance bank guarantee and removal of name from the list of the supplier shall be taken against the firm.
- xvi. The Successful tenderer is bound to supply the material on the approved rates. Any hike in tax on later stage will not be paid if not levied by the J&K Govt. However, in the event of any revision in the existing rates of duties or introduction of any statuary duty and taxes imposed by the Government, the same will be paid extra on production of satisfactory documentary proof.
- xvii. The successful bidder shall carefully examine the conditions, specifications, size and Catalogue/drawings etc. of the goods to be supplied wherever

applicable. In case of any doubts, the successful bidder shall before sign the contract refers to the competent authority and get clarifications.

- xviii. If at any stage during the tenure of the tender the successful tenderer reduces the sales price lower than the quoted rates under agreement will forthwith notify such reductions of the sale price to the competent authority immediately.
- xix. All terms and conditions of tender shall conform part of the supply order/agreement.
- xx. Each machine / equipment quoted shall be under warranty of five years from the date of installation and its successful commissioning at required site. The details of Comprehensive Maintenance Contract for the period of 05 years (including spares) after the warranty period shall also be mentioned. Any condition mentioned against each item in the list of items in tender document shall also be the part of the terms & conditions.
- xxi. The successful tenderer should ensure immediate supplies after issuance of Supply order and they are bound to supply material strictly as per the conditions approved by the Authority. If at any stage it is found that material supplied by the firms is not according to, as approved by the Authority, the action as deemed fit will be taken against the firm.
- xxii. The competent authority shall also have right to alter/ modify the specifications of any item(s) for purchasing in the best interest of the SMVDSB during the process of finalization of a contract viz. Placement of supply order.
- xxiii. All the items supplied shall be of the best quality, specification, trade mark and in accordance with the approved standard, catalogue, samples if provided. In case of any articles supplied not being approved, shall be liable to be rejected or replaced and any expenses as a result of rejection or replacement of supplies, shall be entirely at the cost of tenderer.
- xxiv. The tenderer shall be responsible for the proper packing, so as to avoid damage under normal conditions of transport by rail, road or air and delivery of material in good condition to the consignee at the destination. In the event of any loss, damage, breakage, leakage or any shortage, the tenderer shall be liable to make good such loss and shortage found at the checking/ inspection/ verification of the materials by the consignee, no extra cost on such account shall be admissible.
- xxv. The supplies shall be accepted only in proper packing where-ever required.
- xxvi. <u>Performance Bank Guarantee</u>: The Successful bidder shall furnish Performance Bank Guarantee (PBG) pledged to Accounts Officer, SMVD Charitable Society, Katra for an amount equals to 5% of the Contract Value as Security Deposit within a period of 20 days from the issuance of Letter of Award and the same shall be released after successfully completion of Comprehensive Annual Maintenance Contract of 05 years. The EMD of the Successful bidder shall be returned within 15 days of submission of Security Deposit.
- xxvii. **Down Time:** The engineer for servicing of the equipment shall be deputed within 48 hours of report from the concerned authorities and for any spare part required, same shall be arranged by the successful bidder at its own cost.
- xxviii. The equipment to be supplied shall have to be guaranteed for **95% uptime** by the tenderer during the warranty period. The period during which the equipment remains non-functional or unserviceable for want of engineer or non-availability of spare parts shall not be counted towards the guarantee period and has to be extended accordingly by that period. (1 day down = 1 day extended) besides the competent authority shall be at liberty to impose suitable penalty upto Rs.4,000/- per day.
- xxix. The original manufacturer shall undertake that they will also remain responsible for after sale services for the supplies executed by the tenderer on their behalf.
- xxx. No advance payment shall be authorized unless required under specific terms & conditions. For the purpose of payment, the supply shall mean full supply of the ordered material and no requests for on-account payment shall be entertained.

- xxxi. Any other condition that is not indicated here can be incorporated in the supply order or agreement before execution of a contract if need arises.
- xxxii. Any changes/corrigendum/extension of closing / opening dates in respect of this e-NIT shall be issued through SMVDSB's website, or e-publishing portal only and no press notification will be issued in this regard. The bidder(s) are therefore requested to regularly visit SMVDSB's website and e-publishing portal for updates.
- xxxiii. In case of rejection of the bid(s) due to incomplete information or not meeting the terms & conditions mentioned in e-NIT, the competent authority's decision will be final and the bidder shall not be entitled to any compensation for nonissue of work.
- xxxiv. In case of any document attached found forged/tampered, the bidder (s) is likely to face legal action against them under rules including forfeiture of their earnest money and debarred to participate in the tendering process of SMVDSB for the period of 03 years.
- xxxv. After the successful culmination of tender, if the successful bidder(s) refuses to comply with the rate approval order and subsequently failed to comply the supply orders on account of any reason, the same bidder(s) shall be debarred from further dealing with the Board for a period of 03 years and forfeiture of Performance Security.
- xxxvi. SMVDSB reserves the right to allot the Contract to one or more firms on the same rates / terms and conditions after the successful culmination of e-NIT.
- xxxvii. SMVDSB reserves the right to seek clarifications or additional information/ documents from any bidder regarding its technical bid. Such clarification(s) or additional information/document(s) shall be provided within the time specified for the purpose. Any request / response thereafter shall not be considered and the proposal shall be liable to be rejected.
- xxxviii. SMVDSB reserves the right to negotiate the rates offered, terms and conditions with the lowest bidder or any of the bidder on quality basis to ascertain the suitability of the acceptable offer.
- xxxix. It is clearly understood by the parties that no financial liability of any type is created by issuance of the letter of Award.
  - xl. SMVDSB reserves the right to modify/change/delete/add any further terms and conditions prior to the issue of work order.

## 8. TERMS OF CONTRACT

- a) **Period of Contract**: The rates contract shall remain valid for a period of one year from the date of its issuance and can be further mutually extended for a period of 90 more days.
- b) Contract Agreement: The successful bidder shall be bound to execute an agreement on non-judicial stamp paper of Rs. 500/- (Five hundred only). The SMVDSB reserves the right to amend the terms & conditions of contract by mutual discussions and shall be in writing. The amended terms and condition will form part of the agreement.
- c) **Sub-Contracting**: The successful bidder shall not assign, sub-contract or sublet the whole or any part of the contract in any manner.
- d) SMVDSB also reserves the right to modify the Terms and Conditions of the e-NIT at any time.
- e) **Delivery Period**: The successful bidder has to execute all the Purchase Orders against this Rate Contract, within the stipulated time frame.
- 9. **PENALTY**: In case of delay in executing the SITC orders issued against the Rate Contract, a Penalty @1% of order amount per week of delay shall be imposed, subject to a maximum penalty amount of 10% of the order value, beyond which the order shall be cancelled and the PBG forfeited.

### 10. BILLING AND PAYMENTS:

(i) No advance payments shall be made.

- (ii) The payment to the successful bidder(s) shall be made in the following manner:
  - a) 80% payment (excluding cost of Comprehensive Annual Maintenance Contract) shall be made against full supply of order material against certificate of Executive Director, Medical College, Kakryal.
  - b) 20% payment shall be made after successful installation, testing, commissioning and handover of equipment(s) to the end users against certificate to be issued by Executive Director, Medical College, Kakryal.
  - c) The Comprehensive Annual Maintenance Charges shall be paid in 05 Annual equal instalments at the end of each year of CAMC coverage.
- (iii) The supplier shall have to mention the GST No. 01ABIAS9784P1ZK of Shri Mata Vaishno Devi Charitable Society, Katra while raising their bill of supplies. While filing GSTR-I, the supplier shall classify the supply / Service made to Shrine Board under Business (B to B) Sales. The supplier shall also mention six digit HSN code of the material to be supplied. In case the vendor doesn't upload / mention the bill under B to B, the GST amount levied in the Bill shall not be paid.
- (iv) The supplier shall file GSTR 1 and 3B within the due dates prescribed under the CGST / SGST Act 2017 so as to enable SMVDSB to claim timely input credit. In case of default, interest @2% per-month of tax amount shall be charged and recovered from the defaulting supplier.
- (v) In case of quarterly based GST filling firms, the supplier shall have to transfer their bills (B to B) on monthly bases under Invoice Furnishing Facility (IFF).

### 11. **INSPECTION / LIFTING BACK OF REJECTED SUPPLIES:**

- i. The supplied machines / equipments shall be checked / inspected by the team nominated by the authorities and if found defective or not as ordered, the same shall be rejected at the sole risk of vendor.
- ii. The rejected material shall have to be lifted by the supplier at his own risk and cost within a week's time failing which storage charges per day as may be deemed fit by the authority shall be levied. Beyond one month the material shall be auctioned and storage charges shall be recovered from the supplier @2% per day.

### 12. **TERMINATION OF CONTRACT:**

If the successful bidder fails to execute the SITC orders within the stipulated time or violates the terms and conditions of the e-NIT. The rate contract is liable to be cancelled by the competent authority. In such an eventuality, no compensation / damages, whatsoever shall be payable to the successful bidder.

### 13. **ARBITRATION:**

All disputes and differences between the parties hereto shall be referred to the sole arbitration of the person to be nominated and appointed by the **Chief Executive Officer**, Shri Mata Vaishno Devi Shrine Board, whose decision shall be final and binding upon the parties to this agreement. The provision of The Arbitration and Conciliation Act, 1996 shall apply. Courts at Jammu only shall have the jurisdiction to entertain any legal proceeding arising out of this contract.

### 14. FORCE MAJEURE:

Any failure or omission to carry out the provisions of the order shall not give rise to any claim by one party against the other, if such failure or omission arises from an "Act of God" which shall include all acts of Natural Calamities such as fire, flood, earthquakes, hurricanes or any pestilences or from civil strikes, compliances with any statute or regulations of the Government lock outs and strikes, riots, embargoes or from any other reasons beyond the control of the parties including the war (Whether declared or not) Civil War or State of Insurrection.

### Queries may be addressed to:

- Executive Director, Medical College, Kakryal E-Mail: <u>edir.smvdime@maavaishnodevi.net</u> Contact No. 9906035050
- Asstt. Chief Executive Officer (G), SMVDSB E-Mail: <u>aceog@maavaishnodevi.net</u> Contact No. 9906019466

No.: CO/Pur/NE/612/3702 Dated: 25.07.2024 (Dr. Gopal K Sharma) Asstt. Chief Executive Officer

### (Technical Bid)

### (To be submitted on the letterhead of the Agency) FOR SUPPLY OF MACHINES / EQUIPMENTS TO SHRI MATA VAISHNO DEVI SHRINE BOARD, KATRA

Name of the Ten	derer:		
Detail of Tender a) UTR No	<b>Fee:</b> date	Amount	
Detail of EMD:			
EMD in the fo	rm of CDR/FDR/TDR No	, Amount:	
Date:	, Bank	, Branch	

### To,

The Chief Executive Officer, Shri Mata Vaishno Devi Shrine Board, Katra.

### Sir,

I hereby submit my tender / bid for supplying medical machines / equipments for Shri Mata Vaishno Devi Shrine as mentioned in the **Clause No. 03 of the e-NIT**. The detail of the particulars submitted through online mode and in a hardcopy format is as produced below:

S.	Particulars	Attached/Not
No.		Attached
1.	Name of the Supplier / Manufacturerwith Address (telephone number/Mobile No.) along with brief description of background.	
2.	Authorized dealer / distributor / suppler of medical machines / equipments certificate.	
3.	Experience of supply of Medical machines / equipments to Government Medical Colleges, Government Universities/ Institutes of National Importance for not less than 03 years as on 31 March, 2024 (Attach relevant copies of work order).	
4.	Affidavit on stamp paper dully attested by 1 <sup>st</sup> Class Magistrate	
5.	Average Annual turnover for the last three years (2021-22, 2022- 23 & 2023-24). (Proof to be enclosed)	
6.	The tenderer must have sound financial background and a positive net worth for the last three years (2021-22, 2022-23 & 2023-24). (Proof to be enclosed)	
7.	Audited Balance sheet for the last 03 years 2021-22, 2022-23 & 2023-24.	
8.	<ul> <li>a) PAN (proof to be enclosed)</li> <li>b) ITR statement/ Income Tax Assessment Order (for the last three years to be enclosed) i.e. 2021-22, 2022-23 &amp; 2023-24.</li> <li>c) GST No. (proof to be enclosed)</li> </ul>	
9.	Declaration Certificate (Annexure-C)	
10.	No Deviation Certificate (Annexure-D)	

S.	Particulars	Attached/Not
No.		Attached
11.	Undertaking (Annexure-E)	
12.	Authorization Certificate from Principal Manufacturer (Annexure-	
40	1) Accuracy of Cartificate from Drive in al Manufacturer (Accuracy O)	
13.	Assurance Certificate from Principal Manufacturer (Annexure-G)	

Copies of documentary proof may be furnished where-ever required. Additional pages may be used, if needed.

Signature: _	
Name:	
<b>Designation:</b>	
R/o:	
Contact No.:	
•••••••	· · · · · · · · · · · · · · · · · · ·

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S. No.	ANATOMY
Hist	ology Laboratory
1	Microscopes, Monocular/Binocular
	MONOCULAR CO-AXIAL RESEARCH MICROSCOPE:
	Unique Model incorporation latest COAXIAL coarse and fine focusing mechanism based on
	a 4- gear reduction system traveling on ball bearing guides with highly sensitivity fine
	motion with a graduation reading to 0. 002mm. The Co-axial system provides highest deg.
	of working convenience and precision. Sturdy and stable microscope stand with ball
	bearing Quadruple revolving nose piece turret on a dust-proof mount. Lifelong smooth and
	built in click stop brings each objective to a perfect alignment for a common center.
	Large graduated mechanical stage (145x125mm) with low positioned co-axial central knobs
	for X & Y movements and convenient manipulation. The microscope base has built in
	halogen 6V-20W illumination with oil illumination with on/off switch and continuously
	variable light intensity regulator for day-light has also been provided. A high-grade
	condenser system NA 1.25 with iris-diaphragm and swing out filter ring is adjustable
	through rack-n-pinion.
	A high transmission monocular Observation head is inclined at 45 deg. with superior
	coated prismatic system. Best colour coated corrected parfocalled and centered optics are
	fitted.
	Optical Combination:
	Achromatic Objectives:4x/5x,10x,40x/45x,(SL) & 100x (SL) Oil immersion
	Eye Piece : WF.10x
	Eye Pieces : 5x Huygenian
	Packed in Thermocol and Wooden Box
2	Dissection microscope
	STUDENT DISSECTING MICROSCOPE: A stable round base with square stage provided
	with jointed eyepiece carrier for free movement on the total stage area. With removable
	hand rests. Focus by rack-n-pinion. Two high pint 10x & 20x eyepieces provided. complete
	with stage clips and Plano concave reflector. Packed in wooden box. This model has been
	constructed as per ISI Specifications.
3	Microtomes, rotary: -
	ROTARY SENIOR MICROTOME (A.O. Spencer 820 Types)
	Streamlined standard equipment incorporated with latest technology for cutting serial
	sections in research work. The precise feed mechanism cuts sections from 1-50 microns in
	steps of one micron each.
	Feed Adjustments: 1-50 microns. Total feed excursion 28mm with opening of object clamps
	37x27mm. Overall dimensions 16x10x9" Complete with razor-120mm with back & handle,
4	Niereternee, Cledre, Jerre evitting
4	Microtomes, Sledge, large cutting:-
	Sledge microtome/sliding microtome for cutting large blocks of paranin and resin embedded
	hatenal for material for light microscopy. The knile holding clamps shall allow the knile to
	microtomo which is yory boowy for stability and not usually subject to vibration, with a food
	range of 0 20 microps
рну	
1	Polygraph Multichannel (Oty 1)
	The system should be able to record and analyse
	Pulse PPG blood pressure ECG EMG EEG EOG Pulse Transit time Eorearm
	Diathyemography Heart Rate V/ariability [UDV/]
	ECC Multi loade configurations for real time cordiae avia 8 wester erablicia
	ECG winn leads configurations for real time cardiac axis & vector analysis
	Digital microphone for heart & lung sounds studies.
	Deep breathing test, Valsalva Menuever, Vascular function Testing.
	Dynamometer to study Hand Grip Test.
	• Four channel balance board for static posturography or body Sway studies with same
	software.

Hardware Specifications:

- High Speed USB based 4 channel data acquisition System.
- Simultaneous recording of real time for atleast 14 and more parameters.
- High sampling rate of 100 KHz or more
- Should have Inbuild Human safe Fully Isolated Stimulator for Constant current & Voltage stimulation output range (0–20 mA) with pulse duration: 50–200 μs.
- Should have a noise free wireless multichannel ECG, R-R interval, Heart Rate, Skin temp, GSR, Respiration rate, SPO2, PPG Accelerometer activity integrated into the system.
- The range of Wireless parameters should be 100 meters or above for real time recording and also have logging mode as well.
- Both wired and wireless equipment should record and analyse simultaneously as well individually on same software.
- The software should have step by step instructions, protocol and experimental design for performing various experiments in physiology teaching applications. Also should have sample data for animal experiments for demonstrating to the students.
- Lesson authoring/editing service must include content including predeveloped experimental protocols, background information on each experiment, transducer setup and data acquisition settings, and example data as per requirement of department.
- It allows faculties to edit lessons/Experimenets online through mobiles, Tablets, PC etc and upload for students
- Teaching software allows faculty to take assignment on same software and provide grading.
- Facility for automatic analysis in while data recording and after recording for ECG, Heart Rate Variability, Blood Pressure, Peak analysis, Spectrum analysis, etc.
- Online and offline analysis of Heart variability in time domain and frequency domain on same software.
- Should have option for Mathematical function, Statistical analysis and export options to other software like MATLAB, Excel, QuickTime, Wav, Text etc. online as well as offline for desired interpretation of the data.
- The software should provide an easy file sharing option to a distant user with-out involving any cost with a 5 year of free updates and upgrade.
- All Equipment's wired & Wireless should work on same Software simultaneously and individually as per the departmental need.
- Compatible Desktop Computer (I5, 4GB RAM, 1TB HDD, 18 inch Monitor, Windows OS), Printer and 1kVa UPS.
- Documentations:-IEC, CE marked /FDA, other safety certificates must be provided.
- Manufacturer should have ISO certificate.
- Manufacturer should have experience of Manufacturing & Installation of the quoted product for atleast 05 years.

# 2 Gas Analysis Apparatus, Haldane's students type : Should be supplied with multichannel recording unit with a range of +2 mV to + 10 V. Sampling rate of 100 KHz per channel and option for variable sampling speed on each channel. ADC resolution of 16 bits on all gain ranges. Facility for recording ECG leads (I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis & vector analysis on same software etc. Online and offline Heart rate variability in frequency domain and time domain. Software should generate automated HRV report with time domain and frequency domain parameters.

- Amplifiers & Transducers for ECG; Spirometer with respiratory flow head and mouth pieces. Pulse, respiration rate, Heart rate, hand dynamometer, Blood pressure, heart sound etc.
- The Software should calculate VE Expired minute volume, V02 oxygen consumption,

	VC02, carbon dioxide production, RER respiratory exchange ratio, ECG, HRV, Body
	Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry
	Metabolic Log Window VE (RTPS) vs. V02 VE (RTPS) vs. VC02 VC02 vs. V02 REP
	$V_{CO2}$ vs. time $V_{CO2}$ vs
	Automated report with Subjects details ( Name age Sex weight height ) and
	environmental details
	Accessories:-Mouth piece, head gear, tubing and flow sensors, mixing chamber
	connectors, FCG electrodes, cream, paste, filters and Douglas bags to be provided.
	<ul> <li>Compatible Computer/Laptop &amp; trolley should be provided.</li> </ul>
	Gas Analyzer should have an Oxygen sensor with minimum range of 5-100% oxygen
	and resolution of at least ,0.02% & the carbon dioxide sensor with minimum range 0-
	10% of carbon dioxide and resolution of at least 0.1 % and variable flow range of 0-185
	ml/min for best performance and results and must have following specifications»
	Operating Temperature Range: +5 to 40°C
	Humidity: 0 to 90% non-condensing
	Warm-up time: 10 mins @ 20°C
	• Should be supplied with Gas Mixing Chamber, tubing and connecting tubings and cable.
	• Must have an analogue outputs for connecting it to data recoding unit and software.
	• The instrument should be approved to IEC, CE.& ISO and other safety standards from
	Manufacturer chould have experience of Manufacturing 8 Installation of the gueted
	<ul> <li>Manufacturer should have experience of Manufacturing &amp; Installation of the quoted product for atleast 05 years. Documentary proof should be attached</li> </ul>
3	Sherrington Starling kymograph (electrically driven)
C C	ELECTRICAL E-8 STUDENT KYMOGRAPH (Superior Quality) :With special heavy duty
	motor, Oil lapped gear system jerk free running instantaneous start & stop clutch ,stainless
	steel spindle screw lift.15x15cm.cylinder.
4	Automatic Gas Analyser O2,CO2, N2 with Bicycle Ergometer.
	The existence of a second measure VO2 VCO2 DO VE entremetry/flow volume ate
	• The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.
	<ul> <li>The system should measure vO2, vCO2, RQ, vE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation,</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp;</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> </ul>
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	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption , VCO2</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption , VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio,</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption , VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption , VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption, VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption , VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs Time,VO2 vs Time,VCO2 vs Time, VE vs Time etc.</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption , VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs Time, VO2 vs Time, VCO2 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption, VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs Time,VO2 vs Time,VCO2 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic graphs mentioned above with Subjects details (Name, age, Sex, weight, height ) and</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption, VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs Time,VO2 vs Time,VCO2 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic graphs mentioned above with Subjects details ( Name, age, Sex, weight, height ) and environmental details.</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption, VCO2 carbon dioxide production, VE Expired minute volume, RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VCO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2, VE vs VCO2, VCO2 vs VO2, RER vs Time, REE vs Time, VO2 vs Time, VCO2 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic graphs mentioned above with Subjects details ( Name, age, Sex, weight, height ) and environmental details.</li> <li>Should have high sensitive oxygen and carbon dioxide sensor with adequate variable</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption, VCO2 carbon dioxide production, VE Expired minute volume, RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs Time,VO2 vs Time,VCO2 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic graphs mentioned above with Subjects details ( Name, age, Sex, weight, height ) and environmental details.</li> <li>Should have high sensitive oxygen and carbon dioxide sensor with adequate variable flow range for best performance and results.</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption, VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs Time,VO2 vs Time, VCO2 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic graphs mentioned above with Subjects details ( Name, age, Sex, weight, height ) and environmental details.</li> <li>Should have high sensitive oxygen and carbon dioxide sensor with adequate variable flow range for best performance and results. CO2 Sensor</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RQ, VE, sphometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption, VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs Time, VO2 vs Time, VCO2 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic graphs mentioned above with Subjects details (Name, age, Sex, weight, height) and environmental details.</li> <li>Should have high sensitive oxygen and carbon dioxide sensor with adequate variable flow range for best performance and results. CO2 Sensor Type: Infrared, optical absorption Type: Visible spectrum (760 nm) Papage: 0.409% CO2</li> </ul>
	<ul> <li>The system should measure VO2, VCO2, RC, VE, spirometry/ now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption , VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs Time, VO2 vs Time, VCO2 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic graphs mentioned above with Subjects details ( Name, age, Sex, weight, height ) and environmental details.</li> <li>Should have high sensitive oxygen and carbon dioxide sensor with adequate variable flow range for best performance and results. CO2 Sensor Type: Infrared, optical absorption Range: 0-100% CO2</li> <li>Linear Outputt: 0-11/(0-100% CO2)</li> </ul>
	<ul> <li>The system should measure VO2, VO2, RC, VE, spirometry now volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption , VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VC2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs Time, VO2 vs Time, VC02 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic graphs mentioned above with Subjects details ( Name, age, Sex, weight, height ) and environmental details.</li> <li>Should have high sensitive oxygen and carbon dioxide sensor with adequate variable flow range for best performance and results. CO2 Sensor Type: Infrared, optical absorption Range: 0-100% O2</li> <li>Linear Output: 0-1V (0-10% CO2)</li> <li>Resolution: 0.1% CO2</li> </ul>
	<ul> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption, VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs Time, VO2 vs Time, VCO2 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic graphs mentioned above with Subjects details ( Name, age, Sex, weight, height ) and environmental details.</li> <li>Should have high sensitive oxygen and carbon dioxide sensor with adequate variable flow range for best performance and results. CO2 Sensor Type: Infrared, optical absorption Range: 0-100% O2</li> <li>Linear Output: 0-1V (0-10% CO2)</li> <li>Resolution: 0.1% CO2</li> <li>Should have high sensitive oxygen carbon dioxide sensor and nitrogen with adequate</li> </ul>
	<ul> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption, VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs Time,VO2 vs Time,VCO2 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic graphs mentioned above with Subjects details (Name, age, Sex, weight, height) and environmental details.</li> <li>Should have high sensitive oxygen and carbon dioxide sensor with adequate variable flow range for best performance and results.</li> <li>CO2 Sensor C2 Sensor Type: Visible spectrum (760 nm) Range: 0-10% CO2 Resolution: 0.1% CO2</li> <li>Should have high sensitive oxygen, carbon dioxide sensor and nitrogen with adequate variable flow range for best performance and results.</li> </ul>
	<ul> <li>The system should measure VO2, VC02, RCI, VF, spitometry how volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption , VCO2 carbon dioxide production, VE Expired minute volume , RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VC02,VCO2 vs VO2,RER vs Time, REE vs Time,VO2 vs Time,VCO2 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic graphs mentioned above with Subjects details ( Name, age, Sex, weight, height ) and environmental details.</li> <li>Should have high sensitive oxygen and carbon dioxide sensor with adequate variable flow range for best performance and results.</li> <li>CO2 Sensor</li> <li>Type: Visible spectrum (760 nm) Range: 0-10% CO2 Resolution: 0.1% CO2 Resolution: 0.1% CO2 Resolution: 0.01% O2</li> <li>Should have high sensitive oxygen, carbon dioxide sensor and nitrogen with adequate variable flow range for best performance and results.</li> <li>The system should is multaneously record and analyse all the required parameter in a</li> </ul>
	<ul> <li>The system should measure VO2, VC02, RC, Ve, spitometry how volume, etc.</li> <li>The system should supplied with Branded Compatible Computer I5 10<sup>th</sup> Generation, 8GB RAM, 1 TB HDD, Windows 10, MS office, Wi-Fi Bluetooth with Monitor, Lazer printer</li> <li>Facility to perform online and offline complete heart rate variability analysis (Time &amp; Frequency domains), ECG interpretation, PQRST amplitudes and ST elevation analysis.</li> <li>To plot real time flow &amp; volume loops</li> <li>Facility for ECG (lead I, II, III, aVL, aVF, aVR and VI to V6) for real time cardiac axis and vector analysis.</li> <li>The system should be able to record &amp; measure VO2 oxygen consumption, VCO2 carbon dioxide production, VE Expired minute volume, RER respiratory exchange ratio, ECG, HRV, Body Temperature and Pressure Saturate BTPS, Standard Temperature and Pressure Dry STPD, (VE / VO2), (VE / VCO2) etc. and should generates a number of Metabolic graphs like VE vs VO2,VE vs VCO2,VCO2 vs VO2,RER vs Time, REE vs Time, VO2 vs Time, VE vs Time etc.</li> <li>Software should generate automatic report with the metabolic values and metabolic graphs mentioned above with Subjects details ( Name, age, Sex, weight, height ) and environmental details.</li> <li>Should have high sensitive oxygen and carbon dioxide sensor with adequate variable flow range for best performance and results. CO2 Sensor Type: Infrared, optical absorption Type: Visible spectrum (760 nm) Range: 0-10% CO2 Linear Output: 0-1V (0-10% CO2) Linear Output: 0-1V (0-100% O2)</li> <li>Should have high sensitive oxygen, carbon dioxide sensor and nitrogen with adequate variable flow range for best performance and results.</li> <li>The system should simultaneously record and analyse all the required parameter in a single screen for interpretation and computation of results.</li> </ul>

		<ul> <li>Should have a noise free wireless multichannel ECG, R-R interval, Heart Rate, Skin temp, GSR, Respiration rate, SPO2, PPG Accelerometer activity integrated into the system.</li> </ul>
		<ul> <li>The range of Wireless parameters should be 100 meters or above for real time</li> </ul>
		recording and also have logging mode as well.
		<ul> <li>Both wired and wireless equipment should records and analyse simultaneously as well individually on same software for recording and analysis</li> </ul>
		<ul> <li>The system should be provided with physical mixing chamber suitable for extremely high and low ventilation ranges.</li> </ul>
		<ul> <li>Accessories:Mouth piece, head gear, tubing and flow sensors, mixing chamber connectors, ECG electrodes, cream, paste, filters and Douglas bags to be provided.</li> <li>Free Software upgrades and updates should be provided for next 5 years.</li> </ul>
		It should be supplied or interfaced with a compatible branded Bicycle Ergometer
		System must be provided with Trolley to keep portable equipment Safety.
		Manufacturer should have ISO certification for quality standards.
		<ul> <li>Should be US FDA/ European CE / IEC/BIS other safety standards approved product.</li> <li>Demonstration of the equipment's and necessary training to be provided by the exports</li> </ul>
		If required.
		<ul> <li>Manufacturer should have experience of Manufacturing &amp; installation of the quoted product for at least 05 years. Documentary proof should be attached.</li> </ul>
Ī	5	MOSSO'S ERGOGRAPH:: This is for recording work done on to the drum surface with
		special arm fixation rests sun-mica topped base board. complete with weight set
	0	<b>MARTIN BICYCLE ERGOGRAPH</b> : The cycle Frame is supported by a sturdy metallic frame, from the front of which two uprights ascend and carry a desk and a cross piece which provide for the attachment in from of the tension balances. The back wheel 168 cm. in circumference and about 22 kg. in weight carried in its circumference a stout calico the ends of which are at tached to spring balances through two set of adjustable pulleys. An
		adjustable counter records the revolutions of the wheel .With audio indication of each revolution.
-	7	adjustable counter records the revolutions of the wheel .With audio indication of each revolution. <b>Ophthalmoscope:-</b>
	7	adjustable counter records the revolutions of the wheel .With audio indication of each revolution. <b>Ophthalmoscope:-</b> Consist of concave mirror with a hole in centre Matron ophthalmoscope three mirror 2 concave mirror 1 large and other is small Plane
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	7	<ul> <li>adjustable counter records the revolutions of the wheel .With audio indication of each revolution.</li> <li><b>Ophthalmoscope:-</b> Consist of concave mirror with a hole in centre Matron ophthalmoscope three mirror 2 concave mirror 1 large and other is small Plane mirror for retinoscopy Three mirror attached that central hole come in same place Series of lenses Series of hole arranged to measure diameter of pupil Source light of light on back side Three channel physiograph Technical Specification:-</li> <li>Should be able to record three channels with time and event channels.</li> </ul>
	7	<ul> <li>adjustable counter records the revolutions of the wheel .With audio indication of each revolution.</li> <li><b>Ophthalmoscope:-</b> Consist of concave mirror with a hole in centre Matron ophthalmoscope three mirror 2 concave mirror 1 large and other is small Plane mirror for retinoscopy Three mirror attached that central hole come in same place Series of lenses Series of hole arranged to measure diameter of pupil Source light of light on back side Three channel physiograph Technical Specification:- <ul> <li>Should be able to record three channels with time and event channels.</li> <li>Transducers should have 16 bit resolution.</li> </ul> </li> </ul>
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	7	<ul> <li>adjustable counter records the revolutions of the wheel .With audio indication of each revolution.</li> <li>Ophthalmoscope:- Consist of concave mirror with a hole in centre Matron ophthalmoscope three mirror 2 concave mirror 1 large and other is small Plane mirror for retinoscopy Three mirror attached that central hole come in same place Series of lenses Series of hole arranged to measure diameter of pupil Source light of light on back side Three channel physiograph Technical Specification:- <ul> <li>Should be able to record three channels with time and event channels.</li> <li>Transducers should have 16 bit resolution.</li> <li>Sampling rate should be 250, 500, 1000 samples / second.</li> </ul> </li> <li>Should have plug &amp; play Smart transducers for human applications including Pulse, Biopotential (ECG / EMG / EEG / EOG), Respiratory Belt, Cardio Microphone, Tendon hammer, Sphygmomanometer, Hand grip and Skin temperature.</li> <li>Software should measure time interval between user selected points, display of data value at user selected point and tabulate for analysis.</li> </ul>
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-	7	<ul> <li>adjustable counter records the revolutions of the wheel .With audio indication of each revolution.</li> <li>Ophthalmoscope:- Consist of concave mirror with a hole in centre Matron ophthalmoscope three mirror 2 concave mirror 1 large and other is small Plane mirror for retinoscopy Three mirror attached that central hole come in same place Series of lenses Series of hole arranged to measure diameter of pupil Source light of light on back side Three channel physiograph Technical Specification:- <ul> <li>Should be able to record three channels with time and event channels.</li> <li>Transducers should have 16 bit resolution.</li> <li>Sampling rate should be 250, 500, 1000 samples / second.</li> </ul> </li> <li>Should have plug &amp; play Smart transducers for human applications including Pulse, Biopotential (ECG / EMG / EEG / EOG), Respiratory Belt, Cardio Microphone, Tendon hammer, Sphygmomanometer, Hand grip and Skin temperature.</li> <li>Software should measure time interval between user selected points, display of data value at user selected point and tabulate for analysis.</li> <li>The system should have contents with step by step instructions, protocol and experimental design for performing various experiments in physiology applications.</li> <li>Should have sample data for human and animal experiments for demonstrating to the students.</li> </ul>
	7 8	<ul> <li>adjustable counter records the revolutions of the wheel .With audio indication of each revolution.</li> <li><b>Ophthalmoscope:</b>- Consist of concave mirror with a hole in centre Matron ophthalmoscope three mirror 2 concave mirror 1 large and other is small Plane mirror for retinoscopy Three mirror attached that central hole come in same place Series of lenses Series of hole arranged to measure diameter of pupil Source light of light on back side Three channel physiograph Technical Specification:- <ul> <li>Should be able to record three channels with time and event channels.</li> <li>Transducers should have 16 bit resolution.</li> <li>Sampling rate should be 250, 500, 1000 samples / second.</li> <li>Should have plug &amp; play Smart transducers for human applications including Pulse, Biopotential (ECG / EMG / EEG / EOG), Respiratory Belt, Cardio Microphone, Tendon hammer, Sphygmomanometer, Hand grip and Skin temperature.</li> <li>Software should measure time interval between user selected points, display of data value at user selected point and tabulate for analysis.</li> <li>The system should have contents with step by step instructions, protocol and experimental design for performing various experiments in physiology applications.</li> <li>Software should have inbuilt assessment facility with automatic grading option.</li> <li>Software should have inbuilt assessment facility with automatic grading option.</li> </ul> </li> </ul>

	<ul> <li>Software updates and upgrades should be provided for 5 years.</li> </ul>
	Compatible laptop should be supplied.
	Certification : ISO / CE / IEC / BIS should be provided
9	Student physiograph, (single channel) with accessories:- Digital Physiograph
	Technical Specifications
	The system should be able to record and analyse:
	<ul> <li>Pulse, Respiration, blood pressure, bio potentials, ECG recording multi leads facility</li> </ul>
	along with Cardiac Vector Axis analysis.
	<ul> <li>Dynamometer to study handgrip strength profile.</li> </ul>
	<ul> <li>Study Reaction Time, Pulse Transit Time and Peak waveform Analysis.</li> </ul>
	Should have atleast 4 channels or more.
	<ul> <li>Range: +2mV to +10V and variable and high sampling rate of 400 KHz (aggregate speed).</li> </ul>
	ADC resolution: 16 bits on all gain ranges.
	<ul> <li>Transducers for recording of Blood Pressure, Heart sound, Heart rate, Pulse and Arm</li> </ul>
	Plethysmography, Respiration Rate, Stethography, Hand grip test and Reflex tandon hammer and reaction times.
	<ul> <li>Balance board for static posturography and communicate via Bluetooth with the same software.</li> </ul>
	Forearm Plethysmograph for forearm Plethysmography in same software.
	<ul> <li>Inbuild Multichannel Bio-amplifier with electrodes (ECG, EMG, EEG, EOG, EGG etc)</li> </ul>
	• Provided with built-in Isolated Human safe Current Stimulator atleast Output current: 0-
	20 mA with software Selectable Pulse Rate, duration, amplitude, Delay etc.
	• The software should provide step by step instructions, protocol and experimental design
	for performing various experiments in physiology teaching applications.
	The teaching software must be capable of running several applications simultaneously
	within one program including: data collection, background materials, data analyses, and
	reporting options.
	<ul> <li>It must allow editing control of the recorder settings on the hardware.</li> </ul>
	• It must allow students to save their laboratory progress and PDF report of their data.
	<ul> <li>Lesson authoring/editing service must include content including predeveloped</li> </ul>
	experimental protocols, background information on each experiment, transducer setup
	and data acquisition settings, and example data as per requirement of department.
	<ul> <li>It allows faculties to edit lessons/Experiments online through mobiles. Tablets. PC etc.</li> </ul>
	and upload for students
	<ul> <li>Ability to automatically calculate the frontal plane of ECG's with the cardiac and vector</li> </ul>
	cardiogram on the same software
	<ul> <li>Ability to undertake online and offline analysis with various export options like Binary</li> </ul>
	Axon IGOR MATLAB Excel Grant Pad Prism Quick Time Way Text etc
	Real time data streaming to Excel and MATLAB
	<ul> <li>The system should be supplied with desktop computers with DV/D DW/ 4CB. DAM and</li> </ul>
	500 GB hard disk UPS and 21-inch LED monitor with stand and other required
	autosouries and invited to a conducted must be provided from manufacturar
	<ul> <li>ISO &amp; IEO and other safety standards must be provided from manufacturer.</li> <li>The system should be adequately electrically grounded are site at the time of it.</li> </ul>
	Ine system should be adequately electrically grounded on site at the time of its
	Installation of the quoted
	product for atleast 05 years. Documentary proof should be attached.
10	Centrifuge, high speed with technometer:-
_	CENTRIFUGE RECTANGULAR (Research)
	Laboratory Centrifuge are suitable for routine sample analysis in Medical Hospital,
	Pathology and Institutional Laboratories. With a wide Choice of rotor heads and adaptors,
	these units are truly versatile.

	Salient Features:
	Digital Speed Indicator
	Stepless speed regulator
	<ul> <li>O 00 minutes digital countdown timor</li> </ul>
	<ul> <li>Under the start with out off</li> </ul>
	✤ Impaiance detector with cut off
	<ul> <li>Safety Lid interlock to prevent cover opening during centrifugation</li> </ul>
	Press Switch for quick acceleration to full speed.
	Technical Data
	Control :-Microprocessor
	Max Speed : 5250
	Max.RCF:-3950xg
	Motor:- Universal Motor
	Display:- Digital LCD with Set & Working parameters
	Timer - 1-99 Min
	Canacity
	o) Out Front tuboo
11	Digital Physiograph
	Digital Physiograph
	STUDENT PHYSIOGRAPH with SINGLE Channel
	Console with Time & Event channel and stimulator Human & Animal experiments.
	I) STRAIN GAGE
	ii) ISOTONIC
	iii) PULSE RESPIRATION
	iv) TEMPERATURE
	v) EKG (CLINICAL) with Electrode 5 pin Junction box and Jell
	vi) BIO POTENTIAL (with Electrodes, 3 pin Junction box and control Electrodes for Action
	DID FOTEINTIAL (WITH Electrodes, 5 pin Junction box, Faste and Electrodes for Action
	TRANSDUCERS:
	i)PRESSURE
	ii) VOLUME
	iii) MUSCLE ACTIVITY/FORCE
	IV) RESPIRATION DELT
	V) ISOTONIC FINE MOVEMENT
	vi) PULSE
	vii) RESPIRATION (Thermistors Type)
	viii)TEMPERATURE
	ACCESSORIES Otv
	Following accessories are supplied along with each console:
	a) Chart Depart 7 folds 250 folds
	a) Chart Paper 2 loids 250 loids
	D) Fuses 05
	c) Earthing wire 01
	d) Instruction Manual 01
	e) Extra Pen with Cradle 01
	f) lok <sup>1</sup> / <sub>6</sub>   tr
	a) Machina Covor
10	
12	
	Microprocessor controlled single channel ECG
	Machine.
	FEATURES:-
	- Parameters Display on LCD.
	- Compact, lightweight, portable, Easy to use & service.
	- High Fidelity recording
	Maintananaa fraa digital tharmal array ariatar hanaa fraa fram
	- maintenance nee uigital thermai anay phinter hence nee 110m
	triction, non linearity damping stylus neating problems.
	- Clear ECG tracings & easy paper loading.
	- Electronically controlled feather touch key operations.
	- In built rechargeable battery with charger
	- Automatic & Manual modes.

	TECHNICAL SPECIFICATIONS
	Leads : Standard 12 Leads
	Input Impedance : 50M ohm
	Time Constant : more than 3.2 seconds
	Noise : $+ \frac{1}{4}$ LSB (less than 1 micro volt
	peak to peak)
	Filters : Digital AC 50 Hz
	Writing Device : Electronic thermal array Printer
	Recording Paper : Thermal 50 MM. 30 mtrs.
	Paper Speed : 25 & 50 mm/sec.
	Power Supply : 230V AC/50Hz
	Weight: 1.5kg. (with battery)
	Temperature : 5° to 50° C ( 41°-122° F)
	Print Out : ECG Trace, Gain , Paper Speed, Lead
	Marking and calibration pulse.
	CMRR : Greater than 120 db
	Frequency Response : .05 to 150 Hz
	A/D Conversion : 12 bit
	Leakage Current : < 10 micro amps
	Recording format : Two Auto & Manual
	Recording length : 2,3 sec./lead (factory set in Auto mode)
	Sensitivity : 5, 10 & 20 mm/mv.
	Recording Tracks : Single Channel Automatic trace centering
	Battery life : > 50 ECG's
	Dimensions : 230 L x 165 W x 65 H (mm)
	Humidity : 15% to 95%, RH, non conditioning
	Standard Accessories
	10 lead Patient Cable : 01 No
	Accessories Box : 01 No.
	Clipon Electrodes : 04 Nos.
	Jelly Bottle : 01 No.
	Chest Electrodes with
	Rubber Bulbs : 06 Nos.
	Dust Cover : 01 No.
	Earth Cable : 01 No.
	Instruction Manual : 01 No.
	Recording Paper : 01 Roll
BIOCHE	EMISTRY
1	Semi autoanalyser:-
	For End point, Kinetic, Fixed Time, Multi Standard and Coagulation Tests. 100 open tests,
	dual Flow cell / Cuvette system with 18 µl Flow cell. Built-in thermal printer with graphic
	capability. It has 28 quick access test keys, 40x4 character LCD display, Peltier controlled
	thermostat and user friendly software.
	Semi Auto Analyser : For End point, Kinetic, Fixed Time, Multi Standard and Coagulation
	Tests. 100 open tests, dual Flow cell / Cuvette system with 18 µl Flow cell. Built-in thermal
	printer with graphic capability. It has 28 quick access test keys, 40x4 character LCD
	display, Peltier controlled thermostat and user friendly software.
	High Precision and excellent reproducibility for reliable reporting.
	Excellent QC function with the option of 2 levels of programmable controls per test.
	Double aspiration air gap after each sample prevent cross-contamination
	LCD display allows doe easy keyboard operation
	Memory for 60 programs and 2000 test results=-suitable for running profiles
	Absorbance :0.5-3.0A
	Resolution :0.001 Abs(Display) 0.0001 Abs(Calculation)
	Light Source :Halogen Lungsten Lamp
	vvavelengths: 340,405,500,546,578,670(300nm -800nm)
	wavelengths Accuracy : ±1nm
	Data Storage : Memory for 60 programs and 2000 test results
1	Band Width :<8NM

	Flow cell :Metal quartz flow cell ,Capacity 32µl
	Temperature Control : Peltier 25°c,30°c,37°C±1°C and ambient temperature
	Aspiration system: Double Aspiration air cap after each sample
	Cross contamination Rate: < 1%
	Display : LCD Display Output :Internal Printer
	Interface :RS232 serial Cable
	Power Supply : AC 100V-240V +10% 50-10HZ
2	FLISA (Demonstration)
2	ELISA READER-FOR DEMOSTRATION
	96 wells and should have reading canability of 1 to 96 wells individually
	a linear measurement range of 0 to 2 000 Abs
	a linear measurement range of 0 to 3.000 Abs
	wavelength range from 400 to 750nm
	a protometric accuracy of ±3% or better
	a resolution of 0.001Abs
	easy access 8 position filter wheel
	Machine supplied with 4 standard filters
	automatic filter selection
	automatic calibration before each reading
	at least 6 second reading speed
	facility for storage of calibration curves
	Capable of doing multi standard tests and controls
	different types of blanking facility like air wise and well wise
	capable of reading U, V and flat type wells
	capable of reading 8 or 12 well strip plates
	use halogen light source and two spare bulbs should be provided
	internal thermal printer and 5 rolls of thermal should be supplied along with the unit
	work with input 200 to 240Vac 50 Hz supply
	······································
	Elisa Washer
	capability to wash flat. U or V bottomed micro plates or 8 or 12 well strip plates
	8 or 12 way manifold
	25 wash program memory or more
	programmable washing time, volume and soaking time
	minimum 6 wash cyclos
	continuous operating cycle
	residual valume less then Ful
	residual volume less than 5µi
	In-built vacuum and dispensing pumps to ensure accurate and quite wasning
	waste bottle with full bottle alarm or sufficient mechanism to avoid spillage and damage to
	equipment
	solution based wash buffer intake
	work with input 200 to 240Vac 50 Hz supply
	supplied with online pure sinewave UPS of sufficient capacity with minimum
	30 minutes back up time and dust cover for both machines
3	Vacutainer Tube Four Color
4	Complete Chromatographic Unit for paper & TLC
	<b>CHROMATOGRAPHY CHAMBER:</b> Made of Teak wood construction with wax coating.
	Made of teakwood with glass on four sides and on top. Internal surface wax coated for
	solvent resistance. Hinged top provided with rubber gasket for air tight closing. Window
	with air tight door in lower portion. Heavy castors provided for easy movement. Nicely
	polished. Supplied with two stainless steel troughs and 4/6 glass rods.
	Size:-6 Filter Papers of 57x68 cm Size
	THIN LAYER CHROMATOGRAPHY APPARATUS: Desaga German Pattern having
	moveable applicator with inbuilt thickness arrangement between 0 to 2mm. If further
	consists of the following components.
	a) Spreader (Applicator) made of electroplated brass.
	b) Perspex base of 114x23 cm, to support glass plates.
	c) Plate rack aluminum, anodized, for ten 20x20 cm, or 20x10 cm, plates.
	,

	<ul> <li>d) Developing tank with lid.</li> <li>e) Spotting template made of Perspex.</li> <li>f) T.L.C plates set of five 20x20 cm. and two 20x5 cm. or set of ten 20x10 cm. and two 20x5 cm.</li> <li>g) Glass sprayer with rubber bellow, Cap.100 ml.</li> <li>h) Micro-pipette.</li> <li>i) Scriber for making lines made of stainless steel.</li> </ul>
5	Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose) <b>PAPER STRIP ELECTROPHORESIS APPARATUS HORIZONTAL MODEL</b> It can be accommodate 6 paper strips horizontally. Buffer can be saturated very fast in this mechanism. A recessed safety interlock switch breaks the current of both electrodes while the lid of mechanism is uplifted. Both electrode section have capacity of 550ml and each are provided with transverse baffles to minimize. Diffusion of buffer which is in contact with the ends of paper strip. Polarity of the electrode is indicated by two pilot lamps provided on the front panel. The complete mechanism is fitted with leveling screws of facilitate leveling. The elementary unit consists of anode & cathode reservoir with platinum electrodes, special Glass Lid & Power Cord. <b>PAPER STRIP ELECTROPHORESIS APPARATUS VERTICAL MODEL</b> : It is traditional mechanism for general analysis of many samples in clinical laboratories. 6 paper strip can be placed at required height. Agar or agarose gel can also be run in micro slides. 150 + 150ml buffer required to run the sample. The elementary unit consist of Anode & Cathode reservoir with Platinum electrode assembly. Paper hanging rods (3 nos.), Lid (1no.) & power cord (1 No.). <b>DIGITAL POWER SUPPLY</b> with digital control & display: provided with short circuit & over load protection with polarity. Reverse Switch.
6	Densitometer with computer Gel Densitometer Scanner Gel Densitometer is Combination of Gel Scanner, Window PC and State of art Gel Densitometry Software, which is main part of Gel densitometer. It allows you to automatically analyze gel electrophoresis images. It is designed to reproducibly image gels, Western blots, Agarose gels, PCR gels, TLC, etc across a wide dynamic range. This Densitometry System uses transmissive and reflective imaging to scan chromogenic samples at the optimal detection wavelength. If you have ever had to guess at the intensity or location of gel bands, hold two gels up to a light to compare band location or intensity, or wait in line to use an expensive gel densitometer system, then you will find the Densitometer with gel software to be an accurate. General Specifications Optics: Flat-bed Gel film scanner with 6400 X 9600 Dpi Scanning Scan Speed: 100 samples in 12 seconds Scan Length: From 0.01 to 221.5 mm Media: image gels, Western blots, Agarose gels, PCR gels, TLC, etc Scan Modes: Automatic, manual Scan/Edit Features: Auto/manual fraction selection, reference overlay, baseline adjustment, delete area. Auto edit for cholesterol profile. Automatic Data Analysis: Analog curve (printed with or without reference overlay), fractions, relative % and/or units, integral count, one or two ratios, high and low out-of-range indicators, and total. Ratios: User may define the ratio of any fraction to any other fraction or to the total. PC Specification:- Dual Core, 4GB, 1TB, window 10 Software:- Gel scan analysis software. Main Features:- Guantify lanes, segments, and dot blots Analyze JPG, TIFF, GIF, BMP, PNG and many other image formats Perform gel densitometry and quantification on many types of electrophoresis bands Quantify Western blots, Agarose gels, PCR gels, TLC, or any other gel image Improve accuracy and reproducibility Reduce the need for guesswork in gel quantifying

	Automate your gel analysis for a much lower cost than other densitometry software
	Reduce gel analysis times and increase laboratory productivity
	Determine the relative abundance and position of each band or segment within the rel
	gel
	Calibrate the image intensity to normalize results  Save the data in ASCII and elipheard format
	$\Box$ Save the data in ASCII and clipboard format
	$\Box$ Export get data to other spreadsheet, data analysis, and graphics programs
	Densitometer Festures
	$\Box$ Lane analysis mode for get lanes
	$\Box$ Segment analysis mode for get segments
	$\Box$ Dot Blot analysis mode
	□ Full Image Resolution gel analysis
	□ Analyze JPG, TIFF, GIF, BMP, PNG and other image formats
	□ Linear and logarithmic optical densities
	Point and click peak insertion and editing
	Automatic and user defined lane sizing and alignment
	□ Clone Drawing Mode
	□ Grayscale and Color Gel Analysis
	Saturation Checking
	Lane/Segment Slider
	Segment Labelling
	Concentration and MW Calibration Curves
	Sequencing gel mode (ACGT)
	Image intensity calibration for true reproducibility
	Resizable windows and custom screen colors
	Intuitive and easy to use electrophoresis software
7	Spectrophotometer:-
	<b>MICROPROCESSOR UV/VIS SPECTROPHOTOMETER</b> (single beam) Range 190 to
	1000nm with facility for automatic concentration, % Transmission, Absorbance and K factor
	measurements. It has 16x2 line LCD data display and motorized wavelength selection on 4
	digit LED display. It has quad sample holder with 4 position selector control for 10mm path
	length cuvettes. Facility has been provided for 100 sample data storage and interface with
	any Centronics primer. RS 232C interface can be provided in request, A set of 2 quartz
ΡΔΤ	HOLOGY
1	Manual Rotary Microtome
•	BDI-91 : ROTARY SENIOR MICROTOME (A.O. Spencer 820 Types)
	Streamlined standard equipment incorporated with latest technology for cutting serial
	sections in research work. The precise feed mechanism cuts sections from 1-50 microns in
	steps of one micron each.
	Feed Adjustments: 1-50 microns. Total feed excursion 28mm with opening of object
	clamps 37x27mm. Overall dimensions 16x10x9" Complete with razor-120mm with back &
	handle, honing plate, object holder set of three, oil can. Packed in a wooden box
2	Automated Rotary Microtome
	FULLY AUTOMATIC MICROTOME
	Automatic microtome is advanced new-type developed based on semi-automatic
	microtome. Its
	soul combined by device and manufacture, which owns proprietary intellectual property
	rights. It's ideal slicing machine in histopathology research.
	Adopted with streamline design, advanced, stable performance, easy to operate. Driving
	feed system is controlled by intelligent procedure, quick rotary-switch or automatic
	slicing speed of automatic slicing can be adjusted, with sale quick braking system;
	precise electronic mechanic design and manufacture to ensure high precision of tissue
	Silong, automatic operation ease labor intensity, correspond with numan ergonomics.
	Advanced import drive systems trimming slicing fast forward fast step back easy-
	transform.
	I CD indicates thickness of slicing, trimming and also counting of slicing :

	Both slicing and trimming can be finished by controlling system;
	Hand wheal can be locked at any position, to ensure safety of tissue slicing;
	High-volume trash tank can be easily taken down;
	Quick
	Convenient converted specimen clamp; disposable embedding cassette clamp and
	paraffin clamp
	Safe alarm system:
	East rotary and automatic slicing, speed of slicing can be adjusted continuously:
	Randomly conversion on slicing and trimming:
	Solf protection on sincing and miniming,
	Demonou protection
	Dormancy protection, Man marshing dislance an anothing indicating marshall a dented in the OLED indicating marshall
	Man-machine dialogue operation indicating mode, adopted inti OLED indicating panel,
	nign
	brightness, high contrast, wide view angle, rapid reaction, wide range of temperature ,low
	energy-consumption etc;
	Technical parameters:
	Range of section thickness setting: 0100 um;
	Range of trimming setting: 0100um
	0—10um increment 1um
	1020um increment 2um
	20—100um increment 5um
	Specimen horizontal feeding: 26mm;
	Maximum stroke length: 60mm;
	Range of specimen retraction: 20um:
	Specimen clamp can be 360°turned:
	Minimum setting thickness of slice: 1um:
	Maximum size of slicing: 50 x 50mm.
	Precision error: 10°
	Resetting temperature: ambient_55°
	Maximum temperature difference of cn/o-plate: 60°
	Maximum temperature difference of cryo-plate. 00
	Maximum area of one plate: 45 x 40mm:
	I CD simultaneously indicates resetting temperature and surrent temperature shout anyo
	brobe and any plate:
	probe and cryo-plate, 60% hast angle between any probe and any plate easy for aliging:
	CD indicates temperature of defrect. After defrect, it receiver to freezing situation:
	Automatic responsibilities and resources, after start up, resouting to receipt situation,
	Automatic memorization and recovery, after start up, resetting temperature can be
	reserved itself;
	After 4—7 min freezing time, best time for slicing;
	Voltage: AC220V 50HZ□ 110V 60HZ;
	Power: 150VA
	Dimension: 580×360×310mm
3	<u>Cryostat</u>
	MICROTOME CRYOSTAT AUTOMATIC
	It provides a rapid and easy means for the sectioning of natural tissue from 2 to 20 microns
	in step of 2 microns without distortion for high quality microscopic examination. Sections
	have the high resolution of cytological details required for pathological diagnosis,
	histochemistry, fluorescence, biochemistry, microscopy etc. Technique is simple and easy
	to learn. To withstand condensation inside the chamber, inbuilt Rotary Microtome is made
	of entirely rust-proof material fitted with anti roll device to avoid curling of sections. Plastic
	plate is adjustable in all directions.
	Cryostat temperature ranges up to - 30° C as selected by imported thermostat and
	maintained by hermetically sealed compressor system. Dial type thermometer indicates
	actual temperature of the chamber.
	Inner chamber is made of thick gauge stainless steel. Clear plastic cover. slip in type, at
	front opening suffices for working access to microtome. Small fluorescent tube light is fitted
	inside the chamber which switches on automatically whenever plastic door opens to
	facilitate easy visibility. Microtome hand wheel provided outside the chamber in right hand
	side for easy operation. Control panel includes: Thermostat control temperature indicator
	sue for easy operation. Control parter includes: memostat control, temperature indicator

	i.e. dial thermometer automatic timer, pilot lamps, line switch, line indicator and voltmeter, which indicates the incoming voltage. Cabinet is of heavy gauge steel with enameled
	exterior finish. Four castor wheels fitted at bottom provide easy mobility for use in various
	locations and for storage when not in use.
	Supplied complete with rust-proof in-built microtome, forced air refrigeration unit,
	temperature oil and one microtome knife 120 mm long with back and handle in wooden
	box, cord and plug. Suitable to work on 220 V, single phase, 50 Hz, AC supply.
4	Automatic Tissue Processor Histokinette:
	Tissue Processor is rotary type with a minimum 12 stations.
	The Instrument is Microprocessor controlled with adequate memory to save and retrieve 6
	user selectable programs. Rotary head is having a lock out facility at the end of run to prevent basket moving from
	station 12 to station 1'
	Having 10 stations with organic solvent resistant lipless beakers of 1 ltrs capacity
	Having two temperature controlled wax baths of 1 ltrs capacity.
	Wax bath is having user definable temperature range of at 50 -65° C with a high temp. cut
	Built in protection provided to not immerse tissue basket in way bath unless way is melted
	or set wax temperature is attained.
	Having individual programmable liming sequence for each station from 1 min to 6 hrs. in
	increments of 1 min and programmable delay start lime of up to 99 hrs.
	Provided with twin tissue baskets with a capacity of 100 cassettes per basket.
	Each Tissue baskets is suspended from a basket rotor for gentie and even rotation of tissues in the processing fluids
	Supplied with 24Nos. SS tissue cassette with even perforation.
	Retain cycle information in case of power failure to continue processing on restoration of
	power.
	The basket automatically is lowered into the nearest station in case of power failure during
	In case of power disruption during a cycle an error msg indicating the station in which
	there was power failure and the extra immersion lime spend by the basket in the station will
	be flashed.
	Having a large LCD display feather fouch buttons input user friendly menus.
	range of 140V to 260 V AC.
	Operated by feather touch keyboard with digital display. Display shows :Real Time .Date
	,Month and year.
	Wax bath Temperature: Set temperature and attain temperature .station No. of displayed in
	Key board carries the salient features:
	<ul> <li>Start Button :Used to start unit after doing setting</li> </ul>
	Delay : To set delay time from 1 min to 999min
	Clear Off : In case wrong entry is done can be cleared Off.
	Load :Used as enter key after doing the setting
	Lock :Used to lock keyboard
	<ul> <li>Next Used to shift the basket infinediately</li> <li>Display: Used to display the cycle timing before starting the unit</li> </ul>
	<ul> <li>Test 'Used to move basket from 12<sup>th</sup> station to Home position</li> </ul>
	<ul> <li>Code:Used to set a new key board lock</li> </ul>
	Temperature :To set temperature of Wax bath
	Upward Key: To increase time in increment of one minute
	Downward Key: To decrease the timing in one Minute.
	All Electrical switches used are ISI Marked and silver coated and heavy duty.
	<ul> <li>Heavy gauge used in Tibration Of Dody.</li> <li>Class beakers without lip to avoid evaporation Borosil 1 liter conscitut</li> </ul>
	<ul> <li>Glass beakers without up to avoid evaporation borosin riller capacity</li> <li>Wax bath stainless steel inner outer with Teflon coated wire used in heater with best</li> </ul>
	quality heating wire with thermal cut out of 75 deg.

	Leakproof wax bath
	• External body powder coated to avoid chipping and anti rusting chemical used
	Internal parts fabricated from LM grade aluminum
	All moving parts moving on Ball bearing oil sealed.
	Center brass rod moving on linear bearing
	Not much maintenance required
	Heavy duty rotor motor used for agitation
	Main motor used Korean Geared Motor to avoid vibration and sound
	<ul> <li>Individual lide covers the Glass beakers to avoid evaporization</li> </ul>
	<ul> <li>Individual lids covers the Glass beakers to avoid evaporization</li> <li>In case or omergeney side lifting bandle provided to take out tissue backet in case of</li> </ul>
	<ul> <li>In case of energency side inting nancie provided to take out tissue basket in case of electricity failure</li> </ul>
	Thread lock used after tightening the assembly screws and holts
	<ul> <li>Tiread lock used alter lightening the assembly screws and bolts.</li> <li>Tissue basket capacity of 100 tissue cassotte.</li> </ul>
	<ul> <li>Firstie basket capacity of 100 issue casselle.</li> <li>Easy to clean platform for cleaning platform individual cups can be removed for</li> </ul>
	<ul> <li>Lasy to clean platform.</li> <li>cleaning platform.</li> </ul>
	• Safety device for Tissue in case Wax not melted the basket stops at the station 10 <sup>th</sup> till
	temperature is not attained.
	<ul> <li>Similar safety feature for STN 11<sup>th</sup> and 12<sup>th</sup> Station.</li> </ul>
	Heavy duty gear and case hardening done for ling life.
	Trouble free and maintenance free
5	Ultrapure water solutions - Distilled water plant
	WATER STILL: (Manasty type) Stainless steel
	Manesty type water still: made of all stainless steel; output 4 Lt./hr approx.; work on
	220VAC; the condenser can be opened easily for periodic cleaning., designed to provide
	pyrogen free distilled water easily. Complete unit made of stainless steel. The lid perfectly
	rest and get sealed inside the collar on the head of the tank which avoids loss of steam and
	jumping of lid., easy wall mounting.
	Output Capacity (Approx.)
	a) Output approx. 3/4 litres per hour.
6	Fully Automated high throughput multi-Stainer Workstation
7	Fully Automated Embedding System (Heated embedding module & cold
	plate) Fully Automated Embadding system (Heated Embadding Medule & cold Plate)
	Has independent heating zones that are controlled through a microprocessor. It has a large
	storage tank: the tank incorporates the filter which ensures continuous flow of paraffin from
	the tank. The
	flow of paraffin from the tank can be controlled manually or through foot switch. The heated
	operation platform and the forceps holder makes it easy to embed the tissues. The unit has
	a storage tank, preservation boxes, forceps holder, paraffin nozzle whose heating can be
	controlled through microprocessor and it can be programmed for weekdays for both on and
	off.
	Salient Features: Large paraffin tank, Easy to read and operate control panel, cold spot,
	Illuminated
	work platform, Mold warmer and cassette bath, it is programmable for weekdays and each
	heating zones temperature can be individually set which makes it easy for the user,
	Separate heating
	zones for storage tank, 2 preservation boxes, paraffin nozzle, forceps holder and work
	platform and Excess Paraffin Collecting tray collects the excess paraffin from different
	heating zones. Complete with 3L capacity of paraffin tank.
8	Fully Automated Elexible Cover slipping Workstation
0	

	Crossing Station - Stainless steel, with Control panel, an initiation system, mack
	mounted adjustable computer arm with articulation, LED lights that are color
	and intensity. Dedicated USB ports for camera control and data transfer
	adjustable Integrated nathology camera system Instrument Set (High quality)
	Height Adjustable
	Stainless steel Chairs with Split AC or appropriate capacity.
	GROSSING TABLE COMPLETE S.S. WITH EXHAUST.
	<ul> <li>Made of high grade stainless steel</li> </ul>
	<ul> <li>Continuous air flow along entire work area.</li> </ul>
	<ul> <li>Integrated illumination with UV germicidal light.</li> </ul>
	<ul> <li>Working area of 5'x2.5'x3' and sides made from Acrylic material.</li> </ul>
	<ul> <li>Self supporting under carriage with adjustable legs.</li> </ul>
	<ul> <li>Adjustable set of stools with rest to reduce back strain.</li> </ul>
	Dictaphone
	•Camera holder on railing system
	•Magnifying glass/light magnifier with flexible arms.
	•Document holder for requisition forms, literatures etc.
	•Magnetic instrument holder.
	•Paper towel holder.
	•Inch/centimeter ruler.
	•Polvethvlene cutting board.
	•Steel basin with adjustable valve with formalin pour off basin.
	•Study perforated insertable work plates.
	•Waste bin
	•Sprinkler system with adjustable valve for bath sanitation located underneath the
	perforate working plates.
	•Removable organizer bins.
	•Safety splash shield.
	•Drawers
	Size : 150x75x90cm.
10	Fully Automated Immuno-histo-chemistry Setup with Continuous supply of
	Important Antibadian Lymphama Danal ata
	Important Antibodies, Lymphonia Panel etc.
MIC	ROBIOLOGY
<b>MIC</b>	Balance Electronic Digital
<b>MIC</b> 1	ROBIOLOGY         Balance Electronic Digital         Analytical Balance :Upto 200g/1m Increment
<b>MIC</b> 1	Important Antibodies, Lymphoma Pariel etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance :Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of
<b>MIC</b> 1	ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function
<b>MIC</b> 1	ROBIOLOGY         Balance Electronic Digital         Analytical Balance :Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.
<b>MIC</b> 1	ROBIOLOGY         Balance Electronic Digital         Analytical Balance :Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements
<b>MIC</b> 1	ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is
1 1	Important Antibodies, Lymphoma Parier etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is required.
1 1	Important Antibodies, Lymphoma Parier etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is required.         Reading of the weight by digital display.
<b>MIC</b> 1	ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case
<b>MIC</b> 1	Important Antibodies, Lymphoma Pariel etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is         required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision
<b>MIC</b> 1	ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision for data interface
<b>MIC</b> 1	ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is         required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision for data interface         Technical Specifications
<b>MIC</b> 1	ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is         required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision         for data interface         Technical Specifications         Weigh accurately, Weighing capacity 210gm
<b>MIC</b> 1	Important Antibodies, Lymphoma Parlel etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is         required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision         for data interface         Technical Specifications         Weigh accurately, Weighing capacity 210gm         LCD Display
<b>MIC</b> 1	Important Antibodies, Lymphoma Pariel etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is         required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision         for data interface         Technical Specifications         Weigh accurately, Weighing capacity 210gm         LCD Display         Power Supply         Power Supply
<b>MIC</b> 1	Important Antibodies, Lympholina Panel etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is         required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision for data interface         Technical Specifications         Weigh accurately, Weighing capacity 210gm         LCD Display         Power Supply         Power input to be 220-240V AC, 50Hz
<u>MIC</u> 1	Important Antibodies, Lymphonia Pariel etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is         required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision         for data interface         Technical Specifications         Weigh accurately, Weighing capacity 210gm         LCD Display         Power Supply         Power Supply         Power input to be 220-240V AC, 50Hz         Biosafety Cabinet Type - 2A
<b>MIC</b> 1	Important Antibodies, Lympholina Parier etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is         required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision         for data interface         Technical Specifications         Weigh accurately, Weighing capacity 210gm         LCD Display         Power Supply         Power input to be 220-240V AC, 50Hz         Biosafety Cabinet Type - 2A         Biosafety Cabinet Type - 2A:         Whole Cabinet Made of cold rolled steel sheet duly powder
<u>MIC</u> 1	Important Antibodies, Lympholina Parier etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1gm increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is         required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision for data interface         Technical Specifications         Weigh accurately, Weighing capacity 210gm         LCD Display         Power input to be 220-240V AC, 50Hz         Biosafety Cabinet Type - 2A         Biosafety Cabinet Type - 2A:         Whole Cabinet Made of cold rolled steel sheet duly powder coated inside & outside for longer life & durability. These class II Bio Safety Cabinets
1 1 2	Important Antibodies, Lymptonia Parieretc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is         required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision         for data interface         Technical Specifications         Weigh accurately, Weighing capacity 210gm         LCD Display         Power Supply         Power input to be 220-240V AC, 50Hz         Biosafety Cabinet Type - 2A         Biosafety Cabinet Type - 2A:         Whole Cabinet Made of cold rolled steel sheet duly powder         coated inside & outside for longer life & durability. These class II Bio Safety Cabinets         provide person as well as environment protection and have 100% exhaust system with
1 1 2	Important Antibuoties, Lymphonia Parier etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is         required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision for data interface         Technical Specifications         Weigh accurately, Weighing capacity 210gm         LCD Display         Power supply         Power supply         Power input to be 220-240V AC, 50Hz         Biosafety Cabinet Type - 2A         Biosafety Cabinet Type
1 1 2	Important Antibuoties, Lymphonia Parier etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : Upto 200g/1m Increment         Analytical Balance : upto 200g/1m increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is         required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision         for data interface         Technical Specifications         Weigh accurately, Weighing capacity 210gm         LCD Display         Power Supply         Power Supply         Power Supply         Power Supply         Power input to be 220-240V AC, 50Hz         Biosafety Cabinet Type - 2A         Biosafety Cabinet Type-2A: Whole Cabinet Made of cold rolled steel sheet duly powder         coated inside & outside for longer life & durability. These class II Bio Safety Cabinets         provide person as well as environment protection and have 100% exhaust system with         HEPA filtration virus burn out unit &U.V. Germicidal Light. Equipment is supplied complete
1 1 2	Important Antibodies, Lymphonia Parter etc.         ROBIOLOGY         Balance Electronic Digital         Analytical Balance : upto 200g/1m Increment         Analytical Balance : upto 200g/1gm increment Description of         Function         Electronic Balance is required for precision weighing of Lab samples.         Operation Requirements         Microprocessor based single pan Analytical Balance with High accuracy & precision is required.         Reading of the weight by digital display.         Electronic top loading balances with transparent case         The balance should have dynamic weighing with automatic and manual start and provision for data interface         Technical Specifications         Weigh accurately, Weighing capacity 210gm         LCD Display         Power Supply         Power Supply         Power Supply         Power input to be 220-240V AC, 50Hz         Biosafety Cabinet Type - 2A         Biosafety Cabinet Type - 2A:         Biosafety Cabinet Type - 2A         Biosafety Cabinet Type - 2A:         Bio

	Working Area
3	BOD Incubator
	INCUBATOR B.O.D
	INCUBATOR B.O.D BIO-CHEMICAL OXYGEN DEMAND (Deluxe-Digital Control)
	Double wall construction. Inner chamber made of richly anodized aluminium or highly
	Exterior made out of thick mild steel sheet duly finished in white stoving enamel/powder
	coated paint with mat finished colour combinations. Outer double wall door is provided with
	magnetic gasket and lock & key arrangement. Inner door unbreakable acrylic transparent
	sheet for inspection of material in the chamber without disturbing the chamber temperature.
	Door operated inner illumination has been provided. Temperature is controlled by Deluxe
	Digital Controller from 5° C to 50° C $\pm$ 0.5° C. Standard cooling unit with a sealed
	compressor with protective devices has been provided below the chamber for safe and
	temperature working Inner air circulating system is provided to achieve uniform
	temperature. A control panel is provided with various indicators, on-off switch. Supplied
	with cord and plug etc. To work on 220V AC 50Hz single phase.
	Inner Chambers size (mm)
	W x D xH
	505 x 415 x 830 6.1 cu.ft. 171 ltrs.
4	Centriluge CENTRIFUGE RECTANGULAR (Research)
	Laboratory Centrifuge are suitable for routine sample analysis in Medical Hospital,
	Pathology and Institutional Laboratories .With a wide Choice of rotor heads and adaptors,
	these units are truly versatile.
	Salient Features:
	Digital Speed Indicator     Stepless speed regulator
	<ul> <li>Otepiess speed regulator</li> <li>0-99 minutes digital countdown timer</li> </ul>
	<ul> <li>Imbalance detector with cut off</li> </ul>
	<ul> <li>Safety Lid interlock to prevent cover opening during centrifugation</li> </ul>
	<ul> <li>Press Switch for quick acceleration to full speed.</li> </ul>
	<u>Lechnical Data</u> Control : Microprocessor
	Max Speed :- 5250
	Max.RCF:-3950xg
	Motor:- Universal Motor
	Display:- Digital LCD with Set & Working parameters
	Timer :- 1-99 Min
	Capacity
5	a). 8x15ml tubes.
5	CO2 Incubator
	CO2 incubator is not only an advanced instrument for cultivation of cells, tissues and
	bacteria
	but also a key equipment for immunology, genetics and bioengineering. It is widely
	applicable for research and production of microorganisms, agricultural science and
	pharmacology
	The latest model is a high-performance air-adjusting type CO2 incubator integrating many
	year manufacturing technology and experience of our company. It is also developed with
	the introduction of new technics compared with common CO2 incubators. This type
	provides faster heating and less errors of temperature precision
	It is made of specular stainless steel by argon-arc welding technics and semicircular arcs
	at corners ensure easy cleaning Microprocessor temporature controller makes temporature stability
	Independent alarm system for temperature-limiting ensures experiment run safely and no
	accident would happen

	Microorganism filter at inlet provides 100% filtra	ted gases
	Main parts are all imported equipped with CO2	pressure-releasing valve(special for Lark)IR
	SPECIFICATION	
	Parameter	Specification
	Capacity/Cubage	80Litre
	Inner Chamber	Stainless Steel with curved corners
	Outer Chamber	MS fine finish power coated
	Heating Method	Air Jacket
	Temperature Range	RT+5 ~ 50°C
	Temperature Control	0.1°C
	Temperature Stability	± 0.3°C
	CO2 Control Range	0 ~ 20% (Infrared Sensor)
	CO2 Recovery	≤ Calibration x 1.2min
	Humidifying Method	Natural Evaporization
	Ambient Temperature	+5 ~50° C
	Incubator Sterilizer	UV method
	Shelves Per Chamber	2(pcs)/3(pcs)
	Input Power	450W/720W
	Electrical Requirement	220V, 50Hz
6	Deep Freeze -20° C & Deep Freezer	
	Double walled with inner chamber made of S.S painted. Temperature range from ambient to compressor. Body is mounted on a sturdy ar wheels. Unit is fitted with solid State Digir Horizontal Chest type models are supplied ir models are supplied with three stainless steel st Capacity: Vertical 6 cuft. Optional: Supplied with Automatic voltage stabilizer.	and outer of thick PCRC sheet duly enamel -20°C is achieved by hermetically sealed ngle iron frame and is mounted on castor tal Temperature Indicator-Cum-Controller. In a single compartment where as vertical oring shelves.
1	<b>HOT AIR UNIVERSAL OVEN (Memmert Type)</b> (Three side heating elements) Standard double wall fabrication, Inner chamber highly polished stainless steel sheet. Exterior fa finished in white stoving enamel/powder coated Kanthal wire heating elements provided on three range of 50° C to 250° C $\pm$ 2° C, controlled thermometer is built-in type. Control panel is p rates of power thermostat control Knob and indic	per made of richly anodized aluminium or abricated out of thick milled steel sheet duly paint with mat finished colour combinations. a sides to attain quick and uniform heating in d by capillary type thermostat. L-shaped rovided with selector switch of high or low cators for mains & thermostat. Supplied with
8	cord and plug. The equipment is suitable to oper Chamber size in mm / Inches No. of Capacity HCapacity Caporov (Approx.) Shelves (Appro c)450 x 450 x 450 (18" x 18" x 18")2 95 ltrsoPTIONAL i) Air circulating fan. ii)Digital temp. Indicator-cum-ControllerIncubator INCUBATORS	rate on 220 V AC 50 Hz single phase. / ox.)
	Standard double wall fabrication. Inner chamber highly polished stainless steel sheet and outer r	er made out of richly anodized aluminum or nade out of thick mild steel sheet finished in

	white stoving enamel/powder coated paint with mat finished colour combinations. Double wall door with double glass window for observation in the chamber. Temperature range 5° $C$ above ambient to 80° $C$ + 1° $C$ controlled by a thermostat. The equipment is workable on
	220  V Ac  50  Hz single phase.
	Chamber size in mm/Inches No. of Capacity
	H D W Shelves (Approx.)
	a) 450 x 450 x 450 (18"x18"x18") 2 95 ltrs.
	i) Air circulating fan
	ii)Digital temp. Indicator-cum-Controller
9	Laminar flow
	<b>HORIZONTAL LAMINAR AIR FLOW CABINET</b> Laminar flow principle involves double filtration of air through coarse pre-filter (up to 5 microns) and Hepa filter (down to 0.3 microns) for filtration of biological and particulate contaminants. A constant uni-directional air flow is drawn from atmosphere and passed through pre and hepa filters on the work surface. Fabricated out of reinforced ply board which is clad in from outside in laminated sheet and inner exposed areas are finished in epoxy paint. Table top covered with non glaring laminated sheet or stainless steel sheet. Side panels are fixed and are made out of transparent acrylic sheet. The front door is folding type and made of thick acrylic sheet. (Optional) Stand is built in type or detachable. Blower unit has AUE or equivalent motor and is dynamically balanced with minimal sound & vibration level. Fluorescent lighting is also provided. A suitable UV tube is provided for sterilization. An acrylic block type manometer to measure static pressure in the chamber has been installed. Two way gas tap for gas line has also been provided.
	A) Whole cabinet made of wooden board laminated with sunmica.
	Working Area
10	4'x2'x2' Microscope with universal condenser containing oil immersion. Bright
	field, Phase Contrast & Dark ground <b>Binocular research microscopes With Phase Contrast System:</b> Fine Focus Binocular Co-Axial Research Microscope: with 30 Binocular head. A Hi-fi research microscope with extra large base which supports the robust arm has a special grade plastic top to provide comfortable hand rest for ease of operation. Binocular observation head 45 deg. Rotatable with interpupillary distance from 54 to 74mm. All Prisms –Antifungus treated. It has a special Quadruple revolving nose-piece moving on ball bearings.It is fitted with hard coated,colour corrected optics and super wide field HKWF 10x eyepieces. The optics have been treated with anti fungus treatment for long life. Special graduated mechanical stage(135mm x125mm) travel of 75mm & 50mm in X&Y direction and moves on ball bearings with low positioned 'Soft Feel' co-axial system. Provided with <b>COAXIAL</b> coarse and fine focusing mechanism on ball bearing guide ways. Graduated knob with 1 div = 0.002 mm with knob tension control ring. A high transmission sub stage condenser NA 1.25 with iris diaphragm and daylight blue glass filter. Unit is adjustable through rack-n- pinion. built-in halogen illumination 6V-20w with light intensity controller. <b>Optical Combination:</b> <b>Achromatic Objectives</b> :(DIN Standard ) 4x (N.A.0.10),10x(N.A 0.25 ),40x (N.A.0.65) and 100x (N.A.1.25- oil immersion Spring Loaded). <b>Super wide eye pieces</b> : WF 10x (Pair) (FN 18) <b>Eye Pieces</b> : 5x (Pair) Huygenian PHASE CONTRAST EQUIPMENT (Imported) Sophisticated attachment for bright field Microscopy which is employed in study of living organisms ,cells etc. Comprises Substage Abbe condenser with revolving Turret Annular Phase Plates for 10x,20x, 40x,100x Objectives and fifth position for Bright Field with iris. Full Dispose the position for Bright Field with iris. Full Dispose to 10x,20x, 40x,100x Objectives and fifth position for Bright Field with iris.
	green filter and centering Telescope Eye piece
	DARK FIELD EQUIPMENT FOR RESEARCH MICROSCOPE (Imported) Versatile attachment for Dark Field Microscopy. It Comprises of 100x oil immersion with built in iris diaphragm and Dark filed substage condenser.

11	Vortex Mixer
	VORTEX SHAKER / CYCLO MIXER (Test Tube Shaker)
	Useful for accelerated mixing of solutions in test tubes, small flasks or centrifugal tubes etc.
	The housing is 150x150 mm. The speed is regulated by a speed control devices. Shorts
	eccentric stroke motor imparts vigorous agitation to the tubes or flasks. Body is strong and
	finished in white stoving enamel/powder coated paint with mat finished colour combinations.
10	The equipment is workable on 220V AC 50 Hz single phase.
12	-80°C deep freezer with UPS:-
	DEEP FREEZER (Vertical)
	Double walled with inner chamber made of S.S and outer of thick PCRC sheet duly enamel
	painted. Temperature range from ambient to -20°C is achieved by hermetically sealed
	compressor. Body is mounted on a sturdy angle iron frame and is mounted on castor
	wheels. Unit is fitted with solid State Digital Temperature Indicator-Cum-Controller.
	Horizontal Chest type models are supplied in a single compartment where as vertical
	models are supplied with three stainless steel storing shelves.
40	VERTICAL
13	Micro centrifuge / Refrigerated Centrifuge
	Refrigerated centrifuge
	Table top, Refrigerated Micro purpose Centrifuge
	Speed: Maximum 16,000 rpm (adjustable) Max. RCF 17600 X g. (without rotor nead)
	Speed control method: Automatic/Manual microprocessor controlled.
	himer. 0 - 90 min with count down reature. Speed control. Feather touch up / down arrow
	Key type. Operation Keyer Facther Tauch Type, Memory Program, 20Nac
	Display system: I CD display (16digit X 2 line)
	Display system. LCD display (Todigit $\land 2$ life) Speed Sefety central: Interleak Lid system during operation: Imbalance sefety during
	speed Salety control. Interlock Lid system during operation, impatance salety during
	Puzzar: ON after cycle operation Brake: ON / OEE Dewar supply: 240y 50 Hz single
	buzzer. ON alter cycle operation. Brake. ON / OFF. Fower supply. 2400, 50 Hz, single
	Temperature: System with micro pro controller with working chamber
	temperature range of -10 deg C to Ambient Temp
	Interchangeable Rotor Heads
	1) 24 x $2/1.5$ ml Angle Rotor head with polypropylene tubes.
14	Fluorescent Microscope (2 Filter Microscope)
FOR	ENSIC MEDICINE & TOXICOLOGY
1	Stryker Type Autopsy Saw With Accessories
COMM	
1	Ice Lined Refrigerator (I.L.R.) (at Health Centre):- which comes with a microprocessor for
-	controlling temperature and specifically designed evaporator and condenser to provide
	maximum refrigeration. These refrigerators have have stainless steel interior for easy usage
	and hygiene. Offered products have a vast storage space for accumulating a large number
	of vaccines and other samples.
	Special Features:
	Refrigeration System:
	The ICE lined refrigerator is built with CFC-free polyethylene insulation.
	Superior refrigeration from optimized evaporator and condenser design.
	Dual interior layer design features built-in ice packs to keep chamber temperature within 2
	to 8 range in an ambient temperature of no warmer than 43 for up to 24 hours during loss of
	power, presuming ice-packs are fully charged
	Temperature Control:
	The ice lined refrigerator features of digital temperature display
	Power on/off indicator
	Cabinet temperature range of 2 to 8
	Specifications:
	Reliable temperature between +2°C to +8°C
	Only 8 hrs. Of electricity needed per 24 hrs. at 43°C ambient
	Seit-regulating cooling system
	<ul> <li>External capinet and internal liner pre-painted daivanized steel protects adainst</li> </ul>

	corrosion
•	Cooling coil of copper
•	Danfoss compressor; suitable for use in the tropics. Starting 22 % below rated voltage
•	7 baskets for organized storage (optional)
	Green Technology:
•	Hydrocarbon refrigerant
•	Cyclopentane insulation
•	Extremely low energy consumption

Recyclable components.

### (ON THE LETTER HEAD OF THE FIRM)

### DECLARATION

I / We hereby declare that no case is pending with the police / court against the bidder / firm / company (Agency). Also, I / We have not been suspended / blacklisted by any PSU / Government Department / Financial Institution / Court etc.

Seal and Signature of the bidder

Place: Date:

### (ON THE LETTER HEAD OF THE FIRM)

### NO DEVIATION CERTIFICATE

Notwithstanding anything mentioned in our bid, we hereby accept all the terms and conditions mentioned in the e-NIT. I/We hereby undertake and confirm that we have understood the specifications properly and shall supply the medical machines / equipments to SMVDSB during the Rate Contract Period.

Seal and Signature of the bidder

Place: Date:

### <u>Annexure-E</u>

### (ON THE LETTER HEAD OF THE FIRM)

### UNDERTAKING

To The \_\_\_\_\_

Sub: Tender for Procurement of Machinery and Equipment for establishment of Anatomy, Physiology, Pathology, Community Medicine, Biochemistry, Forensic Medicine & Toxicology, Microbiology Departments of Medical College, Kakryal (Group-A)

Sir,

- 1. I/We hereby agree to abide by all terms and conditions laid down in tender document.
- 2. We will be responsible for warranty of Machinery and Equipment for five years, from the date of successful installation.
- 3. This is to certify that/We before signing this bid have read and fully understood all the terms and conditions and instructions contained therein and undertake myself/ ourselves abide by the said terms and conditions.
- 4. I/we agree to abide by the tendered terms & conditions
- 5. I / we declare that our financial position is sound and we are competent to execute the supplies as & when allotted.
- 6. We will execute the supplies strictly in accordance with the approved specifications, if approved in our favour.

(Signature of the Bidder)

Name and address of the Bidder

## (ON A LETTER HEAD OF THE PRINCIPAL MANUFACTURER)

### UNDERTAKING

The \_\_\_\_\_

Sub: Tender for Procurement of Machinery and Equipment for Medical College, Kakryal (Group-A)

Sir,

This is in reference to your Tender Notice No: \_\_\_\_\_. In this regard we have authorized the below mentioned Party to quote the above said tender on our behalf:-

M/S	
Correspondence address	
Contact person	
Contact No	

Signature with seal:					
Name of the signing person					
Designation:					
Contact No:					
e-mail:					

### TO BE SUPPLIED BY THE PRINCIPAL MANUFACTURER ON THEIR LETTER HEAD

I\_\_\_\_\_ do hereby solemnly affirm and declare as under:

- 1. In case of any change of our local dealer/Agent, we will be fully responsible during the warranty period of the equipment as well as execution of Comprehensive Maintenance Contract after the expiry of the warranty period on the rates quoted by their dealer.
- 2. Spares of the quoted model shall be available at least for a period of seven years after the expiry of warranty period.
- 3. The models quoted by our dealer, on our authority, are compliant with the tendered specifications and deviations, if any, are mentioned in "Remarks" Column in compliance sheet.
- 4. The product / model number being quoted against the tender is currently undergoing production and have not been discontinued by us and
- 5. Our Average Turnover of last three financial years was\_\_\_\_\_

Deponent should be the same person who has signed the Annexure"F"

### FINANCIAL BID

# (to be submitted online only)

# FOR THE SUPPLY OF MACHINES / EQUIPMENTS TO SHRI MATA VAISHNO DEVI SHRINE BOARD (Group-A).

No.     Quantity     rate per Unit for SITC (in Rs.)     charges for 5 years (in Rs.)     Amount (in Rs.)       1.     Microscopes, Monocular/Binocular     Image: Section microscope     Image: Section microscope     Image: Section microscope       3.     Microtomes, rotary     Image: Section microscope     Image: Section microscope     Image: Section microscope       3.     Microtomes, rotary     Image: Section microscope     Image: Section microscope     Image: Section microscope       3.     Microtomes, Sledge, large cutting     Image: Section microscope     Image: Section microscope     Image: Section microscope       5.     Multichannel physiography 3 channel complete with accessories     Image: Section microscope     Image: Section microscope       6.     Centrifuge high speed with techno meter     Image: Section microscope     Image: Section microscope       9.     Mosso.s ergograph     Image: Section microscope     Image: Section microscope       10.     Bicycle Ergometer     Image: Section microscope     Image: Section microscope       12.     Digital ECG Machine     Image: Section microscope     Image: Section microscope       13.     Student physiograph, (single channel) with accessories     Image: Section microscope     Image: Section microscope       14.     Gas analyser automatic for CO2, O2, N2     Image: Section microscope     Image: Section microscope     Image: Section	S.	Item	Indicative	All inclusive	CAMC	Total
for SiTC (in Rs.)     for Syears (in Rs.)       1.     Microscopes, Monocular/Binocular       2.     Dissection microscope       3.     Microtomes, rotary       4.     Microtomes, Sledge, large cutting       5.     Multichannel physiography 3 channel complete with accessories       6.     Centrifuge high speed with techno meter       7.     Digital Physiograph       8.     Polygraphs       9.     Mosso, s ergograph       10.     Bicycle Ergometer       11.     ophthalmoscope       12.     Digital ECG Machine       13.     Student physiograph, (single channel) with accessories       14.     Gas analyser automatic for CO2, O2, N2       15.     Sherington Starling kymograph (electrically driven)       16.     Centrifuge, high speed with technometer       17.     Semi autoanalyser       18.     Vacutainer Tube       19.     Complete Chromatographic Unit for paper & TLC       20.     Complete Chromatographic Unit for paper & TLC       21.     Digital Roder and Washer       23.     Elias Reader and Washer       24.     Automated Rotary Microtome       25.     Automated Rotary Microtome       26.     Cryostat       27.     Automated Rotary Microtome       28.     Lius Pro	No.		Quantity	rate per Unit	charges	Amount
(in Rs.)       (in Rs.)         1.       Microscopes, Monocular/Binocular         2.       Dissection microscope         3.       Microtomes, rotary         4.       Microtomes, Stedge, large cutting         5.       Multichannel physiography 3 channel complete with accessories         6.       Centrifuge high speed with techno meter         7.       Digital Physiograph         8.       Polygraphs         9.       Mosso, sergograph         10.       Bicycle Ergometer         11.       ophthalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Ro			-	for SITC	for 5 years	(in Rs.)
1.       Microscopes, Monocular/Binocular         2.       Dissection microscope         3.       Microtomes, rotary         4.       Microtomes, rotary         5.       Multichannel physiography 3 channel complete with accessories         6.       Centrifuge high speed with techno meter         7.       Digital Physiograph         8.       Polygraphs         9.       Mosso, sergograph         10.       Bicycle Ergometer         11.       ophthalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Chromatographic Unit for paper, PAGE, agarose)         21.       Densitmeter with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         26.       Cryostat <th></th> <th></th> <th></th> <th>(in Rs.)</th> <th>(in Rs.)</th> <th></th>				(in Rs.)	(in Rs.)	
Monocular/Binocular         2.       Dissection microscope         3.       Microtomes, rotary         4.       Microtomes, Sledge, large cutting         5.       Multichannel physiography 3 channel complete with accessories         6.       Centrifuge high speed with techno meter         7.       Digital Physiograph         8.       Polygraphs         9.       Mosso, sergograph         10.       Bicycle Ergometer         11.       optital ECG Machine         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         11.       Densitometer with computer         22.       Spectrophotometer         23.       Elias Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Tissue Processor – Histokinette         24.       Manual Rotary M	1.	Microscopes,				
2.       Dissection microscope         3.       Microtomes, rotary         4.       Microtomes, Sledge, large cutting         5.       Multichannel physiography 3 channel complete with accessories         6.       Centrifuge high speed with techno meter         7.       Digital Physiograph         8.       Polygraphs         9.       Mosso, sergograph         10.       Bicycle Ergometer         11.       optithalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.		Monocular/Binocular			$\leq$	$\langle$
3.       Microtomes, rotary         4.       Microtomes, Sledge, large cutting         5.       Multichannel physiography 3 channel complete with accessories         6.       Centrifuge high speed with techno meter         7.       Digital Physiograph         8.       Polygraphs         9.       Mosso, s ergograph         10.       Bicycle Ergometer         11.       ophthalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elias Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.       Cryostat         27.       Automated Rotary Microtome         28.       Ultrapure water solu	2.	Dissection microscope			$\geq$	$\geq$
4.       Microtomes, Sledge, large cutting         5.       Multichannel physiography 3 channel complete with accessories         6.       Centrifuge high speed with techno meter         7.       Digital Physiograph         8.       Polygraphs         9.       Mosso, sergograph         10.       Bicycle Ergometer         11.       ophthalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.       Cryostat         27.       Automated Rotary Microtome         28.	3.	Microtomes, rotary		$\geq$	$\geq$	$\searrow$
5.       Multichannel physiography 3 channel complete with accessories         6.       Centrifuge high speed with techno meter         7.       Digital Physiograph         8.       Polygraphs         9.       Mosso,s ergograph         10.       Bicycle Ergometer         11.       ophthalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Tissue Processor – Histokinette         26.       Cryostat         27.       Automated Rotary Microtome         28.       Fully Automated high throughout	4.	Microtomes, Sledge, large cutting			$\geq$	$\geq$
channel complete with accessories 6. Centrifuge high speed with techno meter 7. Digital Physiograph 8. Polygraphs 9. Mosso, s ergograph 10. Bicycle Ergometer 11. ophthalmoscope 12. Digital ECG Machine 13. Student physiograph, (single channel) with accessories 14. Gas analyser automatic for CO2, O2, N2 15. Sherrington Starling kymograph (electrically driven) 16. Centrifuge, high speed with technometer 17. Semi autoanalyser 18. Vacutainer Tube 19. Complete Chromatographic Unit for paper & TLC 20. Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose) 21. Densitometer with computer 22. Spectrophotometer 23. Elias Reader and Washer 24. Manual Rotary Microtome 25. Automated Rotary Microtome 26. Cryostat 27. Automated Rotary Microtome 28. Ultrapure water solutions - Distilled water plant 29. Fully Automated high throughout	5.	Multichannel physiography 3		$\searrow$	$\searrow$	$\searrow$
accessories         6.       Centrifuge high speed with techno meter         7.       Digital Physiograph         8.       Polygraphs         9.       Mosso, sergograph         10.       Bicycle Ergometer         11.       ophthalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         19.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Tissue Processor – Histokinette         27.       Automated Tissue Processor – Histokinette         28.       Fully Automated high throughout		channel complete with		$\sim$	$\sim$	$\times$
<ul> <li>Centrifuge high speed with techno meter</li> <li>Digital Physiograph</li> <li>Polygraphs</li> <li>Polygraphs</li> <li>Mosso, s ergograph</li> <li>Bicycle Ergometer</li> <li>opithal moscope</li> <li>Digital ECG Machine</li> <li>Student physiograph, (single channel) with accessories</li> <li>Channel) with accessories</li> <li>Gas analyser automatic for CO2, O2, N2</li> <li>Sherrington Starling kymograph (electrically driven)</li> <li>Centrifuge, high speed with technometer</li> <li>Complete Chromatographic Unit for paper &amp; TLC</li> <li>Complete Chromatographic Unit for paper &amp; TLC</li> <li>Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)</li> <li>Densitometer with computer</li> <li>Spectrophotometer</li> <li>Elisa Reader and Washer</li> <li>Automated Tissue Processor – Histokinette</li> <li>Wutapure water solutions - Distilled water plant</li> <li>Fully Automated high throughout</li> </ul>		accessories		$\langle \rangle$	$\langle \rangle$	$\langle \rangle$
techno meter         7.       Digital Physiograph         8.       Polygraphs         9.       Mosso,s ergograph         10.       Bicycle Ergometer         11.       ophthalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.       Cryostat         27.       Automated Rotary Microtome         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout	6.	Centrifuge high speed with				
7.       Digital Physiograph         8.       Polygraphs         9.       Mosso,s ergograph         10.       Bicycle Ergometer         11.       ophthalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.       Cryostat         27.       Automated Rotary Microtome         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout		techno meter		$\langle \rangle$	$\langle \rangle$	$\langle \rangle$
8.       Polygraphs         9.       Mosso,s ergograph         10.       Bicycle Ergometer         11.       ophthalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.       Cryostat         27.       Automated Tissue Processor – Histokinette         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout	7.	Digital Physiograph		>	$\sim$	$\sim$
9.       Mosso,s ergograph         10.       Bicycle Ergometer         11.       ophthalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Tissue Processor – Histokinette         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout	8.	Polygraphs		$\sim$	$\sim$	$\sim$
10.       Bicycle Ergometer         11.       ophthalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Tissue Processor – Histokinette         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout	9.	Mosso,s ergograph		$\sim$	$\geq$	$\sim$
11.       ophthalmoscope         12.       Digital ECG Machine         13.       Student physiograph, (single channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.       Cryostat         27.       Automated Tissue Processor – Histokinette         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout	10.	Bicycle Ergometer		$\sim$	$\geq$	$\sim$
<ul> <li>12. Digital ECG Machine</li> <li>13. Student physiograph, (single channel) with accessories</li> <li>14. Gas analyser automatic for CO2, O2, N2</li> <li>15. Sherrington Starling kymograph (electrically driven)</li> <li>16. Centrifuge, high speed with technometer</li> <li>17. Semi autoanalyser</li> <li>18. Vacutainer Tube</li> <li>19. Complete Chromatographic Unit for paper &amp; TLC</li> <li>20. Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)</li> <li>21. Densitometer with computer</li> <li>22. Spectrophotometer</li> <li>23. Elisa Reader and Washer</li> <li>24. Manual Rotary Microtome</li> <li>25. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>	11.	ophthalmoscope		$\sim$	$\sim$	$\sim$
<ul> <li>Student physiograph, (single channel) with accessories</li> <li>Gas analyser automatic for CO2, O2, N2</li> <li>Sherrington Starling kymograph (electrically driven)</li> <li>Centrifuge, high speed with technometer</li> <li>Semi autoanalyser</li> <li>Vacutainer Tube</li> <li>Complete Chromatographic Unit for paper &amp; TLC</li> <li>Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)</li> <li>Densitometer</li> <li>Elisa Reader and Washer</li> <li>Elisa Reader and Washer</li> <li>Automated Rotary Microtome</li> <li>Automated Tissue Processor – Histokinette</li> <li>With accessor – Histokinette</li> <li>With accessor – Histokinette</li> <li>With accessor – Histokinette</li> <li>Fully Automated high throughout</li> </ul>	12.	Digital ECG Machine		$\geq$	$\geq$	$\geq$
channel) with accessories         14.       Gas analyser automatic for CO2, O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Tissue Processor – Histokinette         27.       Automated Tissue Processor – Histokinette         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout	13.	Student physiograph, (single				
<ul> <li>14. Gas analyser automatic for CO2, O2, N2</li> <li>15. Sherrington Starling kymograph (electrically driven)</li> <li>16. Centrifuge, high speed with technometer</li> <li>17. Semi autoanalyser</li> <li>18. Vacutainer Tube</li> <li>19. Complete Chromatographic Unit for paper &amp; TLC</li> <li>20. Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)</li> <li>21. Densitometer with computer</li> <li>22. Spectrophotometer</li> <li>23. Elisa Reader and Washer</li> <li>24. Manual Rotary Microtome</li> <li>25. Automated Rotary Microtome</li> <li>26. Cryostat</li> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>		channel) with accessories		$\langle \rangle$	$\langle \rangle$	$\langle \rangle$
O2, N2         15.       Sherrington Starling kymograph (electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.       Cryostat         27.       Automated Tissue Processor – Histokinette         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout	14.	Gas analyser automatic for CO2,				
<ul> <li>15. Sherrington Starling kymograph (electrically driven)</li> <li>16. Centrifuge, high speed with technometer</li> <li>17. Semi autoanalyser</li> <li>18. Vacutainer Tube</li> <li>19. Complete Chromatographic Unit for paper &amp; TLC</li> <li>20. Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)</li> <li>21. Densitometer with computer</li> <li>22. Spectrophotometer</li> <li>23. Elisa Reader and Washer</li> <li>24. Manual Rotary Microtome</li> <li>25. Automated Rotary Microtome</li> <li>26. Cryostat</li> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>		O2, N2		$\langle \rangle$	$\langle \rangle$	$\langle \rangle$
(electrically driven)         16.       Centrifuge, high speed with technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.       Cryostat         27.       Automated Tissue Processor – Histokinette         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout	15.	Sherrington Starling kymograph				
<ul> <li>16. Centrifuge, high speed with technometer</li> <li>17. Semi autoanalyser</li> <li>18. Vacutainer Tube</li> <li>19. Complete Chromatographic Unit for paper &amp; TLC</li> <li>20. Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)</li> <li>21. Densitometer with computer</li> <li>22. Spectrophotometer</li> <li>23. Elisa Reader and Washer</li> <li>24. Manual Rotary Microtome</li> <li>25. Automated Rotary Microtome</li> <li>26. Cryostat</li> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>		(electrically driven)		$\langle \rangle$	$\langle \rangle$	$\langle \rangle$
technometer         17.       Semi autoanalyser         18.       Vacutainer Tube         19.       Complete Chromatographic Unit for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.       Cryostat         27.       Automated Tissue Processor – Histokinette         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout	16.	Centrifuge, high speed with				
<ul> <li>17. Semi autoanalyser</li> <li>18. Vacutainer Tube</li> <li>19. Complete Chromatographic Unit for paper &amp; TLC</li> <li>20. Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)</li> <li>21. Densitometer with computer</li> <li>22. Spectrophotometer</li> <li>23. Elisa Reader and Washer</li> <li>24. Manual Rotary Microtome</li> <li>25. Automated Rotary Microtome</li> <li>26. Cryostat</li> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>		technometer		$\langle \rangle$	$\langle \rangle$	$\langle \rangle$
<ul> <li>18. Vacutainer Tube</li> <li>19. Complete Chromatographic Unit for paper &amp; TLC</li> <li>20. Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)</li> <li>21. Densitometer with computer</li> <li>22. Spectrophotometer</li> <li>23. Elisa Reader and Washer</li> <li>24. Manual Rotary Microtome</li> <li>25. Automated Rotary Microtome</li> <li>26. Cryostat</li> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>	17.	Semi autoanalyser		$\sim$	>	$\sim$
<ul> <li>19. Complete Chromatographic Unit for paper &amp; TLC</li> <li>20. Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)</li> <li>21. Densitometer with computer</li> <li>22. Spectrophotometer</li> <li>23. Elisa Reader and Washer</li> <li>24. Manual Rotary Microtome</li> <li>25. Automated Rotary Microtome</li> <li>26. Cryostat</li> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>	18.	Vacutainer Tube		$\sim$	$\sim$	$\sim$
for paper & TLC         20.       Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.       Cryostat         27.       Automated Tissue Processor – Histokinette         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout	19.	Complete Chromatographic Unit				
<ul> <li>20. Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)</li> <li>21. Densitometer with computer</li> <li>22. Spectrophotometer</li> <li>23. Elisa Reader and Washer</li> <li>24. Manual Rotary Microtome</li> <li>25. Automated Rotary Microtome</li> <li>26. Cryostat</li> <li>27. Automated Tissue Processor - Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>		for paper & TLC		$\langle \rangle$	$\langle \rangle$	$\langle \rangle$
apparatus with power supply (Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.       Cryostat         27.       Automated Tissue Processor – Histokinette         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout	20.	Complete Electrophoresis				$\searrow$
(Paper, PAGE, agarose)         21.       Densitometer with computer         22.       Spectrophotometer         23.       Elisa Reader and Washer         24.       Manual Rotary Microtome         25.       Automated Rotary Microtome         26.       Cryostat         27.       Automated Tissue Processor – Histokinette         28.       Ultrapure water solutions - Distilled water plant         29.       Fully Automated high throughout		apparatus with power supply				$\times$
<ul> <li>21. Densitometer with computer</li> <li>22. Spectrophotometer</li> <li>23. Elisa Reader and Washer</li> <li>24. Manual Rotary Microtome</li> <li>25. Automated Rotary Microtome</li> <li>26. Cryostat</li> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>		(Paper, PAGE, agarose)		$\langle \rangle$	$\langle \rangle$	$\langle \rangle$
<ul> <li>22. Spectrophotometer</li> <li>23. Elisa Reader and Washer</li> <li>24. Manual Rotary Microtome</li> <li>25. Automated Rotary Microtome</li> <li>26. Cryostat</li> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>	21.	Densitometer with computer		$\langle \rangle$	$\langle \rangle$	$\langle \rangle$
<ul> <li>23. Elisa Reader and Washer</li> <li>24. Manual Rotary Microtome</li> <li>25. Automated Rotary Microtome</li> <li>26. Cryostat</li> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>	22.	Spectrophotometer		$\langle \rangle$	$\langle \rangle$	$\checkmark$
<ul> <li>24. Manual Rotary Microtome</li> <li>25. Automated Rotary Microtome</li> <li>26. Cryostat</li> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>	23.	Elisa Reader and Washer		$\langle \rangle$	$\langle$	$\sim$
<ul> <li>25. Automated Rotary Microtome</li> <li>26. Cryostat</li> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>	24.	Manual Rotary Microtome		$\langle \rangle$	$\langle \rangle$	$\langle$
<ul> <li>26. Cryostat</li> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>	25.	Automated Rotary Microtome		$\langle \rangle$	$\langle \rangle$	$\checkmark$
<ul> <li>27. Automated Tissue Processor – Histokinette</li> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>	26.	Cryostat			>	$\sim$
Histokinette         28.       Ultrapure water solutions -         Distilled water plant         29.       Fully Automated high throughout	27.	Automated Lissue Processor –				$\searrow$
<ul> <li>28. Ultrapure water solutions - Distilled water plant</li> <li>29. Fully Automated high throughout</li> </ul>	00			$\langle \rangle$	$\langle \rangle$	$\leftarrow  ightarrow$
29. Fully Automated high throughout	28.	Distilled water plant				$\left \right\rangle$
29.  Fully Automated high throughout	00	Distilled water plant		$\langle - \rangle$	$\langle \longrightarrow$	$\longleftrightarrow$
	29.	Fully Automated high throughout				$\left \right\rangle$
IVIUITI-Stainer VV orkstation	20	IVIUITI-Stainer Workstation		$\langle - \rangle$	$\langle \longrightarrow$	$\langle - \rangle$
30. Fully Automated Embedding	30.	Fully Automated Embedding				
System (Heated embedding		System (Heated embedding				
1100001e & COID piale)	24	Tully Automated Flaville		$\longleftrightarrow$	$\longleftrightarrow$	$\longleftrightarrow$
ST. Fully Automated Flexible	SI.	Coverslipping Workstation			$\mid$	>
22 Grossing Station - Stainless stool	30	Grossing Station Stainlass staal		$\langle \rangle$	$\langle \rangle$	$\displaystyle{\longleftrightarrow}$

	with Control panel, air filtration system, Track mounted adjustable computer arm with articulation, LED lights that are color and intensity, Dedicated USB ports for camera control and data transfer adjustable, Integrated pathology camera system, Instrument Set (High quality) Height Adjustable Stainless Steel Chairs With Split AC of appropriate capacity.			
33.	Fully Automated Immuno-histo- chemistry Setup with Continuous supply of Important Antibodies,			
24	Piecefoty Cobinet Type 24		$\langle \rangle$	$\langle \rangle$
34.	BIOSalety Cabinet Type - ZA	$\bigcirc$	$\bigcirc$	$\bigcirc$
35.		$\langle \rangle$	$\bigcirc$	$\bigcirc$
30.	Centriluge			>
37.		$\langle \rangle$	$\langle \rangle$	$\langle \rangle$
38.	Deep Fleeze -20° C & Deep	$\geq$	$\geq$	$\geq$
20		$\langle \rangle$	$\langle \rangle$	$\langle \rangle$
39.	Hot Air Oven	$\langle$	$\langle$	$\langle$
40.		$\langle \rangle$	$\langle \rangle$	$\langle \rangle$
41.	Laminar flow			$\sim$
42.	condenser containing oil immersion, Bright field, Phase Contrast & Dark ground			
43.	-80°C deep freezer with UPS			$\geq$
44.	Microcentrifuge / Refrigerated		$\frown$	$\frown$
	Centrifuge			
45.	Vortex Mixer	$\sim$	$\sim$	$\sim$
46.	Electronic Balance			
47.	Fluorescent Microscope			$\geq$
48.	Stryker Type Autopsy Saw With	$\frown$	$\frown$	$\bigtriangledown$
	Accessories			
49.	Ice Lined Refrigerator (I.L.R.) (at			$\searrow$
	Health Centre)			