Price Rs. 2000/- only

F.NO.(26) (2)/UCMS/CS/OGT/T&R/Scientific Equipment/2016
Dated:15.09.2016

UNIVERSITY COLLEGE OF MEDICAL SCIENCES
(UNIVERSITY OF DELHI)
& GURU TEG BAHADUR HOSPITAL
DILSHAD GARDEN, DELHI – 110 095
COLLEGE: 0091-11-22582972-74
FAX: 0091-11-22590495
WEBSITE: http://www.ucms.ac.in

NOTICE INVITING TENDER

(Section – I)

On behalf of the Principal, UCMS, the undersigned is directed to invite the sealed tenders from registered manufacturers/authorised suppliers on DDP basis (Delivered Duty Paid) for the supply & installation of following items:-

Tender Group	**Name of the Items (Detailed Specifications are given in Section IV of the Tender Document)**
Lecture Theatre	Sound & Visual System
Microbiology	Fully automated Mycobacterium culture Differenciation and Sensivity system for 1st and 2nd line drugs**,** Fluoresecent Trinocular Microscope, Biosafety Cabinet Class II BII, VDRL Shaker, Clinical Centrifuge Table Top, Refrigerator double door 350-400 ltr., Hot Air Oven
Community Medicine	Ice Lined Refrigerator (ILR)
Pediatrics	Resuscitation Manikins for new born (for pre-term babes), Resuscitation Manikins for new born (for term babies), Vascular Excess Limb, Electronic Breast Milk Management System, Harpenden Calibre, Lungs Function Machine
MRU	Double beam UV-VIS spectrophotometer, Gas Chromatography – Mass Spectrometer, Ice Flaking Machine, Semi-Micro Weighing Balance, Inverted Microscope with Phase Contrast and with CCD Camera
Dermatology	Five Headed Microscope with Digital Camera attachment, 5MP handheld digital microscope with adjustable polarization (10-200x) with Windows laptop for image capture, processing and storage
Physiology	Mosso's Ergograph, Perimeter (Priestley smith)
Biochemistry	Automated DNA/RNA/Protein extraction system, Anoxomat Chambers, Vertical Deep Freezer -20^{0}C, Thermostatic orbital Shaker, Magnetic Stirrer, Semi-Autoanalyser, Real Time PCR, Lyophilizer
Obst. & Gyane.	Video Colposcope/Colposcope, Cardio-Toco-Graphy (CTG) machine/NST Machine
Pathology	UV-VIS Spectrophotometer with temperature control and data management system, Grossing Station, Automated Liquid Based Cytology System, Ultrapure Water Purification System, Automatic Tissue Embedding Centre, Semi Automatic Rotary Microtome, Digital Laboratory pH meter, Deep Freezer – 86 ^{0} C, Tissue Floatation Bath, Binocular Microscope, Block Filing Cabinet, Slide Filing Cabinet, Roto-Scriber for Labeling Glass Slides, Non-Motorised Upright Research Microscope along with Fluorescence in-SITU Hybridization (FISH) Imaging Workstation, Refrigerated Centrifuge
MIU	Plotter Printer
Orthopaedics	-80 ^{0} Electrical Freezer, Cell Separator
Ophthalmology	Virtual Reality Surgical Simulator, Virtual Reality Direct Ophthalmoscopy Simulator, Virtual Reality Indirect Ophthalmoscopy Simulator, Farnsworth Munsell 100-Hue test, ETDRS Chart, Distance Randot Steroacuity test, High-Definition Document Camera, Fly Test for Steroacuity

The Tender Document for items will be on **TWO BID** System consisting of Technical Bid and Price Bid. The bid(s) has to be submitted item-wise **(separate bid for each item, failing which, the bid shall not be opened/entertained)** containing two parts, Part-I as Technical Bid in one sealed envelope and Part-II as Price Bid in one sealed envelope. Both the sealed envelopes (for Technical as well as Price Bid) must be put in one big envelope and on all the three envelopes must be clearly mentioned all details of item (Tender Group, Name of Item, Tender No., Name & address alongwith mobile number of Bidder etc.). Any bidder may bid for any number of items against the purchase of single Tender Document but each offer must be submitted itemwise in two bid system. **Separate EMD must be enclosed with the Technical Bid for each item**.

The Tender Documents along with detailed specifications, terms and conditions can be downloaded from the College web site "http://www.ucms.ac.in/tender.htm" and the fee for tender documents of Rs.2000/- (Rupees two thousand only) must be enclosed with the technical bid. Tender document fee is not refundable. **NAME & ADDRESS OF BIDDER ALONGWITH THE TENDER GROUP & NAME OF ITEM MUST BE MENTIONED ON THE BACKSIDE OF DEMAND DRAFTS**. **THE BIDDER CAN PARTICIPATE FOR ANY NO. OF ITEMS AGAINST THE SINGLE TENDER DOCUMENT FEE.**

a) Price of Tender Document: Rs.2000/- (Two Thousand only) Non-refundable.
b) Date of commencement of sale of Tender Document: **15.09.2016.**
c) Last date and time for receipt of Tender Document: **14.10.2016 up to 9:15 a.m**. The tender should be addressed to "**The Principal, University College of Medical Sciences, Dilshad Garden, Delhi-110095**" and **may be dropped in tender box kept in the office of Sh. Rajesh Kumar, Asstt. Registrar (Central Stores), Room No. 11, Ground Floor, UCMS** or sent by registered post so as to reach the College on/before **14.10.2016 up to 9:15 a.m.** No tender will be accepted after due date and time.
d) Time and date of opening of Technical Bid: **14.10.2016 from 11.00** a.m. onwards.
e) In case demonstration is required for any item(s), the Price Bids for such item(s) shall be opened after the demonstration.
f) If any further amendment / changes made by the College, the same will be uploaded on College website only.
g) Tender should be submitted separately for each item.

All Tender Documents must be accompanied with the Earnest Money Deposit (Refundable without interest), failing which the bid will be rejected. The Earnest Money Deposit is to be paid in the form of Demand Draft / Pay Order only in favour of **"The Principal, University College of Medical Sciences"** payable at Delhi and should be attached with Technical Bid. Name of firm and complete postal address of bidder alongwith the Tender Group & Name of item must be mentioned on the backside of Demand Drafts.

The College shall not be responsible for any delay in receiving bids/sending of Tender Document by post.

The College reserves the right to accept or reject or cancel any bid/item at any stage of procurement process without assigning any reason thereof. No correspondence in this regard shall be entertained.

Earnest Money shall be forfeited in case, it is found, at any stage that information/particulars regarding supply of tendered item(s) are false.

sd/-
(S. K. DOGRA)
DEPUTY REGISTRAR

SECTION II.

INSTRUCTIONS TO BIDDERS

A. Introduction

1. Eligible Bidders/Tenderer

1.1 This invitation for bids is open to all reputed manufacturers or their sole authorised dealer (wherever manufacturers are not directly selling their product).

1.2 Tenderer/Bidder should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by any Government Office.

2. Cost of Tender/Bidding:

2.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the University College of Medical Sciences hereinafter referred to as "the purchaser", will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

B. The Tender/Bidding Documents

3. Content of Tender/Bidding Documents

3.1 The goods required, bidding procedures and contract terms are prescribed in the bidding documents. In addition to the invitation for bids, the bidding documents include:

a) Tender Notice
b) Instructions to Bidders.
c) General Conditions of Contract;
d) Technical Specifications;
e) Schedule of Requirements;
f) Qualification Requirement;
g) Tender/Bid Form and Price Schedules;
h) Tender/Bid Security Form (Earnest Money form)
i) Contract Form;
j) Performance Security Form;
k) Performance Statement;
l) Manufacturer's Authorization Form;
m) Capability Statement Forms; and
n) Service Support Details Form

3.2 The Tenderer/Bidder is expected to examine all instructions, forms, terms and specifications in the bidding documents. Failure to furnish all information required in the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Tenderer's/Bidder's risk and may result in the rejection of its bid.

4. Clarification of Tender/Bidding Documents;

4.1 A prospective Tenderer/Bidder requiring any clarification of the Tender/Bidding Documents may notify the purchaser in writing at the purchaser's mailing address indicated in the invitation for Tender/Bids, which must be received before 10 days from the last date of submission the bid

5. **Amendment of Tender/Bidding Documents;**

5.1 At any time prior to the deadline for submission of bids, the purchaser may, for any reason, whether at its initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment.

5.2 All prospective bidders should keep in touch to the College website for any further amendments / changes and shall be binding on them.

5.3 In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the purchaser may, at its discretion, extend the deadline for the submission of bids.

C. Preparation of Bids/Tenders

6. Language of Bids/Tenders:

6.1 The Tenders/Bids prepared by the Tenderer/Bidder, as well as all correspondence and documents relating to the Tender/Bid exchanged by the Tenderer/Bidder and the purchaser, shall be written in English/Hindi language. Supporting documents and printed literature shall also be furnished in English.

7. Documents Comprising the Bid/Tender:

7.1 The Tender/ Bid prepared by the Tenderer/Bidder shall comprise the following components:

a) A Tender/Bid Form and a price schedule.
b) Documentary evidence establishing that the Tenderer/bidder is eligible to Tender/Bid and is qualified to perform the contract if its Tender/Bid is accepted;
c) Documentary evidence establishing goods eligibility and conformity to bidding documents.
d) In case of authorised agent, the Authorisation Certificate, issued by the Principal firm.
e) Earnest Money Deposit.
f) Copy of Registration Certificate of Sale Tax/DVAT etc.

7.2 The Tenders/Bids so prepared shall be submitted in two sealed envelopes in two parts as follows:

Part I. Technical Bid

Containing unpriced Bid consisting of complete technical package and unpriced commercial package including Bid Form duly filled and signed. No price detail is to be given in this bid. **NO ALTERNATE OFFER (FOR OTHER MODELS) SHALL BE ALLOWED, OTHERWISE, THE BID MAY BE TECHNICALLY REJECTED.**

Blank Price Schedule Format (Columns 1 to 4 only filled in) as submitted in Section VII (1) shall also be enclosed.

Part II. Price Bid

Containing prices, with detailed break up as per format enclosed, both in figures and in words. Authenticated copy of manufacturers rate list / prices be enclosed for justification of prices quoted to the College.

Item wise Technical Bid & Price Bid is to be submitted in separate envelopes. Enclose separate EMD with Technical Bid for each item separately.

8. Tender/Bid Form:

8.1 The Tenderer/Bidder shall complete the bid form.

9. Tender/Bid Prices

- If rates are quoted in foreign currency, the rates must be on DDP (Delivered Duty Paid) basis including insurance of the item.

  "Delivered Duty Paid" means that the seller delivers the goods when the goods are placed at the disposal of the buyer, cleared for import on the arriving means of transport ready for unloading at the named place of destination. The seller bears all the costs and risks involved in bringing the goods to the place of destination and has an obligation to clear the goods not only for export bus also for import, to pay any duty for both export and import and to carry out all customs formalities.

- However, the custom clearance documents will be provided by the purchaser at the time of clearing the item. It includes Custom Duty Exemption Certificate (CERTIFICATE FOR AVAILING CUSTOMS DUTY EXEMPTION IN TERMS OF GOVT. NOTIFICATION NO.51/96-CUSTOM DATED 23RD JULY, 1996 AND CENTRAL EXCISE DUTY EXEMPTION IN TERMS OF GOVT. NOTIFICATION NO.10/97-CENTRAL EXCISE DATED 01ST MARCH, 1997), authorization letters, Bank Release Order etc.

9.1 The Tender/Bidder shall indicate on the price schedule the unit prices and total bid prices of the goods it proposes to supply under the contract for each item separately. In any column does not apply to the bidder, same should be mentioned as NOT APPLICABLE.

9.2 The Tenderer/Bidder's separation of price components will be solely for the purpose of facilitating the comparison of bids by the purchaser and will not in any way limit the purchaser's right to contract on any of the terms offered.

9.3 Fixed price: Prices quoted by the Tenderer/Bidder shall be fixed during the Tenderer/Bidder's performance of the Contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected.

10 Tender/Bid currencies;

10.1 Prices may be quoted in Indian National Rupees (INR) on FOR (Destination of purchaser) basis. In case of items priced in foreign currencies, converted INR value should be given on the publication date of NIT and it must be on DDP (Delivered Duty Paid, please refer point No.9) basis.

11 Documents Establishing Tender/bidder's Eligibility and Qualifications;

11.1 The Bidder shall furnish, as part of its bid, documents establishing the Tenderer/bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted.

11.2 The documentary evidence of the bidder's qualifications to perform the contract if its bid is accepted, shall be established to the purchaser's satisfaction:

a) That, in the case of a bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized (AS PER AUTHORISATION FORM IN SECTION XII) by the goods manufacturer or producer to supply the goods in India.

b) That Bidder has the financial, technical and production capability necessary to perform the contract and meet the criteria outlined in the QUALIFICATION REQUIREMENTS SPECIFIED IN SECTION VI.

c) If an Agent submits bids on behalf of more than one MANUFACTURER, unless each such Bid is accompanied by a Separate TENDER/BID FORM for each Tender/Bid and a separate EMD, when required for each Bid and AUTHORISATION from the respective Manufacturer, all such Bids will be rejected as non-responsive.

d) The Tenderer/Bidder should have preferably executed similar single supply order of atleast to the extent of 10 times of the items being quoted. Copies of previous Purchase Order(s) for the same item issued by any Govt. organisation may be provided, if required by Purchaser.

e) Income Tax Clearing Certificate for last three years.

12 Documents Establishing Goods Eligibility and Conformity to Tendering/Bidding Documents:

12.1 The Tenderer/Bidder shall furnish, as part of its Tender/Bid, documents establishing the eligibility and conformity to the bidding documents of all goods and services, which the Tenderer/Bidder proposes to supply under the contract.

12.2 The documentary evidence of conformity of the goods and services to the Tendering/Bidding documents may be in the form of literature, drawings and data, and shall furnish:

a) A detailed description of goods essential technical and performance characteristics of the goods;

b) A list giving full particulars, including available sources of all spare parts, special tools, etc. necessary for the proper and continuing functioning of the goods for a period of six years, following commencement of the goods used by the purchaser;

c) An item-by-item commentary on the purchaser's technical specifications demonstrating the goods and services substantial responsiveness to those specifications or a statement of deviations and exceptions to the provisions of the technical specifications.

d) A confirmation that if the Tenderer/Bidder offers system and/or other software manufactured by another company, such software operates effectively on the systems offered by the Bidder; and the Tenderer/Bidder is willing to accept responsibility for its successful operation; and

e) A confirmation that the firm has already achieved ISO 9002 Certification system. Necessary Certification of ISO 9002 should be attached if applicable.

f) Copy of Registration Certificate/Certificate of incorporation (as per the applicable law) may be enclosed.

12.3 For the purposes of the commentary to be furnished, the Bidder shall note that standards for workmanship, material and equipment, and references to brand names or catalogue numbers designated by the purchaser in its technical specifications are intended to be descriptive only and not restrictive. The Tenderer/Bidder may substitute alternative standards, brand names and/or catalogue numbers in its Tender/Bid, provided that it demonstrates to the purchaser's satisfaction that the substitutions are substantially equivalent or superior to those designated in the technical specifications.

13 Bid Security/Earnest Money Deposit:

13.1 The Tenderer/Bidder shall furnish, as part of its Tender/Bid security **Item-wise** for the amount mentioned at page no 41-42 for the respective item(s) as Earnest Money Deposit (separate EMD for each item(s)).

13.2 The bid security is required to protect the purchaser against the risk of bidder's conduct, which may warrant the security's forfeiture.

13.3 The bid security shall be denominated in Indian National Rupees and shall be in the form of a Demand Draft only payable in the name of "Principal, University College of Medical Sciences" payable at Delhi. **Separate Demand Drafts are to be submitted for each item(s).**

13.4 Any Tender/Bid not secured with EMD will be rejected by the purchaser as non-responsive. No tender shall be opened, if detail of EMD is not recorded on top/cover of technical bid.

13.5 Unsuccessful tenderer/bidder's tender/bid security will be discharged/returned as promptly as possible without any interest.

13.6 The successful tenderer/bidder's EMD will be returned (without any interest) upon the Tenderer/Bidder's supply of goods and furnishing the performance bank guarantee.

13.7 The EMD may be forfeited:

a) If a tenderer/bidder withdraws its bid during the period of tender/bid validity specified by the tender/bidder on the tender/bid form; or

b) In the case of successful tenderer/bidder, if the tendrer/bidder fails:
   i.) to supply the goods.
   ii.) to furnish performance bank guarantee.

c) In case it is found at any stage that information/particulars regarding tendered item(s) is false.

14 Period of validity of Tenders/Bids:

14.1 Tender/Bids must be valid for 150 days after the date of opening of Price bid, prescribed by the purchaser. A tender/bid valid for a shorter period may be rejected by the purchaser as non-responsive.

14.2 In exceptional circumstances, the purchaser may solicit the tenderer/bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The tender/bid security provided shall also be suitably extended. A tenderer/bidder may refuse the request without forfeiting its tender/bid security.

15 Format and Signing of Tender/Bid:

15.1 The Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bid the contract. The latter authorization shall be indicated by written power of attorney accompanying

the bid. All pages of the Bid, except for unamended printed literature, shall be initialled by the person or persons signing the tender/bid.

15.2 Any interlineations, erasure or overwriting shall be valid only if they are initialled by the person or persons signing the tender/bid.

D. Submission of Tenders/Bids

16 Sealing and Marking of Tenders/Bids:

16.1 Tenders shall be prepared and submitted in separate sealed envelopes (Technical and Price Bid) by superscribing all tender details and both must be contained in a separate envelope superscribed as Tender Group _____, Tender No _____ dated _____, DUE FOR OPENING ON _____ FOR SUPPLY OF _____ (name of equipment).

16.2 ALL TENDER DOCUMENT NON ADHERENCE to this may be liable for rejection the tender/bid. The full name of contact person, mobile no., postal address, telegraphic address and Fax/telephone no. of the tenderer shall be written at the bottom left corner of all sealed envelops.

16.3 The Tenders/Bids prepared shall be submitted **item-wise** in two sealed envelopes in two parts as follows: -

Part I. Technical Bid

Containing priced tender/bid consisting of complete technical package of the concerned equipment only and unpriced commercial package including tender/bid form duly filled and signed. **THE SEPARATE DEMAND DRAFT OF EARNEST MONEY DEPOSIT MUST BE ENCLOSED IN THIS ENVELOPE.** The tender fee of Rs.2000/- (Rs two thousand only) must be enclosed with this bid by a separate demand draft in the favour of "Principal, University College of Medical Sciences" Payable at Delhi. No price details to be given in this tender/bid.

Blank Price schedule format (Column 1-4 only filled in) as submitted in Section - VII (1) shall also be enclosed.

Part II. Price Bid

Containing prices with detailed break up as per format enclosed, both in figures and in words. Authenticated copy of Manufacturers Rate list / prices be enclosed for justification of prices quoted to the College.

Item wise Technical Bid & Price Bid is to be submitted in separate envelopes.
Enclose separate EMD with Technical Bid for each item separately.

17 Deadline for submission of Tenders/Bids

17.1 Tenders/Bids must be received by the purchaser at the address specified not later than the time and date specified in the invitation for tender/bid (section I or Notice Inviting Tender). In the event of the specified date for the submission of Tenders/Bids being declared a holiday for the Purchaser, the Tenders/Bids will be received up to the appointed time on the next working day.

17.2 The purchaser may, at its discretion, extend this deadline for the submission of bids, in which case all rights and obligations of the purchaser and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

18 Late Tenders/Bids:

18.1 Any tender/bid received by the purchaser after the deadline for submission of bids prescribed by the purchaser will be rejected.

19 Modification and Withdrawal of Tenders/Bids

19.1 The Tenderer/Bidder may modify or withdraw its Bid after the Bid's submission, provided that written notice of the modification or withdrawal is received by the purchaser prior to the date & time prescribed for submission of tenders/bids.

19.2 The tenderer/bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched not later than the deadline for submission of tender/bids.

19.3 No tender/bid may be modified subsequent to the deadline for submission of bids.

19.4 No tender/bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the bidder on the bid form. Withdrawal of a bid during this interval may result in the bidder's forfeiture of EMD.

E. Tender/Bid Opening and Evaluation

20 Opening of Tenders/Bids by purchaser:

20.1 The purchaser will open technical bids, in the presence of tenderer/bidders representatives who choose to attend on the date and time as indicated in NIT (Section –I) at the following location:

"University College of Medical Sciences, Dilshad Garden, Delhi-110095"

The tenderer/bidder "representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of Bid opening being declared a holiday for the Purchaser, the Bids shall be opened at the appointed time and location on the next working day.

20.2 The tenderer/bidders name, tender/bid withdrawals and the presence or absence of the requisite bid security and such other details as the purchaser, at its discretion, may consider appropriate will be announced at the opening.

20.3 Due to any modification(s) by the tenderer in the Tender/Bid at the time of opening the technical bid, shall not be considered or opened for further process, irrespective of the circumstances.

20.4 The Price Bid shall be opened only for the firm(s) whose Technical Bid is declared qualified/acceptable by the concerned Deptt. of the purchaser .

21 Clarification of Tender/Bids:

21.1 During the examination of tenders/bids, the Purchaser may, at its discretion, ask the tenderer/bidder for a clarification of its bid. The request can be in writing or telephonically for clarification and the response shall be in writing only and no change in the price or substance of the bid shall be sought, offered or permitted.

21.2 No communication with the bidder or his representative shall be entertained regarding the status of the procurement before completion of procurement process.

22 Preliminary Examination:

22.1 The Purchaser will examine the tenders/bids to determine whether they are complete, whether required sureties have been furnished, whether the documents have been properly singed, and whether the bids are generally in order. TENDERS/BIDS FROM AGENTS, WITHOUT PROPER AUTHORISATION FROM THE MANUFACTURER AS PER SECTION XII SHALL BE TREATED AS NON-RESPONSIVE.

22.2 The purchaser after opening the technical bid will examine the documents establishing bidders eligibility and qualification, good eligibility and conformity to bidding documents.

22.3 Deviations from or objection or reservation to critical provisions such as those concerning Performance Scrutiny, Warranty, Force majeure, applicable law and taxes and duties will be deemed to be a material deviation.

22.4 The Purchasers determination of the technical responsiveness is to be based on the contents and documents of the bid itself without recourse to extrinsic evidence.

22.5 If a tender/bid is not technically responsive, it will be rejected by the Purchaser and may not be made responsive by the Tenderer/Bidder by the correction of the non-conformity. No further intimation/correspondence shall be made in this regard.

23 Evaluation and Comparison of Price Tenders/Bids:

23.1 The Tender/Bid evaluation will be done item wise.

23.2 The Purchaser's evaluation of a price bid will take into account the following:

1. Ex-factory/Ex-warehouse/Ex-showroom/Off the Shelf Price
2. Excise duty, if any
3. Packing and forwarding charges
4. Inland transportation, insurance and other local costs incidental to delivery.
5. Other incidental services, if any
6. Sales and other taxes payable
7. The costs below will also be added to the bid price for the purpose of evaluation.

a) Delivery Schedule:

The purchaser requires that the goods under this NIT shall be delivered within the time specified in the schedule of requirements. A delivery "adjustment" will be calculated for the bids at the rate of 2% of the ex-factory price including excise duties for each month of delay beyond the stipulated delivery period and this will be added to the bid price for evaluation. No credit will be given to early deliveries.

24 Contacting the Purchaser:

24.1 No tenderer/bidder shall contact the purchaser on any matter relating to its bid from the time of the bid opening to the time the contract is awarded. If the bidder wishes to bring the additional information to the notice of the purchaser, it should do so in writing.

24.2 Any effort by a bidder to influence the purchaser in its decisions on bid evaluation, bid comparison or contract award may result in the rejection of the bidder's bid.

F. Award of Contract

25 Award Criteria:

25.1 The purchaser will award the contract to the successful Bidder who is determined to be qualified to perform the contract satisfactorily and whose bid has been determined to be technically responsive and has been determined as the lowest evaluated Bid.

26 Purchaser's Right to Vary Quantities at Time of Award:

26.1 The purchaser reserves the right at the time of award of contract to increase or decrease the quantity of goods as per actual and services originally specified in the schedule of requirements (rounded off to the next whole number) without any change in price or other terms and conditions.

27 Purchaser's Right to Accept any Bid and to Reject any or all Bids

27.1 The purchaser reserves the right to accept or reject any tender/bid (without assigning any reason), and to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected tenderer/bidder or bidders of the grounds for the purchaser's action.

28 Signing / issuing the Contract:

28.1 The purchaser will issue the final purchase order / award in favour of successful bidder and the purchase order will be treated as FINAL CONTRACT between the Purchaser and Bidder, incorporating all necessary terms & conditions / agreement between the parties.

28.2 If the purchase order is issued & received by the bidder, it will be presumed that all terms & conditions given in the tender document are acceptable by the bidder.

29 Performance Bank Guarantee :

29.1 Before the payment, the successful bidder shall furnish the Performance Bank Guarantee in accordance with the conditions of contract, in the performance security form provided in the bidding documents or another form acceptable to the purchaser. The validity of Performance Bank Guarantee must be valid upto 60 days after the completion of performance obligation including warranty obligation from the date of satisfactory installation.

29.2 Failure of the successful tenderer/bidder to comply with all necessary requirements shall constitute sufficient grounds for the annulment of the award and forfeiture of the tender/bid security in which event the purchaser may make the award to the next lowest evaluated bidder or call for new tender/bids.

30 Corrupt or Fraudulent Practices

The College requires that tenderer/bidders/Suppliers/Contractors under contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the College:

(a) Defines, for the purposes of this provision, the terms set forth as follows:

(i) "corrupt practice" means the offering, giving, receiving or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution, and

(ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the College of the benefits of free and open competition,

a) Will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question,

b) Will declare a firm ineligible, either indefinitely or for a stated period of time, if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing a contract.

c) If at any stage, any bidder or his supplier firm/Principal/partner etc. found Black-Listed/debarred/any kind of concealment/imposed of any kind of penalty, the College have the right to cancel the procurement even after issuing the purchase order.

d) No bidder or their representative shall meet with any of our faculty member/official without any prior permission of competent authority of the College.

Section III.

General Conditions of Contract

TABLE OF CLAUSES

Section III. (Contd.)

General Conditions of Contract
: Details

1. Definition:

1.1 In this contract, the following terms shall be interpreted as indicated:

a) "The contract" means the Purchase order or agreement entered between the purchaser and the supplier, as recorded in the contract from signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein;

b) "The contract price" means the price payable to the supplier under the contract for the full and proper performance of its contractual obligations;

c) "The goods" means all the equipment, machinery, and/or other materials, which the supplier is required to supply to the purchaser under the contract.

d) "Services" means services ancillary to the supply of the goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other such obligations of the supplier covered under the contract;

e) "GCC" means the General Conditions of Contract contained in this section.

f) The "purchaser" or "buyer" means the University College of Medical Sciences.

g) "The supplier" means the individual or firm supplying the goods & services under this contract.

h) "Day" means calendar day.

2. Application:

2.1 These General conditions shall apply to the extent that they are not superseded by provisions in other parts of the contract.

3. Standards:

3.1 The goods supplied under this contract shall conform to the standards mentioned in the technical specifications, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the goods country of origin and such standards shall be the latest issued by the concerned institution.

4. Use of Contract Documents and Information:

4.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

4.2 The supplier shall not, without the purchaser's prior written consent, make use of any document or information except for purposes of performing the contract.

4.3 Any document, other than the contract itself, shall remain the property of the purchaser and shall be returned (in all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.

5. Patent Rights:

5.1 The supplier shall indemnify the purchaser against all third party claims of infringement of patent, trademark or industrial design rights arising from use of the goods or any part thereof in India.

6. Performance Bank Guarantee:

6.1 Before the payment, the successful bidder shall furnish the Performance Bank Guarantee to the Purchaser for an amount of 10% of the contract value, valid upto 60 days after the date of completion of performance obligations including warranty obligations. The validity of Performance Bank Guarantee must be commenced on or after the date of satisfactory installation.

In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be extended to a further period of 24 months and the Performance Bank Guarantee for proportionate value shall be extended 60 days over and above the extended warranty period.

6.2 The proceeds of the Performance Bank Guarantee shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete its obligations under the contract.

6.3 The Performance Bank Guarantee shall be denominated in Indian National Rupees, issued by a Nationalised/Scheduled bank located in India which shall be in form of Bank Guarantee on Rs. 100/- Non-judicial stamp paper.

6.4 The Performance Bank Guarantee will be discharged by the purchaser and returned to the supplier after the date of completion of the supplier's performance obligations/warranty period, including CAMC obligations under the contract. In this regard, the concerned supplier has to take initiative by writing a request letter to the Purchaser.

7. Inspection and Tests:

7.1 Inspection and tests prior to shipment of Goods and at final acceptance are as follows:

i.) The inspection of the Goods may be carried out to check whether the Goods are in conformity with the technical specification attached to the contract and shall be in line with the inspection/test procedures laid down in the Technical Specifications and the General Conditions of Contract. Following broad test procedure will generally be followed for inspection and testing of machine. The supplier will dispatch the goods to the ultimate consignee after internal inspection testing alongwith the supplier's inspection report and manufacturer's warranty certificate. The purchaser may test the equipment after completion of the installation and commissioning at the site of the installation. For site preparation, the supplier should furnish all details to the purchaser sufficiently in advance so as to get the works completed before receipt of the equipment. Complete hardware and software as specified in section V should be supplied, installed and commissioned properly by the supplier prior to commencement of performance tests.

ii.) The acceptance test will be conducted by the purchaser, their consultant or any other person nominated by the purchaser, at its option. The acceptance will involve trouble-free operation for seven consecutive days. There shall not be any additional charges for carrying out acceptance tests. No malfunction, partial or complete failure of any part of hardware or excessive heating of motors etc. of all tender items or bugs in the software should occur. All the software should be completed and no missing modules/sections will be allowed. The supplier shall maintain necessary log in respect of the results of the tests to establish to the entire satisfaction of the purchaser, the successful completion of the test specified. An average uptake efficiency of 98% (to modify as considered appropriate for each case) for the duration of test period shall be considered as satisfactory.

iii.) In the event of the hardware and software failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which the purchaser reserves the rights to get the equipment replaced by the supplier at no extra cost to the purchaser.

iv.) Successful conduct and conclusion of the acceptance tests for the installed goods and equipment shall also be the sole responsibility and at the cost of the supplier.

The purchaser or its representative shall have right to inspect and/or to test the goods to confirm their conformity to the contract. The technical specifications shall specify what inspection and tests the purchaser requires and where they are to be

conducted. The purchaser shall notify the supplier in writing of the identity of any representatives retained for these purposes.

7.2 The inspections and tests may be conducted on the premises of the supplier or its subcontractor(s) at point of delivery and/or at the goods final destination. Where conducted on the premises of the suppler or its sub-contractor(s), all reasonable facilities and assistance including access to drawings and production data shall be furnished to the inspectors at no charge to the purchaser.

7.3 Should any inspected or tested goods fail to conform to the specification, the purchaser may reject them and the supplier shall either replace the rejected goods or make all alterations necessary to meet specification requirements free of cost to the purchaser.

7.4 The purchaser's right to inspect, test and, where necessary, reject the goods after the goods arrival in the purchaser's country shall in no way be limited or waived by reason of the goods having previously been inspected, tested and passed by the purchaser or its representative prior to the goods shipment from the country of origin.

7.5 Nothing shall in any way release the supplier from any warranty or other obligations under this contract.

Manuals and Drawings

7.6.1 Before the goods and equipments are taken over by the Purchaser, the Supplier shall supply operation and maintenance manuals together with drawings of the goods and equipment. These shall be in such detail as will enable the Purchaser to operate, maintain, adjust and repair all parts of the equipment as stated in the specifications.

7.6.2 The manuals and drawings shall be in the ruling language (English) and in such form and numbers as stated in the contract.

7.6.3 Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purpose of taking over until such manuals and drawing have been supplied to the Purchaser.

7.7 For the System & Other Software the following will apply:

The supplier shall provide complete and legal documentation of hardware, all sub-systems, operating systems, system software and the other software. The supplier shall also provide licensed software for all software products, whether developed by it or acquired from others. The supplier shall also indemnify the purchaser against any levies/penalties on account of any default in this regard.

7.8 Acceptance Certificates:

7.8.1 On successful completion of acceptability test, receipt of deliverables etc, and after the purchaser is satisfied with the working of the system, the acceptance certificate signed by the supplier and the representative of the purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the systems.

8. Packing

8.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination as indicted in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, etc. during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remittance of the goods final destination and the absence of heavy handling facilities at all points in transit.

8.2 The packing, marking and documentation within and outside the packages shall be comply strictly with such special requirements as shall be provided for in the contract including additional requirements, in any subsequent instructions ordered by the purchaser.

8.3 Packing Instructions:

The supplier will be required to make separate packages for each consignee. Each package will be marked on three sides with proper paint / indelible ink, the following:

i. Tender No.
ii. Contract No.
iii. Supplier's Name, and
iv. Packing list reference number

9. Delivery and documents:

9.1 Delivery of the goods shall be made by the supplier in accordance with the terms specified by the purchaser in the notification of the Award / purchase order. The details of shipping and/or other documents to be furnished by the supplier are as below: -

9.2 Atleast 7 days before the delivery of the item, the supplier shall inform / notify in writing to the purchaser on Fax No.011-22582105 with full details of the shipment including contract person/number, Air Waybill/House Air Waybill, railway/air receipt number and date, description of goods, quantity, name of the consignee etc. The supplier shall also mail necessary documents to the purchaser's e-mail i.e. ucmscentralstore@gmail.com. If the supplier does not intimate to the purchaser in writing about the detail of despatching the item(s),

the demurrage/any penalty or any other charges may be imposed on the supplier.

10. Insurance:

10.1 For delivery of goods at site, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from "warehouse to purchaser's place (final destinations) "on All Risks" basis including War Risks and Strikes.

11. Transportation:

11.1 Where the supplier is required under the contract to transport the goods to a specified place of destination within India defined as project site, transport to such place of destination in India including insurance, as shall be specified in the contract, shall be arranged by the supplier, and the related cost shall be included in the contract price.

12. Incidental services:

12.1 The following services shall be furnished and the cost shall be included in the contract price:

a) Performance of the on-site assembly, commissioning and start-up of the equipment.
b) Furnishing the detailed operation and maintenance manuals for each item of supply at each location.
c) Maintenance and repair of the equipment at each location during the warranty period including supply of all spares. This shall not relieve the supplier of any warranty obligations under this contract.

13. Spare parts:

13.1 Supplier shall carry sufficient inventories to assure ex-stock supply of consumable and spare in India. Supplier shall ensure the availability of after sales service for a period of at least five years including the warranty period.

14. Onsite Comprehensive Warranty:

14.1 The supplier warrants that the goods supplied under this contract are new, unused, of the most recent or current models and they incorporate all recent improvements in design and materials unless provided otherwise in the contract.

14.2 <u>This comprehensive warranty (onsite) shall remain valid for 60 months (5 years) from the date of satisfactory installation of item</u> <u>(Performance Bank Guarantee must be valid for 62 months from the date of satisfactory installation)</u>

14.3 The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.

14.4 "Upon receipt of such notice, the Supplier, within 24 hours repairs or replace the defective goods or parts thereof, free of cost at the ultimate destination. The supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts/goods thereafter.

14.5 If the supplier, having been notified, fails to remedy the defect(s) within 24 hours, the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

14.6 The supplier shall guarantee a 98% uptime of computer systems/peripherals & all tender items or other equipment's being supplied.

14.7 If any computer systems/tender items give continuous trouble, say three times in one month during the warranty period, the supplier must replace the system with new system without any additional cost to the purchaser.

14.8 Maintenance service

i. Free maintenance services shall be provided by the supplier during the period of warranty.
ii. It is expected that the average downtime of the item (system) will be less than half the maximum downtime (i.e. defined as number of days for which an item of equipment is not usable because of inability of the supplier to repair it) as mentioned in the form of technical details. In case an item is not usable beyond the stipulated maximum downtime the supplier will be required to arrange for an immediate replacement of the same till it is repaired. Failure to arrange for the immediate repair/replacement will be liable for a penalty of Rs.100 per day per item. The amount of penalty will be recovered from the Performance Bank Guarantee during warranty period.

15. Payment

Payment for Goods and Services shall be made either through Letter of Credit (80%/20%)/FDD or in Indian National Rupees after submission of valid Performance Bank guarantee as well as after satisfactory installation.

16. Prices

16.1 Prices payable to the supplier as stated in the contract shall be fixed.

17. Change Orders

17.1 The purchaser may at any time, by a written order given to the supplier, make changes within the general scope of the contract in any one or more of the following:

a) Drawings, designs or specifications where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
b) The method of shipment or packing;
c) The place of delivery; or
d) The services to be provided by Supplier.

17.2 If any such change causes an increase or decrease in the cost of, or the time required for, the supplier's performance of any part of the work under the Contract, whether changed or not changed by the order, an equitable adjustment shall be made in the contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the supplier for adjustment under this clause must be assorted within thirty (30) days from the date of the Supplier's receipt of the Purchaser's change order.

18. Contract Amendments

18.1 No variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

19. Assignment

19.1 The supplier shall not assign, in whole or in part, its obligations to perform under the Contract, except with the Purchaser's prior written consent.

20. Sub-contract

20.1 The supplier shall notify the Purchaser in writing of all subcontracts in his original bid otherwise the supplier shall not relieve from any liability or obligation under the Contract.

21. Delays in the Supplier's Performance

21.1 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser in the Schedule of Requirements.

21.2 If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of the Contract.

21.3 Except as provided in GCC clause 24, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages unless an extension of the time is agreed upon without application of liquidated damages.

22. Liquidated Damages

22.1 If the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract price, as liquidated damages, a sum equivalent to 0.5% of the delayed goods or unperformed services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of 10 percent of contract price. Once the maximum is reached, the Purchaser may consider termination of the Contract.

23. Termination for Default

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

a) If the supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Purchaser.
b) If the supplier fails to perform any other obligation(s) under the contract.
c) If the supplier, in the judgment of the purchaser has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

For the purpose of this clause:
"Corrupt practice" means the offering. Giving, receiving or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution.

"Fraudulent practice' means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the University College of Medical Sciences, and includes collusive practice among Bidders (prior to or after bid submission designed to establish bid prices at artificial non-competitive levels and to deprive the University College of Medical Sciences of the benefits of free and open competition.

23.2 In the event the Purchaser terminates the Contract in whole or in part, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or services similar to those undelivered, and the supplier shall be liable to the Purchaser for any excess costs for such similar Goods or services. However, the supplier shall continue the performance of the Contract, to the extent not terminated.

24. Force Majeure

24.1 Notwithstanding the provisions of GCC clauses 21, 22, 23, the supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force majeure.

24.2 For purposes of this clause, "Force majeure" means an event beyond the control of the supplier and not involving the suppliers fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

24.3 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonable practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

25. Termination for Insolvency:

25.1 The purchaser may at any time terminate the contract by giving written notice to the supplier, if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the purchaser.

26. Termination for Convenience;

26.1 The purchaser, by written notice sent to the supplier, may & terminate the contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the purchaser's convenience, the extent to which performance of work under the contract is terminated, and the date upon which such termination becomes effective.

26.2 The goods that are complete and ready for shipment within 30 days after the supplier's receipt of notice of termination shall be accepted by the purchaser at the contract terms and prices. For the remaining goods, the purchaser may elect;

a) to have any portion completed and delivered at the contract terms and prices; and/or
b) to cancel the remainder and pay to the supplier an agreed amount for partially completed goods and for materials and parts previously procured by the supplier.

27. Resolution of Disputes:

27.1 The purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the contract.

28. Governing Language:

28.1 The contract shall be written in the English language.

29. Applicable law:

29.1 The contract shall be interpreted in accordance with the laws of the Union of India.

30. Notices:

30.1 Any notice given by one party to the other pursuant to this contract shall be sent to other party in writing and confirmed in writing to the address specified in the tender notice.

30.2 A notice shall be effective when delivered or on the notices effective date, whichever is later.

31. Taxes and Duties:

31.1 The supplier shall be entirely responsible for all taxes, duties, license fees, octroi, road permits etc. incurred until delivery of the contracted goods to the purchaser. Supplier is also requested to submit the copy of registration certificate of Sale Tax or DVAT or any other taxes, whichever is applicable.

Section –IV

Complete Technical Specification of All Tender Items

SECTION –V

Scheduled of Requirement

For all tenders items the delivery period will be 4 to 6 weeks or as indicated in the final contract or purchase order.

SECTION – VI

QUALIFICATION REQUIREMENTS

1. The bidder should be a manufacturer/authorized representative of a manufacturer who must have designed, manufactured, tested and supplied the equipment(s) similar to the type specified in the "schedule of requirements" upto at least 50% of the quantity required in any one of the last 3 years. Such equipments must be of the most recent series models incorporating the latest improvements in design. The models should be in successful operation for about six months as on date of bid opening.
2. The bidder should furnish the information on all past supplies and satisfactory performance in proforma attached.
3. All bids submitted shall also include the following information.

    i) Copies of original documents defining the constitution or legal status, place or registration and principle place of business of at the company or firm or partnership, etc.

    ii) The bidder should furnish a brief write up, backed with adequate data, explaining his available capacity and experience (both technical and commercial) for the manufacture and supply of the required systems and equipment within the specified time of completion after meeting all their current commitments.

    iii) The bidder should clearly confirm that all the facilities exist in his factory for inspection and testing and these will be made available to the Purchase or his representative for inspection.

    iv) Details of Service Centers and information on service support facilities that would be provided during the warranty period (in Service Support form).

    v) Reports on financial standing of the Bidder such as profit and loss statements, balance sheets and auditor's report of the past three years, bankers certificates, etc.

SECTION - VII

1. PRICE SCHEDULE

Sl. No.	Description of item		Country of origin	Quantity and unit	UNIT PRICE								
	Tender Specification	Deviations with respect to Tender specifications			Ex-factory /Ex – warehouse/Ex-showroom/Off the self (a)	Excise duty if any (b)	Packing & forwarding (c)	Inland Transportation, Insurance and other local costs incidental to delivery (d)	Incidental Services (e)	Sale Tax & other taxes payable if contract is awarded (f)	Any Other Charges (if applicable) (g)	Unit Price A+b+c+d+e+f+g	Grand Total on DDP/FOR basis (Col.5x13)
[1]	[2]	[3]	[4]	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

IF RATES ARE QUOTED IN INDIAN NATIONAL RUPEES (INR), THE RATES MUST BE ON FOR (DESTINATION OF PURCHASER) BASIS.
IF RATES ARE QUOTED IN FOREIGN CURRENCY, THE RATES MUST BE ON DDP (DELIVERED DUTY PAID) BASIS INCLUDING INSURANCE OF THE ITEM, PLEASE REFER POINT NO.9
Note: i) In case of discrepancy between unit price and total prices, THE UNIT PRICE shall prevail.

Total Bid Price in Rupees(Grand Total)……
In words…….

Bidder's Signature……..
Name ……..
Business Address……

Place:
Date:

Section VII (Contd.)

2. TIME SCHEDULE

Name of The Bidder _____

Item Sl. No.	Description of Item		Country of Origin	Unit	Quantity	Destination (consignees)	Delivery period require
	Tender Specification	Deviations with respect to Tender specifications					
[1]	[2A]	[2B]	[3	[4]	[5]	[6]	[7]

SECTION –VIII

1. TENDER/BID FORM

Date…….
Tender No……..
Tender Group ……..

To

(Name and address of purchaser)

Gentlemen and /or Ladies:

Having examined the Bidding Documents vide Tender No. ……., we, the undersigned, offer to supply and deliver…… (Description of Goods and Services) in conformity with the said bidding documents.

We undertake, if our bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the final award/contract.

If our bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to 10 percent of the Contract Price for the due performance of the Contract, in the form prescribed by the Purchaser.

We agree to abide by this bid for a period of 150 days after the date fixed from bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this …… day of ……... 2016

…….. ……
(Signature) (In the capacity of)

Duly authorized to sign Bid for and on behalf of

……..

Section VIII. (Contd..)
2. <u>BID SECURITY or EARNEST MONEY DEPOSIT</u>

The bid security shall be denominated in Indian National Rupees and shall be in the form of a Demand Draft only payable in the name of "Principal, University College of Medical Sciences" payable at Delhi. **Separate Demand Drafts are to be submitted for each item(s).**

The Tenderer/Bidder shall furnish EMD(s)/Bid security **Item-wise** for the amount mentioned at page no 41-42 for the respective item(s).

SECTION – IX

FINAL CONTRACT

The purchaser will issue the final purchase order / award in favour of successful bidder and the purchase order will be treated as FINAL CONTRACT between the Purchaser and Bidder, incorporating all necessary terms & conditions / agreement between the parties.

Section X

PERFORMANCE BANK GUARANTEE

To: (Name of Purchaser)

WHEREAS (Name of supplier)

Hereinafter called "the Supplier" has undertaken, in pursuance of Purchase Order No. …….. dated …… 201…. To supply (Description of Goods and Services) hereinafter called "the Contract", costing Rs…… (value of Purchase Order)

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a Bank Guarantee by a recognised bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of (*Amount of the Guarantee in Words and Figures) and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limits of (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the …… day of …… 202…

Signature and Seal of the Guarantors

Date…….

Address ……..

SECTION XI

Proforma for Performance Statement

Bid No. …… Date of opening : …… Time : ……. Hrs. ……

Name of the Firm …….

Order placed by (full address of & date purchaser)	Order No. & date	Description & quantity or of ordered equipment	Value or order	Date of completion of delivery As per Actual Contract	Remarks indicating reasons for late delivery	Has the equipment been satisfactorily functioning (Attach a certificate from Purchaser / Consignee)

Signature and Seal of the Bidder ……
……

SECTION – XII

MANUFACTURERS' AUTHORIZATION FORM
No……..Dated: …….

To,

The Principal,
University College of Medical Sciences,
Dilshad Garden, Delhi-110095

Dear Sir,

Tender No……

We ……. Who are established and reputable manufacturers of ……. (name & descriptions of goods offered) having factories at …….……. (address of factory) do hereby authorize M/s. …….(Name and address of authorised dealer) to submit a bid, and sign the contract with you against the above NIT.
We hereby extend our comprehensive onsite guarantee and warranty for a period of 5 (Five) years from the date of satisfactory installation for the goods and services offered by the above firm against this Bid.

Yours faithfully

(Name)
(Name of Manufacturers)

Note: this letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. It should be included by the Bidder in its Bid.

SECTION –XIII

CAPABILITY STATEMENT

1. Name and address of the bidder …….Phone:
2. Classifications (Circle what is applicable)
   1) Manufacturer
   2) Authorised Agent
   3) Dealer
   4) Others please specify
3. Plant:
   a) Location
   b) Description, Type and size of building
   c) Is property on lease or free hold? If on lease indicate date of expiry of lease in each case.

4.
   a) Type of equipment manufactured and supplied during last 2 years

Name of Equipment	Capacity/ Size	Nos. Manufactured	Projects to which supplies are made	No. of orders on hand

   b) Type of equipment manufactured, supplied, installed and commissioned during last 2 years

Name of Equipment	Capacity/ Size	Nos. Manufactured	Projects to which supplied installed and commissioned	No. of orders on hand

5.
   a) Types of equipment supplied during last 2 years other than those covered under 4 above.

Name of Equipment	Capacity/ Size and Model	Nos. Manufacturers & country of Origin	Total Nos. supplied in India	Projects to which supplies are made	No. of orders in hand

   b) Type of equipment supplied, installed and commissioned during last 2 years other than those covered under 4(a) and (b) above.

Name of Equipment	Capacity/ Size and Model	Nos. Manufacturers & country of Origin	Total Nos. supplied in India	Projects to which supplies are made	No. of orders in hand

6. Plant facilities: Sq. Meter (Remarks)

    a) Space available for manufacture
    b) Space available for storage
    c) Space available for inspection items offered
    d) Space available for storage items offered
    e) Are buildings fire resistant
    f) Are premises approved by Municipal fire Production? Yes/ No
    g) Are buildings under municipal fire Production?
    h) Are power and fuel supply adequate to meet production requirements?
    i) Are adequate transportation facilities available?
    j) Are safety measures adequate for performance of proposed contract?
    k) Are adequate material handling available

7. Details of Testing facilities available

    a) List testing equipment available
    b) Give details of tests which can be carried out on items offered
    c) Details of the testing organization available.

8. Personnel/ Organization:

1. Production
2. Marketing
3. Installation and Commissioning
4. Service
5. Spare parts
6. Administrative

9. Nearest service centre to buyer:

Location …… Phone No. ……

10. Details of organization at Service Centre

    a) No. of skilled employees
    b) No. of unskilled employees
    c) No. of engineering employees
    d) No. of administrative employees
    e) List of special repair/workshop facility available
    f) The storage space available for spare parts
    g) Value of minimum stock of spares available at all the service centres in respective currency
    h) List of the models/types by number of equipment serviced by the centre in last 2 years

11. Names of two buyers to whom similar equipment are supplied installed and commissioned in the past and to whom reference may be made by the purchaser regarding the bidder's technical and delivery ability:

1. ……
2. ……

12. List of components usually subcontracted……..
13. Schedules for furnishing technical data and certified drawings after receipt of orders……..
14. Workload as percentage of total capacity for the current and 8 forthcoming financial year on quarterly basis……..
15. Number of weeks required to prepare a bid proposal……..

HARDWARE DOWNTIME

What is the minimum downtime you will guarantee on each of the following items. (This is defined as the number of days for which an item of equipment is not usable because of inability of the supplier to repair it)

Item	No. of days of max down time
ALL TENDER ITEMS	

Note:-

1. The average down time of each item should not exceed half the maximum down time.
2. If the maximum down time during use in warranty/maintenance 8 period exceeds the maximum down time as specified in the bid, the supplier should arrange immediate replacement. Failure to arrange for the immediate replacement shall render the suppler liable to a penalty as specified in the special conditions of contract.

Signature of Bidder ……

Business Address……..

SECTION XIV

SERVICE SUPPORT DETAILS

NEAREST SERVICE CENTRE							
PACK NO.	DESTINATION	LOCATION PHONE NO. TELEX NO.	STATUS OF OFFICEWORKING DAYS & HOURS	NO. OF SOFTWARE ENGINEERS	NO. OF HARDWARE STAFF	VAL. OF MIN. STOCK AVAILABLE AT ALL TIMES	LIST OF MODELS & TYPES OF PCs SERVICED IN LAST 2 YEARS

Signature and Seal of Manufacturer/Bidder

University College of Medical Sciences
Dilshad Garden Delhi-110095

List of items to be purchased through Open General Tender 2016

Tender Group	S.No.	Name of the Item	Quantity required (in nos)	EMD to be enclosed with Technical Bid (In INR)	Page No. of the specification in Tender Document
LT	1.	Sound & Visual System	1	40,000/-	43-46
Micro	1.	Fully automated Mycobacterium culture Differenciation and Sensivity system for 1st and 2nd line drugs	1	1,00,000/-	46-47
	2.	Fluoresecent Trinocular Microscope	1	40,000/-	47-49
	3.	Biosafety Cabinet Class II BII	2	35,000/-	49-50
	4.	VDRL Shaker	3	5,000/-	50
	5.	Clinical Centrifuge Table Top	2	4,000/-	50
	6.	Refrigerator double door 350-400 ltr.	4	4,000/-	50
	7.	Hot Air Oven	2	5,000/-	50
ComMed	1.	Ice Lined Refrigerator (ILR)	3	10,000/-	51
Peds	1.	Resuscitation Manikins for new born (for pre-term babes)	1	5,000/-	51
	2.	Resuscitation Manikins for new born (for term babies)	1	5,000/-	51
	3.	Vascular Excess Limb	1	5,000/-	51
	4.	Electronic Breast Milk Management System	2	2,000/-	52
	5.	Harpenden Calibre	1	1,000/-	52
	6.	Lungs Function Machine	1	3,000/-	52-53
MRU	1.	Double beam UV-VIS spectrophotometer	1	30,000/-	54
	2.	Gas Chromatography – Mass Spectrometer	1	1,50,000/-	54-57
	3.	Ice Flaking Machine	1	5,000/-	57-58
	4.	Semi-Micro Weighing Balance	1	8,000/-	58
	5.	Inverted Microscope with Phase Contrast and with CCD Camera	1	20,000/-	58-59
Derma	1.	Five Headed Microscope with Digital Camera attachment	1	45,000/-	59-61
	2.	5MP handheld digital microscope with adjustable polarization (10-200x) with Windows laptop for image capture, processing and storage	1	4,000/-	61
Physio	1.	Mosso's Ergograph	6	3,000/-	61-62
	2.	Perimeter (Priestley smith)	15	12,000/-	62
Biochem	1.	Automated DNA/RNA/Protein extraction system	1	40,000/-	62-63
	2.	Anoxomat Chambers	1	45,000/-	63
	3.	Vertical Deep Freezer -20^{0}C	1	2,500/-	63-64
	4.	Thermostatic orbital Shaker	1	3,000/-	64
	5.	Magnetic Stirrer	1	700/-	65
	6.	Semi-Autoanalyser	1	5,000/-	66
	7.	Real Time PCR	1	40,000/-	64-66
	8.	Lyophilizer	1	8,000/-	66
ObsGynae	1.	Video Colposcope/Colposcope	1	10,000/-	67
	2.	Cardio-Toco-Graphy (CTG) machine/NST Machine	2	10,000/-	67-68
Path	1.	UV-VIS Spectrophotometer with temperature control and data management system	1	35,000/-	68-69
	2.	Grossing Station	1	80,000/-	69
	3.	Automated Liquid Based Cytology System	1	65,000/-	69-70
	4.	Ultrapure Water Purification System	1	25,000/-	70
	5.	Automatic Tissue Embedding Centre	1	25,000/-	70-71
	6.	Semi Automatic Rotary Microtome	1	10,000/-	71
	7.	Digital Laboratory pH meter	1	2,000/-	71-72
	8.	Deep Freezer – 86 ^{0} C	1	25,000/-	72
	9.	Tissue Floatation Bath	2	1,500/-	72
	10.	Binocular Microscope	5	7,000/-	72-73
	11.	Block Filing Cabinet	4	8,000/-	73
	12.	Slide Filing Cabinet	4	7,000/-	73
	13.	Roto-Scriber for Labeling Glass Slides	1	2,000/-	74
	14.	Non-Motorised Upright Research Microscope along with Fluorescence in-SITU Hybridization (FISH) Imaging Workstation	1	1,30,000/-	74-77
	15.	Refrigerated Centrifuge	1	12,000/-	77-78

Tender Group	S..No.	Name of the Item	Quantity required (in nos.)	EMD to be enclosed with Technical Bid (In INR)	Page No. of the specification in Tender Document
MIU	1.	Plotter Printer	1	15,000/-	78
Ortho	1.	-80 ^{0} Electrical Freezer	2	50,000/-	78-79
	2.	Cell Separator	1	13,000/-	79
Ophthal	1.	Virtual Reality Surgical Simulator	1	1,000/-	79
	2.	Virtual Reality Direct Ophthalmoscopy Simulator	1	250/-	79
	3.	Virtual Reality Indirect Ophthalmoscopy Simulator	1	250/-	79
	4.	Farnsworth Munsell 100-Hue test	1	2,500/-	79
	5.	ETDRS Chart	5	1,200/-	80
	6.	Distance Randot Steroacuity test	1	500/-	80
	7.	High-Definition Document Camera	1	1,000/-	80
	8.	Fly Test for Steroacuity	1	8,00/-	80

University College of Medical Sciences
Open General Tender 2015-16

Tender Group – LT

<table>
<tr><th>S. No.</th><th>Name of Item</th><th>Specification</th></tr>
<tr><td>1.</td><td>Sound & Visual system</td><td>
<table>
<tr><td>Item 1: Power Amplifier</td><td>Qty.: 03 nos.</td></tr>
<tr><td>Output Channel</td><td>1</td></tr>
<tr><td>Dynamic Output Power@4 ohms</td><td>240 Watts</td></tr>
<tr><td>RMS Output Power @ 4 ohms</td><td>240 Watts</td></tr>
<tr><td>RMS Output Power @ 8 ohms</td><td>120 Watts</td></tr>
<tr><td>Output Power RMS 100 Volts</td><td>240 Watts</td></tr>
<tr><td>Minimum Impedance Load per Channel</td><td>4 ohms</td></tr>
<tr><td>Minimum Impedance Load bridged per Channel</td><td>8 ohms</td></tr>
<tr><td>Output Voltage Tappings</td><td>100/70/50 Volts @ 4 ohms</td></tr>
<tr><td>Line Input Balanced</td><td>1</td></tr>
<tr><td>Priority Input Contact</td><td>1</td></tr>
<tr><td>Priority Output</td><td>24 VDC</td></tr>
<tr><td>Priority Levels</td><td>1</td></tr>
<tr><td>Frequency Response</td><td>35 – 22 kHz</td></tr>
<tr><td>Tone Controls</td><td>Yes</td></tr>
<tr><td>Cooling System</td><td>Fan</td></tr>
<tr><td>Applicable Low Impedance</td><td>Yes</td></tr>
<tr><td>Power Supply</td><td>230 VAC</td></tr>
<tr><td>Maximum Power Consumption</td><td>525 Watts</td></tr>
</table>
<table>
<tr><td>Item 2: Ceiling Speaker</td><td>Qty.: 48 (16 x 3) nos.</td></tr>
<tr><td>Loudspeaker System</td><td>2-Way</td></tr>
<tr><td>Woofer Size</td><td>5.25 inch</td></tr>
<tr><td>Tweeter Size</td><td>1 inch</td></tr>
<tr><td>100V Transformer Power Taps</td><td>15/10/5/2.5 Watts</td></tr>
<tr><td>Impedance</td><td>16 ohms</td></tr>
<tr><td>Low Impedance Dynamic Power</td><td>50 Watts</td></tr>
<tr><td>SPL 1W/1m</td><td>82 dB</td></tr>
<tr><td>Maximum SPL 1m</td><td>100 dB</td></tr>
<tr><td>Frequency Response</td><td>60 – 20 kHz</td></tr>
<tr><td>Vertical Dispersion Angle 1000 Hz</td><td>180°</td></tr>
<tr><td>IP Rating</td><td>54</td></tr>
<tr><td>Woofer Cone Material</td><td>Polypropylene</td></tr>
<tr><td>Grille Main Material</td><td>Aluminium</td></tr>
<tr><td>Main Construction Material</td><td>ABS Plastic</td></tr>
</table>
</td></tr>
</table>

Item 3: Manual Mixer with Effects	**Qty.: 03 nos.**
No. Of Channels	12 + 2
Special Features	Built-in 24 bit Lexicon® digital effects processor
	32 FX settings
	Tap Tempo and FX setting store function
	1 FX send on each channel
	1 configurable auxiliary bus
	XLR-type and ¼" metal jack connector sockets
	RCA phono stereo playback inputs and record outputs
	3-band EQ with a swept mid on mono inputs
	3-band EQ on stereo inputs
	TRS insert sockets and inserts on all mono inputs and mix output
	Ten-segment LED output metering
	Intuitive and comprehensive solo system
	Headphone output
Frequency Response: Mic / Line Input to any Output	+/-1.5dB, 20Hz – 20kHz
T.H.D.: Mic Sensitivity -30dBu, +14dBu @ Mix output	< 0.02% @ 1kHz
Noise	Mic Input E.I.N. (maximum gain: -127dBu (150 ohms source)
	Aux, Mix and Masters (@ 0dB, faders down): < -84dBu
Crosstalk @ 1 kHz	Channel Mute: >90 dB
	Fader Cut-off (rel +10 mark): >90 dB
	Aux Send Pots Offness : >83 dB
EQ (Mono Inputs)	HF: 12kHz, +/-15dB
	MF (swept): 150Hz – 3.5kHz, +/-15dB
	LF: 80Hz, +/-15dB
	Q: 1.5
EQ (Stereo Inputs)	HF: 12kHz, +/-15dB
	MF: 720Hz, +/-15dB
	LF: 80Hz, +/-15dB
Input & Output Levels	Mic Input: +15dBu max
	Line Input: +30dBu max
	Stereo Input: +30dBu max
	Mix Output: +20dBu max
	Headphones (@150Ω): 300mW
Input & Output Impedances	Mic Input: 2kΩ
	Line Input: 10kΩ
	Stereo Input: 65kΩ (stereo), 35kΩ (mono)
	Outputs: 150Ω (balanced), 75Ω (unbalanced)
Power Consumption	Less than 35 W
Item 4: Digital Feedback Destroyer	**Qty.: 03 nos.**
Audio Inputs	Connections: XLR & ¼" TRS stereo connector
	Type: Electronically balanced input
	Input Impedance: Approx. 20 kΩ balanced
	Nominal Input Level: -10 dBV / +4 dBu (adjustable)
	Max. Input Signal Level: +20 dBu at +4 dBu nominal level +6 dBv at -10 dBv nominal level, typically -40 dBv
Audio Outputs	Connections: XLR & ¼" TRS stereo connector
	Type: Balanced

	Output Impedance: Approx. 200 Ω balanced
	Max. Output Level: +20 dBu at +4 dBu nominal level +6 dBv at -10 dBv nominal level
Bypass Type	Relay, Hard Bypass in case of Power Outage
Frequency Response	<10 Hz to 44 kHz
Dynamic Range	107 dB
THD	0.007% typically @ +4 dBu, 1 kHz, amplification 1
Crosstalk	<-100 dB @ 1 kHz
Display Type	3-digit numeric LED display
MIDI Interface Type	5-pole DIN connectors IN/OUT/THRU
Digital Processing	Converter: 24 Bit / 96 kHz
	Sample Rate: 96 kHz
Parametric Equalizer (PEQ)	Type: Max. 20 independent, fully parametric filters per channel
	Frequency Range: 20 Hz to 20 kHz
	Bandwidth: 1/60th to 10 octaves
	Possible Value Range: +15 to -36 dB
Feedback Destroyer (FBQ)	Type: Digital signal analysis for feedback recognition purposes
	Filter: Max. 20 digital notch filters per channel
	Frequency Range: 20 Hz to 20 kHz
	Bandwidth: 1/60th octave
	Possible Value Range: 0 to -36 dB
Power Supply	100-240 V, 50-60 Hz
Power Consumption	Approx. 10 W

Item 5: Full HD Document Camera	**Qty.: 02 nos.**
Zoom	16x (8x optical zoom; 2 sensor zoom)
Digital Zoom	12x
Mechanical Zoom	10x
Close-up	1.2” (3 cm)
Shooting Area Max.	16.5” x 12.4” (420 x 315 mm) > A3 size
Output Resolution	XGA, SXGA(1280x960), WXGA, 1080p
SNR	51 dB
Sharpness	MTF 937 lines
Frame Rate	30 fps
Lamp	LED gooseneck side lamp & head lamp
USB Image Transmission	USB 2.0 (480 Mbps) high-speed transmission
Video / Audio Recording	One-touch records image and sound synchronously
Built-in Microphone	Yes
Image Capture	Single / Continuous capturing
Auto Tune	Yes, one button for image optimization
Image Rotation	0°, 180°, flip, mirror

Item 6 Projector ceiling mounting kit
Details
Good quality cable to connect Laptop with projector
Connectors- VGA , BNC, HDMI

		Item 7 UPS Capacity- 3 KVA Battery Backup- 30 Minutes General Single Phase input & Single Phase output with isolation transformer along with SMF Frequency- 40-70Hz Input range- 80-280 V Protection- Required for..short circuits,over loading,over temperature,input low/high voltage control,DC low/high voltage trip. Battery bank details- Battery Make- Panasonic/Exide/Orchid/Okaya. Battery Type- sealed maintenance free(SMF) Battery Capacity- 12v × 18AH × 16 Nos. Battery Recharge- Battery recharge time should not exceed 8 hours UPS & Battery Housing- Powder coated UPS & battery cabinet with caster wheel should of minimum 1mm thick good quality material. Indications- Mains on load on battery, battery level, load level,over load. Audible Alarm- Over temperature, main failure, battery low & over load. Switches- Main ON/OFF MCB, battery ON/OFF MCB/Fuse. Input wiring – Out put Wiring for UPS & Wiring for load will be in Vendor scope only.

Tender Group – Micro

1.	**Fully automated Mycobacterium culture Differenciation and Sensivity system for 1st and 2nd line drugs**	System should be capable to perform rapid culture, differentiation and sensitivity testing for Mycobacterium tuberculosis. System working principle should be based on non-invasive sensitive fluorescent technology. System should be capable to perform tests to differentiate typical and atypical mycobacterium within 3-4 days time. System should have continuous incubation, monitoring and detection facility with specific algorithm for analyze slow growth patterns of Mycobacterium. System should be able to process minimum 10 fresh samples per day with standard international protocol. System should have more than 300 sample positions with compact space-saving design with User-friendly operation keys. System should be able to process both respiratory & non-respiratory samples. System should have continuous on line automatic quality control check coupled with BARCODE Scanner. System should not have any sharp at the time of sample inoculation to avoid any needle stick injury to user. (To avoid infectious disease transmission to the user, like HIV, HCV, HBV, etc.) First Line Drug Kit/ Media and its protocol should be FDA cleared and approved. System should have a validated protocol to perform 1st Line Drug Sensitivity Testing System should be able to perform second drug sensitivity testing and should have a validated protocol to perform 2nd Line Drug Sensitivity Testing System should have its own validated kit form rapid differentiation between MTBc and MOTT within 15 minutes. System should be supplied with ready to use lyophilized drug vials for entire range of 1st Line Drug Sensitivity testing i.e. S,I,R,E,P. System should be capable of automatic report generation for the interpretation of Drug Sensitivity testing results. System should be supplemented with Ready Made Pyrazinamide Drug media for standardized result. Company should have its own factory certified drug kit for 1st Line Drug Sensitivity Testing for 5 drugs along with Pyrazinamide Drug Media Should have provision of future software up-gradation through Floppy Drive

		System should be supplied along with on line 3KVA UPS with 60 minutes back-up. System should be approved by Central TB Division and WHO. (RNTCP) System should be supplied with high end database management system which can integrated to Hospital/ Lab information system for bi-directional information flow for patient data and information on drug sensitivity patterns with following features- Work-station Detailed Patient Data Incorporation Specimen Demographics Centralized Order Management for Microbiology testing Improved workflow Multiple Platform Connectivity Detailed Data Review-Patient, Specimen, Test & Isolate levels Unlimited Microbiology Data Storage Capacity Incorporation of Patient Therapies Full Transaction Logging Direct On-line Technical Support System should be able to generate the interpretation of 1st Line Drug Susceptibility testing, automatically; no need of manual interpretation. Equipment should be supplied along with free of cost 1000 nos. 7.0ml culture tubes, 03 boxes of supplement kit, 02 boxes of pyarazinamide drug kit and media kit and 02 kits of 1st Line Drugs: S, I, R, E System should have space saving compact design. On-site comprehensive training to be provided to Lab staff and supporting members till familiarity with the system. Five year comprehensive warranty with parts and labour along with another five year warranty without parts must be provided with the system.
2.	**Fluoresecent Trinocular Microscope**	Magnification - 40x -1000x for observation Optical system - infinity optical system with uniform illumination
		EYEPIECE TUBE - TRINOCULAR TUBE WITH INCLINATION ANGLE OF 10-30o ALONGWITH 80:20/50:50 LIGHT DISTRUBUTION PORT FOR SIMULTANIOUS VIEW AND ATTACHING DIGITAL CAMERA AND DOUBLE PORT TO ATTACHED SECOND CAMERA.
		EYEPIECE LENS - 10X (2PCS) WITH BOTH SIDES DIOPTER ADJUSTMENT ATLEAST (F.O.V. 25MM) OR HIGHER SHOULD BE ANTI FUNGUS TYPE.
		OBJECTIVE - HIGH PERFORMANCE OBJECTIVE SUITABLE FOR BRIGHT FIELD, FLUORESCENCE MICROSCOPE Plan Achromat 4x NA 0.10, WD 30.00 mm or better Plan Achromat 10x NA 0.25, WD 10.50 mm or better Plan Fluor 20x NA 0.50, WD 2.10 mm or better Plan Fluor 40x NA 0.75, WD 0.66 mm spring loaded or better Plan Flour 100x NA 1.30, WD 0.16 mm, Oil, Spring loaded or better NOSE PIECE - SEXTUPLE NOSEPIECE. TO ACCOMADATE SIX OBJECTIVES
		COARSE/FINE FOCUSING - FINE 0.1MM PER ROTATION/COARSE 13.8MMPER ROTATION. COARSE MOTION TORQUE ADJUSTABLE.REFOCUSSING STOPPER SHOULD BE INCORPORATED.

		MECHANICAL STAGE - SUPER HARD CERAMIC COATED SURFACE, STAGE HANDLE HEIGHT & TENSION SHOULD BE ADJUSTABLE. LOW POSITIONED COAXIAL X(78MM) AND Y(54MM) MOTION CONTROL ON RIGHTHAND SIDE WITH CAPACITY TO HOLD TWO SLIDE GLASS AT A TIME.	
		IMAGE CAPTURE BUTTON - IMAGE CAPTURE BUTTON INBUILT FOR QUICK IMAGE CAPTURING CONDENSER - ABBE CONDENSER	
		ILLUMINATION - 12V-100W HALOGEN LAMP PRECENTERED AND PREFOCUSED.	
		FLUORESCENE ATTACHMENT:- 120 / 130W MERCURY/METAL HALIDE ILLUMINATION SHOULD HOLD SIX FLUORESCENCE FILTER BLOCKS IN ROTATING TURRET, PRE- CENTERED LIGHT WITH 2000 HRS LAMP LIFE.Lamp should be out-side of the Microscope body.	
		SEMROCKOR/EQUIVALENT FILTERS DAPI- Exciter 387nm, Emitter 415nm, & Dichroic 409nm with Transmission avg>93% 415-950nm. SPECTRUM GREEN - Exciter 494nm, Emitter 527nm, & Dichroic 506nm with Transmission avg>93% 513-950nm. SPECTRUM RED - Exciter 586nm, Emitter 628nm, & Dichroic 605nm with Transmission avg>90% 415-950nm.	
		DIGITAL CAMERA SYSTEM: (A)Digital Monochrome camera for fluorescence imaging Type of sensor: high sensitive, high speed, low noise monochrome CMOS/CCD sensor Quantum efficiency: > 75% Cooling: Electronic cooling Live display: 15 FPS– 45 FPS at full frame or different frame. Full well capacity: more than 50000 e Read out noise: 2.2 e- Optical interface: F mount adapter, PC interface: USB 3.0 All the necessary cables/ power supply must be included	
		(B) Digital SLR camera for Brightfield imaging With at least 16.2 million effective pixel resolution, Sensitivity- ISO 100 to 6400 in steps of 1/3, 1/2, 4 GB compact flash card, 3'' LCD Monitor allows up to 170-degree viewing angle, horizontal opening type vari-angle LCD, USB interface cable with software CD for downloading the images on PC, Lithium-ION Rechargeable battery with charger, Along with compatible relay lens and Adapters.	
		Image Analysis Software should be with following features: Acquisition and device control through four-dimensional acquisition. Image Acquistion, Time Lapse Imaging, Z-Stack, Multi-channel Fluorescence, Annotation, 2D / 3D View, ND Viewer, Filter, Morphology, Large Image, Macro, Segmentation, Auto-measurement, Report Generator facility, Data Base, Vector layer & Multi-Dimensional File Format (ND format) Note: The Microscope, fluorescence, camera and image analysis software should be of same make and manufacturer for future upgradability and flexibility. This is a very essential terms to be followed. Data Collection and processing unit:	

		Branded i5 processor, 4 GB RAM, DVD Writer,1 TB or higher HDD, 18.5”TFT Monitor, Key board, Mouse along with UPS	
3.	**Biosafety Cabinet Class II BII**	The basic equipment shall consist of exhaust HEPA filter, HEPA filter for supply air, negative pressure exhaust plenum, front opening sash with either counter weight of motorized movement, suitable blower assembly, necessary lighting, indicators and controls for the cabinet. The equipment should be mounted on a stand with leveling feet. The exhaust plenum should be under negative pressure, hard ducted to the outside. HEPA FILTER: Face dimensions: 4ft. (L) X 2ft. (W) X 6ft. The HEPA filter should have rated efficiency of 100% at 0.3 microns to provide product protection of Class100 or exceeding Class 100 requirements of Federal Standards 209E or equivalent ISO within the work area. Air Velocity: Should not be more than 100 fpm over the work area. Light Intensity at work surface: 800 lux or more over the entire work surface. Noise level : <70 dBA. UV germicidal lamp intensity: >40 microwatt/sq.cm over the entire work surface. Main body, side and rear panel: Electrogalvanized Steel or Mild Steel, oven baked epoxy powder coated finish. Worktable (surface): SS304 or SS 316. Front panels construction: Removable transparent scratch resistant sheet of approximately 6 mm thickness. Individual switches and indicator lamps for blower motor, florescent lamp and UV lamp. Differential pressure gauge: Scale display in cms of water Electrical protection: The LAF should be fitted with earth leakage circuit breaker (ELCB) Other fittings required for Attaching auxiliary services: Electrical outlet socket (5 ampere rating) qty: 2 nos. Prefilter:- Filtration efficiency of 98% for all types of particle sizes 8 micron and larger Spare accessories: HEPA Filter (one)-dimensions same as above, Prefilters (two). Equipment quoted should comply with Indian Standards Institutions Guidelines or any other National or International Guidelines. The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%. The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90% Power input to be 220-240VAC, 50Hz fitted with Indian plug Resettable over current breaker shall be fitted for protection Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz) Should be FDA , CE,UL or BIS approved product Manufacturer/Supplier should have ISO certification for quality standards. Should be compliant with IEC 61010-1 :(or any international equivalent eg EN/UL 61010) covering safety requirements for electrical equipment for measurement control and laboratory use The Laminar Airflow Cabinet should be tested and comply with the requirements: 1.Downflow Velocity Profile 2.Inflow Velocity Test 3.Airflow Smoke Pattern Test 4.HEPA Filter Leakage Test 5.Electrical Leakage Ground Circuit Resistance and polarity Test 6.Lighting Intensity Test 7.Vibration Test. 8.Noise Level Test 9.UV Lamp Intensity Test	

		10. The differential pressure gauge should be calibrated. Note: All the above Tests will have to be conducted and certified by an accredited agency. Please provide the name and address of the firm agency that will test and certify the LAF. Also necessary proof of accreditation with the appropriate national or international laboratory should be provided
4.	**VDRL Shaker**	Regulated shaking for two or four 96-well micro-titer plates Must be a compact instrument with low profile and small footprint for personal application including immunoassays and colouration tests. The shaker could be used in a cold room or incubator, operating ambient temperature range +5 °C to +40 °C. Speed range should be 150 – 1000 RPM Digital timer should have 1 min – 23 h 59 min (with automatic switch off) Capacity should be 2 microtest plates to 4 micro plates optional Platform Overall dimensions should be. 220x205x90 mm Weight, not more than 2.5 kg Power supply should be external power supply DC 12V, 500 mA
5.	**Clinical Centrifuge Table Top**	Routinely used table top model Should have digital display of speed / timer Should have speed regulator step less Maximum speed should be up to 4000 RPM to 5000 RPM Should be able to detect imbalance Should have lid lock for safe run. Should be able to adapt various capacity rotors. Rotors 24x15ml angle head for holding tubes
6.	**Refrigerator double door 350-400 ltr.**	Double door separating freezer and lower compartment Capacity 365 Ltr. Automated defrosting system In-built stabilizer Warranty 3-5 Years Should be an ISO 9001-2000 Certified Company Tenderer must have a service network and users list.
7.	**Hot Air Oven**	Hot air oven should be made of double walled chamber filled with the glass wool having inner size (WxHxD) 600x900x600 mm. Inner wall should be made of stainless steel SS 304 grade and outer wall is made of mild steel sheet finished with durable powder coated paint Should be provided with air circulating fan. Inner wall should have ribs to adjust shelves to any convenient height supplied with three (3) removable shelves are made up of SS steel with holes. Double walled stainless steel insulated door fitted with heavy hinges. Should be provided with air ventilation on both sides at near the top of equipment. Should be operated on 220/230V, 50Hz single phase AC supply. Should be provided with three heating element on three sides of equipment. Having temperature range 50 0C to 250 0C +/- 10 0C controlled by digital temperature controller with digital display. The equipment control panel should be provided with digital temperature knob, ON/OFF switch, 2 pilot indication lights. Instrument should be fitted with automatic circuit breaker when short circuits and over temperature occur.

Tender Group – ComMed

1.	**Ice Lined Refrigerator (ILR)**	1.Temperature range : 2 to 8 degree centigrade 2.Vaccine Capacity: Around 50 Litres 3.Temperature Display: to be present 4.Holdover time: Around 12-18 hours 5.Defrost: Automatic preferable. 6.World Health Organization (WHO) / UNICEF / PQS approved

Tender Group – Peds

1.	**Resuscitation Manikins for new born (for pre-term babies)**	- Designed to learn the resuscitation skills on Pre-term infants. - Bag and mask ventilation and chest compression. The manikin should have in built indicators for correct and incorrect bag and mass ventilation and chest compression, battery operated/rechargeable battery operation. - Suction - Vascular access through umbilical route. - Vascular access through umbilical route. - I/V cannulation in cephalic and basilic veins on arm, and dorsal venous arch on hand. - I/V cannulation in great saphenous veins on leg and dorsal venous arch on the foot. - Replaceable skin and vein of arm and leg.
2.	**Resuscitation Manikins for new born (for term babies)**	- Designed to learn the resuscitation skills on Term infants. - Bag and mask ventilation and chest compression. The manikin should have in built indicators for correct and incorrect bag and mass ventilation and chest compression, battery operated/rechargeable battery operation. - Suction - Vascular access through umbilical route. - I/V cannulation in cephalic and basilic veins on arm, and dorsal venous arch on hand. - I/V cannulation in great saphenous veins on leg and dorsal venous arch on the foot. - Replaceable skin and vein of arm and leg. - Intraosseous infusion: Provide palpable, surface anatomy of Patella, tibia and tibial tuberosity. Availability of pressurized system for fluid aspiration .Intraosseous leg replacement, skin and bone should be available.
3.	**Vascular Excess Limb**	- The manikin should be a Lifelike reproduction of an infant arm with vivid skin texture - Should allow Venipuncture in antecubital fossa and dorsum of the hand - Should allow to carry out venipuncture and transfusion; - Should allow the Fluid to be infused for realistic flashback; - Should consist of replaceable skin and vessel. - Should be supplied with the following a) Infant IV Arm 1 b) Spare skin 1 c) Spare vessel 1 d) Scalp needle 1 e) Syringe 1
4.	**Electronic Breast**	• Should have maximum capacity 10 kg or more.

	Milk Management System	• Should able to weigh minimum of 10 grams. • Should be having breast milk intake monitoring function measuring pre- breast feed and post breast feeding milk intake. • Should have TARE, AUTO HOLD function. • Should be meant for human use only. • Should be EUCE/US FDA approved.
5.	**Harpenden Calibre**	• Should be able to measure skin fold thickness. • Measuring range should be from 0-80 mm. • Accuracy should be more than 98%. • Should have repeatability of 0.15-0.20 mm. • Should be EUCE/US FDA approved.
6.	**Lungs Function Machine**	**1. FEATURES:** • Portable • Superior dynamic response • Low resistance • Rolling seal method • Desktop/laptop computer operation **2. TECHNICAL SPECIFICATIONS** **Lung Function Machine** **Measurement method:** **Flow: Mouthpiece** **Volume: Flow integration** **Range** **Flow: ± 14l/s** **Volume: 0-8 litres** Dead space: 80 ml Accuracy **Flow: ±5% of indication/ ±200 ml/s for FEV 25-75, ±10% of indication or ±400 ml/s for PEF** **Volume: ±3% of indication/ ±50 ml for FVC & FVC1, ±10% of indication or ± 15l/min for MVV** Precision Flow: ±5% of indication/ ±200 ml/s for FEV 25-75 and PEF Volume: ±3% of indication/ ±50 ml for FVC& FVC1 Limits of detection Flow rate: 2 ml/s Volume: 1 ml Resolution Flow rate: 2 ml/s Volume: 1 ml

		3. PARAMETERS **a. Lung volume: SVC, IC, ERV, TV, IRV, ERV** **b. Spirometry: FVC, FEV0.5,FEV1, FEV3, FEF50, FEF25-75, PEF, FIVC, PIF, FIF50, MVV, FET, MTI** **4. COMPUTER INTERFACE: USB, Pentium IV with windows XP** **5. LCD Display: Flow curves, comparison for pre and post flow volume curves** **6. Predicted normals: Crapo, Cherniack, Morris, Knudson 1983, NHANES III, Zapletal, Polgar, etc** **7. Nose clip** **8. Bacterial & viral filter with 3M manufactured filtrate electrostatic filter** **9. Disposable and non disposable mouthpieces** **10. External printer** **11. Operating conditions:** **Ambient temperature: 15-40C** Relative humidity: 10-90% (non condensing) **12. Power: From PC serial port** 13. **Should be EUCE/US FDA approved.**

1.	**Double beam UV-VIS spectrophotometer**	**TECHNICAL DESCRIPTION**	**CONFIRMED SPECIFICATION**
		Principle	UV/Vis spectrometer with PC control. Preferably with provision for measurement of small volume.
		Construction	Solid Aluminum chassis/ equivalent for thermal and vibration stability
		Optics	Double beam (separate sample and reference cell holder for accurate measurement) sealed, quartz coated, lens free system, double monochromator.
		Grating	Concave holographic grating with 1000 lines/mm or better.
		Sources	Pre-aligned deuterium and tungsten-halogen lamps with automatic switch over.
		Detector	Photomultiplier tube
		Wavelength Range	185±5 – 900 nm.
		Stray Radiation/Light	≤ 0.0001 %T at 220 nm (NaI) or better.
		Wavelength Accuracy	Minimum +/- 0.1 nm at D2 peak, 656.1 nm or better.
		Wavelength Reproducibility	Minimum +/- 0.06 nm (10 measurements at 656.1 nm) or better.
		Band-pass/Band width	Minimum 3steps(0.5 to 5 or better)
		Photometric Accuracy	+/- 0.003 A at 1A or better.
		Photometric Reproducibility (at 1A)	0.001 A (MAXIMUM DEVIATION OF 10MEASUREMENTS) or better.
		Photometric Stability (at 1A)	0.0003 A/h or better.
		Baseline Flatness(1nm slit)	± 0.0004 A or better.
		Photometric Noise Level at 500nm(1nm Slit)	0.00005 A RMS or better.
		Standard Software Applications	Scan, Time Drive, Wavelength Programming, Concentration, Bio Assay, Kinetics, Oligo Quant, Validation, Report Builder, Energy mode, Arithmetic etc. should be included as standard feature of the s/w.
		Standard Accessories	Suitable quartz cuvette for 700ul, 1.5ml, 3.5 ml (one pair each), 10MM With 6-8 position cell-holder.
		Optional accessory:	For enzymetic kinetics 1+1 peltier temperature controller with water circulator for a temperature range 20-60C.
		Local Accessories	Suitable branded PC-printer.
2.	**Gas Chromatography – Mass Spectrometer**	• Fully automatic computer controlled GCMS with programmable electronic control and having capability of qualitative and quantitative analysis • Should have inbuilt GC main frame with Split / Split less Injection port GC with Pneumatic Flow Control capability Accommodates up to two capillary columns • Operating temperature range suitable for all columns and chromatographic separation • Temperature Range: Ambient +4°C to 450°C **(Programmable up to 450 °C)heat up time should be >5 min.**	

		• Temperature Programming supports > 9 oven ramps or better • Setting : **1^0C/min** • Temperature Ramp Rate: **120 °C /min, 0.1 °C /min increments** • Should Equipped with a cooling system, that enable the reduction of cool down time from 450 ^{0}C to 50 ^{0}C<5 minutes • Software Pneumatic Control up to 0.01psi or better **Mass Spectrometer** • Mass range 1.6 – 1050 amu in 0.1 amu steps • Scan speed **>12,000 amu or better.** • Ionization modes: Electronic Ionization(EI) and Positive and Negative Chemical Ionization (CI) • Ion source temp: upto 350 ^{o}C for better sensitivity for active compounds and should be programmable transfer temp 100 ^{o}C to 350 ^{o}C. • Mass analyzer should be based on Quadrupole with high ion transmission efficiency. • Quadrupole temp: optimizable as per the system requirement. • Vacuum Compensation and automatic leak testing with MS • The detector should have provision to reduce the random noise that occurs with ion transmission, improving the S/N ratio • Scan sensitivity Using helium as carrier gas S/N Ratio in simultaneous SIM and SCAN mode • EI full scan specs 1 µL injection of 1 pg/µL OFN at S/N ≥ 600:1 • PCI full scan specs 1 µL injection of 100 pg/µL benzophenone at S/N ≥ 600:1 • NCI full scan specs 2 µL injection of 100 fg/µL OFN S/N ≥ 1000:1 **Columns** • Capillary Column DB-5, 60 mt (or equivalent phase) (2 Nos.) • Capillary Column DB-35Ultra inert, 60 mt (or equivalent phase) (2 Nos) • Capillary Column DB-WAX, 60 mt (or equivalent phase) (1Nos) **Head Space Auto sampler** • With transfer line/direct injection technique • With at least 10 vials capacity or more. • Entire system heating from ambient up to 200 ^{o}C or better in increments of 1^{o}C Vial temperature 50 ^{o}C – 200 ^{o}C or better. • Overlapped Thermostatting (Vials) 1 • Transfer Line temperature 50 ^{o}C – 200 ^{o}C or better • Operated through GC Software • Injection volume linearity be 99% correlation and Area Reproducibility ASDA 3% • Injectors should be either do single or simultaneous injections for both injection ports. • Includes all standard accessories like interface cable, reducing union, HSS Vials 22 ml with 20 mm round top, Crimps Caps, Silicon Rubber/Teflon face septa, Hand Crimper, De-capper etc **Auto Injector** • Sample vial Glassconstruction,1.5 – 2.0 mL,screwtop,Teflon-coated septum. Should be supplied with minimum 15 vials capacity with septum & caps • Prioritysample injectioncanbeinjectedduringasamplesequence,and thenthesequencecanberesumed. **Pneumatic controls** • Electronic pneumatic controls should be integral part of injector and detector modules No extra tubing and wires should be needed to operate electrical valves, and deliver carrier, detector and make-up gases to injectors and detectors. The digital carrier gas controller should allow operating in constant and programmed

		flow and pressure modes. **Injectors (Two Numbers)** • Split / Split less capillary Injector • Suitable for all capillary columns (50 pm to 530pm id) • Spilt less mode for trace analysis • Temperature Range 400°C • Split Ratio Setting Up to 1:900 (1 / 1 ratio increment) • Programmable Capillary Injection Unit. Should support the analysis of compounds with a high boiling point (straight-chain hydrocarbons with 100 carbon number) • Modes of operation : Spilt/Split less, temperature ramped Split less • OCI/PTV and Spilt/Split less capillary injectors with built in pneumatic Control thru software for digital setting of septum purge gas as standard • Temp. range : Room temp + 5 ^{o}C to 450 ^{o}C in steps of 1^{o}C • Heating rate : 50^{o}C to 450^{o}C within 3 minutes • Cooling rate : 450^{o}C to 50^{o}C within 5 minutes • Heating program: max. Heating rate120 ^{o}C /minute**.** • Should be configured with Back Flush option. • For 2 way split, for splitting flow between FID & MS detector **Flame Ionisation Detector** • Type :High sensitivity auto-ranging • Temp. Range :Up to 450^{o}C in steps of 1oC • Detection Limit : 3 pg C/sec or better. • Linear Dynamic Range:10^{6} • Suitable for both capillary & OCI/PTV column application; totally software controlled • Detector gas is controlled electronically **by** pneumatic Control thru software • Fast Automatic Flameout detection and efficient automatic re-ignition **Electron capture detector (ECD)** • **High sensitivity and excellent selectivity** • **High operating temperature for maximum stability** • **PPC pneumatics – software flow control of makeup gas** • **Source 15 mCi^{63}Ni** • **Temperature protect ~ 450 ˚C by software** • **Carrier gas Either Ar/CH_4 or N_2** • **Operating temperature ~100 ˚C to 450 ˚C in 1˚C increments** • **Minimum detectable quantity < 0.05 pgperchloroethylene or Y-BHC with argon/methane or nitrogen** • **Linearity > 10^{4}** • **Makeup gas Standard** **Turbo Molecular Pump** • Vacuum System should be with turbo molecular pump having capacity of 250 L/min, with air-cooled high vacuum pump, with control and safety interlocks integrated into the system. **Library** • Latest Edition library (NIST library as well as Wiley Library). Certificate of originality of the libraries should be attached. **Software**

		The software should be a single point control of GC- MS system and its modules with an assistant bar showing operating procedures graphically and a wizard function that helps enter complicated parameters. These make it easy for even first-time users to use the software. In addition, should be controlling pretreatment accessories, such as headspace sampling unit, the software should allow continuous automatic operation, while using self-diagnostic function of the software validation assistance. If a data problem occurs, the analysis can also be automatically stopped to prevent wasting precious samples. Since measurement parameters and data analysis parameters can be controlled using a single method file and data files include instrument history information, it is capable of supporting GLP compliance and other requirements. Operating Systemshould beMicrosoft Windows 2000 / Windows XP / Windows Vista. Should have feature of Automatic Adjustment of Retention time, creation of Automatic SIM table as standard software feature. It should also have features for data acquisition, control, chromatographic data evaluation and reporting sequencing **Accessories** • Suitable On-line UPS with 60 minutes back up, for GCMS and HS system. • Filled Helium, Nitrogen, and Hydrogen Gas Cylinders & Zero Air Cylinder with regulators for the operation of GCMS with all above accessories. • Gas purification System for all gases • Complete Gas station for connecting between Gas Cylinders & GCMS. • Intel Core i5 processer PC (HP/Dell), RAM = 8 GB, TFT Color Monitor = 19 inches, DVD Writer/Player, Two Speakers, Graphic Card with Licensed Microsoft Operating System (latest) with backup copies in DVD/ CD from factory itself. • Licensed Windows Based Software for system functions including control of all accessories, as well as for Data Processing & Data acquisition of System with original copy in CD/DVD with provision of future up gradation should be provided. • 0.5µl, 1µl, 2 µl, 5 µl, 10µl Syringes (2 each) • Ferrules for columns for use with FID (20 Nos); Ferrules for columns for use with MSD (20 Nos);Non-stick Inlet Septa (50Nos); Column nuts (2 Nos); deactivated liners (1 no); O-rings for liners (20nos). • Filament (2 no's), Split Liners (10 No's.), Respective autosampler Vials 1000 no's each with Septa & Screw cap, Vacuum Pump Oil (1 Ltr) • Installation should include demonstration of application on real samples and training of staff. Necessary reagents etc. for demonstration should be provided by the vendor. • User manual. • User list with name, email and telephone number of user of the quoted model. • Quality Certification: **System should have EU, CE and ISO certification.**
3.	**Ice Flaking Machine**	• Ice production capacity: 30-40kg/day. • Stainless steel cabinet properly insulated with sturdy construction. • Ice storage capacity 10 Kg or more preferably the Ice holding tank made of stainless steel, insulated with PUF insulation so that ice can be stored for longer period without melting. • Air cooled condensation. • Hermitically sealed compressor. • CFC/HCFC free (R134a). • Operating Voltage: 220-240V/50Hz. • Corrosion resistant interior and exterior. • Microprocessor control with LED indicator. • Continuous Ice Flakes Output, No cubes. • Production start time: 15-30 minutes or sooner.

		• Auto cut off in case of water supply failure and maximum ice level. • Low water level detection. • Very low noise level ≤ 50-60 dB. • An outlet should be provided to drain water from the bin to protect it from contamination. • Unit should have adjustable legs to keep the machine in level. • Cryo gloves and spatula deemed to be included. • Any other optional accessories may be quoted separately. • User manual. • Quality Certification: System should have EU, CE and ISO certification. • Warranty: Five years, comprehensive, on site from date of installation • User list with name, e mail and telephone number of user of the quoted model.
4.	**Semi-Micro Weighing Balance**	• Electronic semi microbalance having maximum capacity of approx. 120g. • Readability: 0.01 mg • Repeatability (sd) : ~ 0.04 mg • Linearity: ~ 0.1 mg • Sensitivity temperature drift (10-30°C): 1-3 ppm/ °C • Stabilization time: ~ 5-10 s • Weighing pan dimensions: ~ ø 80-90 mm • Should have fully automatic time and temperature-controlled internal adjustment. • Should be made up of single mono-bloc rust-proof metal alloy. • Should have tare facility. • Built in date and time function. • High-precision weighing cell with constant accuracy over the entire weighing range. • Connectivity to pc as well as printer. • AC adapter to run on main supply with overload protection. • Should be Programmable 3 Smart Keys for shortcut access to applications. • User manual. • Quality Certification: System should have EU, CE and ISO certification. • Warranty: Five years, comprehensive, on site from date of installation • User list with name, e mail and telephone number of user of the quoted model.
5.	**Inverted Microscope with Phase Contrast and with CCD Camera**	• Microscope Body: Microscope body with Infinity optical corrected system, facility for 2way light distribution, up/down focusing with course and fine knobs. Complete attachment for Phase & DIC should be quoted. • Condenser: Long Working distance turret type 5 position condenser with NA of 0.4 with Working distance of 50 mm or higher. • Illumination: High performance LED illumination which should perform bright field, phase contrast /Halogen Lamp of 12V 35W or higher. • Eyepiece: Paired 10X Eyepiece with F.O.V 23 mm or better and dioptre adjustment facility on both eyes. • Nosepiece: 5 position nosepiece with minimum 3 slots for individual DIC. • Mechanical Stage: Mechanical Stage with stage size of 225 X 225 mm or bigger with object guide and universal mounting frame for the attachment terasaki plate, slide, 35 mm dia petri dish, tissue culture flasks. • Objectives: LD Plan Achromat Phase Objective of 5x/0.15, 10x/0.25 WD 8.5 mm, LD Plan Achromat Phase 20x/0.35 WD 4.3 mm, LD Plan Achromat Phase 40x/0.55 WD 2.0mm & 63x/0.65 WD 1.8 MM .Complete attachment for Phase & DIC should be quoted. • Digital camera:

		• Digital high resolution color camera capable of handling bright field, phase contrast image with 5.7 mm x 4.28 mm equivalent 1/2.5" (diagonal 7.1 mm). CCD basic resolution 2560 x 1920 5.0 megapixels or higher. Max. 13 fps at 800 x 600 pixels, subframe or higher. Range of integration time 10 µs up to 2 s. Software along with camera for acquiring, measurements, multi channel imaging for 2 or more channel, merging & capturing of images. Capable to capture color mode. Ambient conditions +5° to +45° Celsius max. 80 % relative humidity, no condensation, free air circulation. • Data Collection: Latest branded computer with Windows 7 professional or better, intel i5 processor, 4 GB RAM, DVD writer, 1TB HDD 2.0" TFT monitor along with UPS and multimedia kit. • All the necessary cables/ power supply must be included. • Microscope should be upgradable to fluorescence attachment in future. • Any other optional accessories may be quoted separately. • On site demonstration of the instrument may be required. • User manual. • Quality Certification: System should have EU, CE and ISO certification. • Warranty: Five years, comprehensive, on site from date of installation • User list with name, e mail and telephone number of user of the quoted model. Note; All the components of Microscope should be from same manufacturer

Tender Group – Derma

1.	**Five Headed Microscope with Digital Camera attachment**	**<u>Five Headed Microscope With Digital Camera</u> Attachment , Projection System With Appropriate Table For Housing And Seating Arrangement For 05 People, Computer, UPS and relevant software** **MICROSCOPE BODY -** ergonomic design microscope body with built-in fly-eye lens for uniform illumination through out the field of view incl. periphery. it should have 3 built-in filters(ncb11, nd8, nd32) **MAGNIFICATION** - 20X-1000X for observation **OPTICAL SYSTEM** - (infinity optical system). eyepiece tube, super wide field, trinocular tube, should be inclined at 25 degree angle with f.o.v. 22mm. Should be anti-fungus type. eyepiece lens 10x (2pcs) with both sides diopter adjustment (f.o.v. 22mm) should be treated with anti fungal coating and tropicalized. Anti reflective treatment. **OBJECTIVE -** Long working distance plan achro objectives 2x0.10MM.dplan achro, 4X 0.10MM 30.0MM PLAN ACHRO 10X 0.25MM 10.5MM,P LAN ACHRO 20X 0.4MM 1.2MMPLAN ACHRO 40X 1.25MM , 100Xdplan achro. **SPRING- LOADED NOSE PIECE.-** reversed sextuple revolving nosepiece to accommodate six objectives at a time coarse/fine focusing fine 0.1mm per rotation/coarse 14mmper rotation. coarse motion torque . adjustable refocussing stopper should be incorporated. **STAGE** - rectangular, super hard alumite coated surface , stay in position, stage handle height & tension should be

		adjustable. 78mm x 54mm cross travel range using low positioned coaxial x and y motion control on right hand side with capacity to hold two slide glass at a time. condenser swing out condenser covering magnification from 2x-100x ILLUMINATION - 12V-100W halogen lamp precentered prefocused. Lamp house should be cordless, voltage (100-240V) photo switch built- in auto photo preset switch. Polarizer Plate set to be used on this microscope. This plate set must be supplied along with the microscope. **TEACHING ATTACHMENT -** should be for Five persons (incl. main observer). binocular tube of teaching attachment should also be anti-fungus type & should give similar viewing as main observer along with pointer unit. Pointer of teaching attachment should be moved on any direction (360º ROTATABLE) **DIGITAL CAMERA ATTACHMENT:** digital camera capable of handling bright field, fluorescence, DIC, dark field images with high density CCD chip. Should support 20 megapixel still and ultra high density video image recording / capture. **LIVE DISPLAY MODE,** binning modes : 2X2, 4X4, digital zoom : upto 16X (8 steps) ; interval shooting : 5 sec intervals. Software should come along with camera for acquiring & capturing of images. should have separate modes for different microscopy techniques i.e brightfield, fluorescencE, DIC, darkfield images . USB port for attaching camera onto desktop/laptop through single wire. Microscope & camera should be from same manufacturer for better compatibility. Camera should support ultra high density video imaging. **Data collection and processing unit: branded, 4 GB RAM, DVD writer, 512 GB or higher HDD, 18.5 TFT monitor, along with color laser printer and UPS** **PROJECTION SYSTEM –** Compatible projection system with non reflective LCD screen, size – atleast 40 inches **Computer with UPS, Software & Printer** **-** CORE i5 / i7DUO processor running at as minimum 2.93 GHz per core - Hard disk capacity – minimum 2TB, RAID level 5 - RAM – 8 GB, DDR 3GB - Optical mouse, and keyboard - Optical drive – 16xDVD+/RN Drive -USB ports – 6 USB, 2 ports - 10/ 100 MBPS LAN, wi-fi capability, sound & graphic card, graphic accelerator card, with 4 GB memory on board HDMi output support 100 mbps or higher Ethernet / networking and blue tooth capability -UPS- online UPS capable of cold boot - Peripherals – Multi-functional device including color printer, scanner and copier

		-Software as follows: - Windows 10 professional latest multimedia edition - Microsoft Office professional 2010/ latest - Adobe photo-shop professional latest Anti-virus software- Norton or equivalent, current at the time of delivery -Video card Card 512 MB HD 4350 -21"wide screen flat monitor – true color mode (1280x1024 pixels) with antiglare or anti reflective screen. - 5 yr hardware maintenance
2.	**5MP handheld digital microscope with adjustable polarization (10-200x) with Windows laptop for image capture, processing and storage**	**Hand-held digital microscope (USB based)** • Provides 10x - 200x magnification • 2592 × 1944 pixels (5 mp) CAMERA • USB 2.0 interface. Connectable to Laptop for image viewing and storage • Should have Measurement features/ calibration features • Should have Polarizing lens/ polarizing to enable better visualization of skin lesions • Should be compatible with Windows and MAC (if possible) • Accompanying software for enabling image storage and retrieval • Should have automatic magnification reading feature wherein the current magnification is displayed on screen • Assortment of detachable front caps for different types of skin lesions **AND** **Laptop with carry case** • OS Windows • 8-16 GB RAM • 1TB Hard drive (minimum) • Processor: Intel i5/i7 • Screen: 13-15 inches • Light weight

Tender Group – Physio

1.	**Mosso's Ergograph**	**1.** Apparatus used to measure work done by forearm muscles in humans. 2. The apparatus consists of arm rest, finger holders, straps and recording unit with automatic rachet. 3. It should have the advantages of both the Dubois and Mosso's Ergograph.

		4. The recording system follows the Dubois design; and the arm rest, finger holders and straps follow the Mosso's design. 5. Complete with one set of 5 kilo weights.
2.	**Perimeter (Priestley smith)**	1. Perimeter Priestly Smith table model for table top use. 2. Used to measure the peripheral field of vision. 3. The apparatus comprises of a calibrated arc & revolving chart holder. 4. The object carrier which moves over the arc, contains five different colours & five apertures of different diameters. 5. There is a calibrated scale and an adjustable chin rest. 6. All fitted over a sturdy base with receptacle for keeping charts. 7. Complete set required with 100 charts.

Tender Group – Biochem

1.	**Automated DNA/RNA/Protein extraction system**	1. Instrument should be compatible to take up samples from vacutainers, eppendorf tubes, 24 well plates, Microtiter 96 well plates and 96 well PCR plates. 2. Should purify nucleic acids (DNA and RNA) and proteins from whole blood, tissue lysate, single cell suspensions and body fluid samples and from bacteria in a convenient, rapid and reproducible manner from different starting materials with high quality and yield. 3. The processing volume should be flexible for all type of sample volumes from 20 – 1000 microlitre. 4. The instrument should be able to run at least 24 samples per run and should also work for one sample per run. 5. The instrument should have an option of stand-alone mode and PC controlled mode. 6. The system should have a memory for 100 internal protocols 7. The software should be supplied with the instrument. 8. The instrument should have an option of heating block which should be capable of setting the temperature upto 115 ^{0} C. 9. Should supply kits for 2000 preps for DNA, RNA and protein isolation (each) and all the other accessories/reagents etc. required for the maintenance of the equipment during the period of CMC. 10. User manual should be supplied 11. Quality Certification: System should have EU or CE or ISO certification. 12. Latest version computer with laser printer should be supplied with the instrument. 13. UPS with enough back up to run the instrument for 2 hours should be supplied with the instrument. 14. The price for all consumables required should be quoted separately and the prices should be locked for the next five years.

2.	**Anoxomat Chambers**	1. Equipment should be able to produce any gas atmosphere (other than hazardous and inflammable) in transparent Jars, by programming, required O2 (atmospheric), CO2, H2 & N2 (from cylinders of mixed gases & pure gases except H2) percentage, through touch screen and having enough memory to store multiple recipe (more than 30) for future use, with reproducibility of <0.5% deviations. 2. It should be fully automatic so that constant supervision is not required. 3. It should have touch screen display for simple operation 4. The equipment should be upgradeable so that the basic equipment can be upgraded to model having facility to accommodate 3 gases or jars, if required 5. Should identity defective jars, catalysts and non- availability of gases, before incubation. 6. All controlled conditions like Hypoxia, Capnophilic, anaerobic & Microaerophilic should be reproducible within 0.5% of the desired value. 7. It should be able to produce any environmental conditions in 3 minutes. 8. It should have filter to prevent microbial contamination. 9. It should work without any disposables and chemicals 10. It should maintain its jar atmosphere with appropriate humidity to prevent drying and cross contaminations 11. The equipment should have minimum consumption of gases & low maintenance 12. It should work with transparent anaerobic jars of its own and also with modified ordinary anaerobic jars having no leakages. 13. A tabletop model with small footprint 14. Vacuum pump should be integrated with the equipment. 15. The equipment should be supplied with arrangements for free gas suuply for 2 years 16. Free user programming of oxygen level gas mixture and evacuation level should be supplied 17. One additional gas connection including software update should be supplied which can be used for pure N2 & CO 18. Latest version branded Computer with Printer including software 19. Following accessories should be supplied with the instrument: • Five Anaerobic Jar transparent for micro titer plates (diameter 175 mm, height 240 mm), 1 rack of 10 petridishes diameter 14 cm, lid transparent, Five anaerobic jar transparent (diameter 230 mm, height 240 mm), 3x12 petridishes 9-10 cm, holder for micro well plates, petridish holder (3X 12, 9-10 cm plates) 20. Four gas cylinders, Two L &T made Messer brand gas regulator should be supplied along with the instrument 21. UPS with a power back up for at least 2 hours to run the instrument.
3.	**Vertical Deep Freezer -20^{0}C**	1. Vertical, double walled body made of high grade steel with rounded corners. 2. Double door with compartmentalized chambers (at least 5 with separate plastic doors). 3. Capacity: 340 – 400 Litres 4. Temperature range (–15 °C to –30°C) 5. Accuracy ± 1.0 °C 6. Should not have auto defrost system. 7. Fast freezer switch 8. Safety fuse, shock protection and locking facility 9. Suitable voltage stabilizer 10. Accessories: temperature alarm, fuses, racks, storage boxes with dividers, etc.
4.	**Thermostatic orbital Shaker**	1. Should have both shaking and rocking movements 2. Should be suitable for incubating western blot membranes, ELISA plates, beakers and tubes. 3. Size of working platform should be atleast 30-35 cm X 20-25 cm. 4. It should have informative display, wide speed range and possibility of continuous operation up to 24 hrs. 5. Temperature range should be between ambient + 5^{o}C to 60^{o}C, with an accuracy of +/- 0.1 ^{o}C

		6. Variable platform rotation speed with range of 50-1000 rpm. 7. System should have a timer for 1min-24 hrs. 8. Individual LCD display for time, temperature and RPM. 9. Sound alert on completion.
5.	**Magnetic Stirrer**	1. Stirring speed 80-1200 RPM 2. Stirring Volume upto 1 litre 3. Stirring position 4 4. Power rating 20 watts 5. Dimension 40 X30 X5 cm (approx) 6. Power AC 230V, 50 Hz
6.	**Semi-Autoanalyser**	1. Lamp: Tungsten Halogen Lamp 2. Monochromatic and Bichromatic Measurements 3. Photometric range: 0 – 3.0 A^o with resolution of 0.0001 A^o 4. Zero drift and filter check facility, facility for light source off. 5. 8 wavelength filters(± 10nm) : 340, 405,450,505/510,550,578,630, 680nm 6. LCD/ LED display 7. Operating environment : 15-30^0 C , Humidity- upto 80% 8. Assays: Absorbance, End Point, Fixed time, Kinetic , Turbidimetry 9. Blanking: option for Automatic, Water blanking, Reagent Blanking 10. Temprature control: RT, 25, 30, 37^0 C 11. Calibration: single point, 2 point & multipoint with display, Calibration types: linear, point to point 12. Aspiration volume: 200µl -1000µl & option for vol calibration 13. Test methods: ≥ 200 user defined programmes 14. Quality control: Automatic QC calculations, L-J Chart, graph display, results, daily and monthly data view 15. Should be FDA approved/ CE certified 16. Memory: minimum of 10000 sample results & minimum of 100 QC results (with retention memory for at least 2 QC values per day) 17. Desirable: Option for short and long continuous washing programme for reaction cuvette/ flow cell 18. Built in thermal printer 19. CMC/ AMC as per the institutional rules 20. Accessories: UPS with atleast ½ hr battery backup, thermal printer rolls 25, suction tube 02 and peristaltic pump tube 02, fuse 02. 21. Free installation & Demonstration
7.	**Real Time PCR**	• Compact, high throughput and fast on line Real-Time PCR system with latest generation cooling and heating system (excitation and emission) and software. The system should support applications like Genotyping, SNP Discovery and analysis, Gene expression, Absolute and Relative Quantification, copy number determination in transgenic, multiplexing and complete end-point analysis, etc. • Capable of performing advance application like HRM for SNP genotyping/ DNA methylation etc. without any probe requirement. • System should provide real time Cycle by Cycle monitoring with continuous display of readings for

		Fluorescence, Temperature changes and progression of amplification • Minimum 3 channels with Provision for adding new dyes if desired by the user. So suitable excitation/Emission (365nm-750nm) • Peltier-free heating and cooling system/ Peltier based system to ensure minimum well to well variation & to achieve high thermal uniformity. • Sample format: 96 or more PCR tubes, optimized for 15-30µl reactions to minimize the running cost. Should have provision to take standard 0.2 ml PCR tubes as well as 0.1ml & 30 µL qPCR tubes/plates. Should be quoted with appropriate accessories to make it an open system so that any tube can be used for sample analysis. • Should not require ROX or any Passive ref dye to generate data. • Linear dynamic range: 10 orders of magnitude or more, standard curve method • Machine should not require any hardware change to recognize newer dyes & chemistries like FRET. • System must be capable to perform chemistries like SYBR Green I, dual color Taqman / Hydrolysis probes, molecular beacons, Simple Probes. • Heating ramp should be at least 6^0C/sec and cooling ramps of at least 5^0C/ sec. should finish run in 45 minutes in fast cycling. • System should not have any metallic sample holder like thermal block to achieve high thermal performance and to avoid block failures. • Thermal uniformity should be 0.01^0C and high temperature resolution 0.05^0C to support application like High Resolution Melt Curve. • Should have filter set at both ends, excitation as well as emission side to avoid cross-talk of dyes. • Excitation source: Multi colour filtered LED/Halogen Lamp • Detector: Multi channel filter set PMT detection/CCD detection • Only licensed and authorized Real Time PCR platform should be supplied • Supplier should be able to supply the reagents and consumables for the operation of the system (for fifty

		thousand reactions) and must have wet lab support available in India. • Should supply 100µl tubes or appropriate reaction plates/ vessels for fifty thousand reactions. • Analysis workstation should be of latest branded Pentium PC/Laptop with licensed Windows operating system. • System should operate at 220V / 50 Hz. Appropriate accessories (qPCR mix & PCR tubes as starter kits, as mentioned), UPS backup 2 hrs and colored printer
8.	**Lyophilizer**	1. Chamber made of stainless steel **with Clear acrylic** Cold Trap lid. **2.** Trap Chamber Volume : Not less than 6 liters in 24 hrs **3.** Lowest Temperature : **-80ºC** **4.** Drain : **Silicon hose** **5.** Defrost : **Manual ;** Display : **LED / 0.1ºC increment** 6. Manifold for Lyophilizer – 6 Port – 1 set **7. Stainless Steel Manifold with 6 X 3/4" Individually valve controlled Manifold Ports with Rubber Valves to accommodate Round Bottom Flasks, Ampoule Manifold etc** 8. Vacuum Pump – 100Ltrs. **9. High Vacuum Pump: Double Stage.** **10. Pump Capacity : 100 ltr** **11. Fitted with Ballast Valve (to avoid undesirable Condensation) and Anti Suck Back Valve (to avoid oil rush to system.)** 12. Mini Speed Vacuum Concentrator **13. Inbuilt pre freezer with spinner** **14.** Rotor : **2.0ml x 20 hole (Anodizing)** **15.** Speed Control : **0 – 2000rpm ;** Heat Control : **Amb. +5ºC - +65ºC** **16.** Vacuum pressure gauge: **0 – 76cm Hg.** **17.** Chamber : **SUS with Teflon coating;** Lid : **Clear acrylic lid** **18.** Speed : **Max.2000 rpm ;** Vacuum Concentrator : **Id-10mm / od-19mm**

Tender Group – ObsGynae

1.	**Video Colposcope/Colposcope**	1. Digital video colposcope work station should be compact on a movable frictionless & sturdy trolley. 2. This should have hand held camera probe with vertical or swing arm stand. 3. Probe should have i) Digital video camera of high resolution & auto white balance & auto zoom with feather touch controls ii) High speed autofocussing with manual work options. Zoom should adjust automatically to image & ambient

		light when camera or the object moves. Manual adjustment should also be there. iii) Inbuilt green filter iv) Varying magnification 5x25x v) Freezing & defreezing button (feather touch) vi) Should have Video capture technology in the monitor itself. vii) Light source – halogen, xenon or LED source with minimum luminiscence – 2-4 lux with fiber optic viii) Image management software system workstation, providing recording and storage facilities, mounted on frictionless wheeled trolley. ix) Colored printer. 4. Continuous voltage transformer. N.B should have Recent ISO certification
2.	**Cardio-Toco-Graphy (CTG) machine/NST Machine**	**CARDIO TOCOGRAPHY MACHINE (CTG MACHINE)** 1. The unit should be suitable for use in labor rooms for the continuous monitoring of fetal heart and uterine activity and should be portable for community monitoring. 2. The unit should operate on AC mains supply of 230V+/-10%, 50Hz. 3. The ultra sound transducer should have multi crystal array of 7 crystals with a frequency of 1.5MHz. 4. The unit should be isolated from the patient and leakage current should be less than 10 microamperes. 5. It should be suitable for printing on unprinted thermal paper, to ensure perfect alignment of the trace of the graph. 6. The unit should comprise of a high – resolution thermal printer, which is capable of recording fetal heart rate and uterine activity, and paper speed should be available with options of 1 cm, 2 cm or 3 cm per minute. 7. The unit should be supplied with the following sensors/transducers to sense the activities mentioned above. a) Doppler ultrasound fetal heart detector b) External tocography input c) Patient event marker 8. The fetal movement should be recordable automatically and by mother through a separate hand held device. 9. The unit should have an audible and visual fetal heart rate signal facility with adjustable volume control. 10. The unit should have the following features a) Power on/off switch b) Digital display of fetal heart rate c) Controls for recorder d) Contractions base line to be set at e) Trace annotation controls. 11. It should have Bradycardia, Tachycardia and loss of contact display alarms. The alarms should have 3 settings – audio, silent and off. 12. The unit should be capable of being upgraded to an Intrapartum and ultra uterine pressure-monitoring mode. 13. The unit should be capable of monitoring twin foetuses when coupled with another similar unit with appropriate cable. 14. When monitoring twins, it should be capable of printing distinct traces for each foetus without overlapping. 15. The offer should include all standard accessories such as transducers/sensors, patient cables, connections, elastic bands etc necessary for the operation of the unit. 16. It should have colour coding system for transducers and matching sockets. 17. The unit should have paper out sensor. 18. The unit should have compact water resistant transducers with soft stretchable belt.

		19. The unit should be portable with weight less than 5 kg & capable of being used on table top, trolley, wall mounted or be suitable for carrying around in a carry case. 20. The unit should have Comprehensive Warranty 21. The unit should be as per recent ISO Certification (9002-2001)

Tender Group – Path

1.	**UV-VIS Spectrophotometer with temperature control and data management system**	- Microprocessor based double beam/array based UV-VIS spectrophotometer for photometric analysis (Absorption & Transmittance), Spectral analysis, Quantitative determination, Time scan, DNA/ protein quantitation in stand alone and PC mode - Peltier based temperature control Temperature range 15- 40^{O} C - High resolution LED/LCD display with dedicated key pad - Wavelength range 190- 1100 nm - Spectral bandwidth1.0 nm over complete range - Wavelength accuracy ≤ ± 0.2 nm for entire range with automatic wavelength correction - Wavelength reproducibility $\pm$ 0.1 nm - Photometric range: Absorbance: - 1.0 to +4.0; Transmittance: 0 to 100% - Photometric accuracy $\pm$ 0.001 - Photometric repeatability $\pm$ 0.001 and 0.10% T - Noise level ≤ ± 0.001 - Baseline flatness ≤ 0.001 abs (190- 1100 nm) - Baseline stability < 0.01 abs per hour - Scanning speed 3000nm or more to 2nm per minute - Light source: Halogen lamp and deuterium lamp (extra one lamp each in addition to the installed one), auto- switchover according to wavelength - Built in validation, calibration and diagnostic program - Compatible quartz Cuvettes: 1 ml and 3 ml (additional six pieces each) - PC Interphase: RS-232 - Application software for DNA/RNA/Protein analysis - Branded computer: Intel Core i5 processor, 8GB DDR3 RAM, 1TB HDD, two or more USB ports in front and and four at back, Internet keyboard, optical mouse, 17 inch LCD colour monitor, compatible latest Windows , MS office and antivirus software, Pen drive- 16GB (2pc), Branded laser printer (B& W) at least 20 ppm - Compliance certificate, Catalogue and operating manual - 2.0 KVA ONLINE UPS with half an hour backup
2.	**Grossing Station**	1. Unit should be made up of Hospital grade Stainless steel (type 304), material thickness 1.5mm, table plate 2.0mm, with convenient assembly 2. Unit should contain acrylic side splash shields 3. Elevating unit should have a user-adjustable work surface height 4. Large deep sink, at least 19" (48 cm) L x 14" (36 cm) W x 10" (25 cm) D 5. Should include hot/cold water fixture with foot control and swing spout faucet 6. Should include built-in table rinse 7. Should have disposal facility

		8. Removable polyethylene cutting board – at least , 23" (58.4 cm) L x 16" (40.6 cm) W x 3/4" (2 cm) H should be included 9. Unit should be supplied with adjustable bellows for connection to exhaust ventilation and with filters for formaldehyde fumes 10. Should have formalin dispenser 11. Drainage system, circulating cold water underneath the perforated work area, with cut off valve 12. Options to fit camera and monitor 13. Digital Camera- high quality, Capable of at least 14 megapixels, at least 18X optical zoom, capable of clicking specimen ~2cm to ~50cm. SD card with at least 1 TB storage, 14. Option of vacuum breaker protected water supply should be there 15. Unit should be provided by integrated centimeter ruler on the front of table with magnetic instrument bar and paper towel dispenser 16. Energy saving, long life LED lights. Light should fall directly on work surface 17. Total 6 sets of replacement filters which are to be changed annually 18. All appliances should be plugged directly into the unit for the convenience of the user 19. Unit should be European CE/USFDA certified product 20. Exhaust duct connection: at least 8" diameter stubs with flexible ducting 21. Power supply 230 V / 50/60 Hz
3.	**Automated Liquid Based Cytology System**	1. The system should work on the principle of liquid based cytology. 2. The system should be FDA approved. 3. System should be able to prepare slide for cytological examination from cervical smears, Body fluids, Urine and CSF. 4. The system should be capable of providing complete solution of automated slide preparation and automated staining for both gynaecological and non gynaecological workload. 5. System should be able to provide atleast 25 unstained smears for cytological examination within one hour. 6. All the accessory equipments like centrifuge, sample racks, vortex mixer, pipettes and ancillaries required for making a smear should be provided along with the equipment. The same will also be maintained by the equipment manufacturer. 7. The preservative fluid for liquid based sample collection must be non hazardous and easy to transport and store with shelf life of at least 6 months to the end user. 8. The system should be capable of preparing thin layered slides within a standardized smear diameter from the specimen for easy an analysis and interpretation. 9. The sample collection system should be capable of use with various methods of specimen collection system like brushes, spatula and endocervical brushes. 10. The system should provide smears compatible with ancillary tests like immunohistochemistry and HPV DNA testing. 11. The system should be robust and capable of running at regular electric requirements as in India. 12. Onsite training for system operation and maintenance for technical staff. 13. One hour power backup facilities must be provided along with the equipment. 14. Diagnostic kits manufactured by the same company as that of the autoanalyser should only be quoted. For every diagnostic kit, number of test/pack size needs to be specified. In case of discrepancy more than 5% company would be responsible for replenishing the additional reagents. Rate of all diagnostic kits and consumables needs to be provided separately and fixed for a period of 3 years. 15. The company will quote separately for the following: **a)** Cost of the equipment. **b)** Diagnostic kits for the tests to be performed 2000 Gynaecological and 2000 non-gynaecological smears. **c)** Company will provide comprehensive warranty for 5yrs from the date of installation. The warranty will cover on site

		replacement/repair of all spares/consumables other than those mentioned in Sr no 14
4.	**Ultrapure Water Purification System**	1. Integrated ultrapure water purification system which gives Type I and Type II water 2. System should consist of pre filtration unit, RO cartridge, Electrode ionization unit, polishing cartridge along with storage 30 L or more capacity PE tank and a direct ultra pure water purification unit 3. The EDI module should have auto-regeneration by a weak current and should not require softening pre treatment 4. The quality of water should be suitable for use in HPLC,GC-MS and molecular biology 5. The equipment should have provision to divert low quality water to the drain 6. Flow rate type I – 0.5 to 1.0 L/ min; type II- 150-200 ml/ min 7. Output quality – ultrapure : 18.25 Mega Ohm 8. TOC (µg/l) < 20 ppb 9. Bacteria count (cfu / ml): <1.0 10. Particulates (size > 0.22µm): < 1/ml 11. Pyrogens (EU/ml): < 0.001 12. RNase (ng/ml): < 0.01 13. DNase (pg/µl): < 5 14. Alarm for filter replacement 15. Compliance certificate, Catalogue, User manual 16. Quality certification: System should have EU, CE and ISO certification
5.	**Automatic Tissue Embedding Centre**	Should be fully Programmable, automatic on/off , two console unit, one heated paraffin dispensing unit and another cryo console with cooling plate 1) Paraffin dispensing Unit Capacity of Paraffin Tank:- minimum 3 litre Capacity of Thermal Chamber for storage of cassettes: approx 100 cassettes Temperature range of Paraffin tank: 50-70 degree Temperature range of Thermal Chamber ; 50-70 degree Temperature range of Hot Plates & forceps wells : 50-70 degree Temperature range of Cold Plate- around -5 degree C Connection for Electrically heated forceps Six heated wells for normal forceps (approx 70 degree C), 3 on either side of the wax dispensing line Precisely metered and adjustable gravity feed paraffin dispenser to deliver the right amount of paraffin Finger touch Plate and foot switch for control of paraffin flow Large warm working surface on either side for min 10 cassettes on each side Heated removable paraffin waste tray Automatic starting time Control Panel must have 2 line LCD display and easy navigation through the menu with help of simple touch key buttons Should have a magnifying lens adjustable in any position large cold spot and illumination for specimen orientation 2) Cold Console Capacity of freezing up to 60 blocks at a time Temperature range of cold plate : 0-10 degree c, adjustable in steps of 1 degree C The system should work on 220-240 v, 50Hz should use CFC free gas and must have ISO 9000/01/02 certification Service for five years exclusive of spare part Replacement
6.	**Semi Automatic Rotary Microtome**	1 Semi-automatic rotary microtome along with manual operation having microprocessor controlled panel, ergonomic tabletop compact equipment. 2 Precision machine suitable for both delicate as well as hard tissue sectioning.

		3 Mechanical automated feeding system with stop function to allow the specimen in a defined feed position 4 Integrated lockable hand wheel capable of being locked in any desired position. Adjustable hand wheel balance system 5 Coarse- feed wheel to support fatigue- free sectioning 6 Vertical stroke- minimum of 55 mm, and maximum of 70mm 7 Specimen orientation system with calibrated control-XY- Axes: 8 degree and Z axes- 360 degree 8 Minimum horizontal Specimen advance of 25mm 9 Locking system to lock in any position 10 Should facilitate specimen size upto 50x50 mm with standard object clamp 11 Stable blade holder to ensure that no vibrations occur while sectioning 12 Specimen retraction of varying microns, should occur in return stroke facility 13 Section thickness via precision stepping motor from 0.5 to 100 microns 14 Trimming thickness up to minimum 100 microns onwards with provision of step trimming 15 Specious removable section waste tray for easy cleaning 16 Universal knife holder base and knife holders for both high and low profile disposable blades 17 Control panel with LED digital display of section thickness, trimming thickness and cutting strokes 18 Spare low and high profile blades in dispenser packs of 50blades: 20 packets each 19 Microtome lubricant oil- 5 bottles 20 Standard tools and accessories required for the working of the equipment 21 A list of installations along with the certificate of satisfactory working and after sales service to be provided preferably from teaching medical colleges/hospitals/research institutes of state or central government. 22 The system should be USFDA and/or European CE approved model, 230V, 50 Hz, with Indian power plugs. 23 Five year warranty period and 5 years CAMC after expiry of warranty period to be quoted. 24) It should have range of thickness 0.5 um – 100um with following increments a) 0.5 um - 2um, with 0.5 um increment b) 2um - 10um, with 1.0 um increment c) 10 um - 60um, with 2.0 um increment d) 50 um - 100um, with 5.0 um increment
7.	**Digital Laboratory pH meter**	1 Bench top compact instrument 2 pH range: -2.000 to 20.000 3 pH resolution: should be capable of variable setting: 0.1, 0.01 and 0.001 4 pH relative accuracy: ±0.002 5 pH calibration points: at-least 3 6 Buffer recognition: both automatic and manual 7 Automatic temperature compensation 8 Display of stability sign with result 9 Operating temperature range: 5 to 45 degrees C 10 Relative humidity range: 5 to 60% 11 Should be capable of data export by USB/Ethernet 12 Should be CE / equivalent compliant 13 Should be accompanied by test /performance certificate 14 To be supplied as complete unit, including electrode stand/arm, base, display area, digital keypad and universal adapter or any other part so that the instrument is fully functional at the time of installation 15 Should be accompanied by universal adapter if required for equipment function 16 Should be accompanied by specific cover for the machine

		17 Set of compatible buffers of pH 4, 7 and 9/10 – minimum 100 mL each should be supplied as essential accessories 18 warranty for complete equipment including electrode, universal adapter
8.	**Deep Freezer – 86 ^{0} C**	- Upright, model - Temperature range - minus 50^{0}C to minus 80^{0}C - Digital display of temperature - Double door system or separate doors inside - Double walls for insulation - CFC free refrigeration - Inside chamber capacity – more than 500 litres - Minimum of 3 shelves - Audio and visual alarm in event of power failure, high or low temperature - Preferably frost free - Integrated lock system - Suitable to work on 220-230 V, AC supply - ISO certified - Pull down time of <5-6hours - In case of power failure chamber temperature to be maintained for minimum of - Preferably on board data logging - Optional LN_2 and CO_2 Back up system - 5 KVA servo voltage stabilizer
9.	**Tissue Floatation Bath**	1. Inner tank (Single piece) made of black anodized aluminum. 2. Housing made of powder coated aluminum. 3. Front panel should consist of temperature regulator knob, mains switch and pilot lamp. 4. Inside black and outer surface should be finished in powder paint, with wide enough rim for drying the wet slides. 5. Thermal loss should be prevented by Insulation in space between the outer body & inner tank. 6. Heating elements should be positioned in the floor and side walls providing better temperature distribution in the bath. 7. Temperature should be controlled by thermostat, from ambient to at least 60^{o}C with an accuracy of +2^{o}C. 8. Should be supplied with Dust Guard Lid made of anodized aluminum.
10.	**Binocular Microscope**	OPTICAL SYSTEM INFINITY CORRECTED OPTICAL SYSTEM MAGNIFICATION 40x- 1000x FOR OBSERVATION. EYEPIECE TUBE INTERPUPILLARY DISTANCE:47-75mm) with Light Path Selector of 100:0, 0:100) EYEPIECE 10x pair with F.O.V: 20mm or better NOSEPIECE QUADRUPLE NOSEPIECE, REVERSED TYPE. STAGE SHOULD BE REFOCUSING TYPE THE STAGE CAN BE INSTANTLY DROPPED BY PUSHING IT DOWN TO EXCHANGE SPECIMENS OR OIL THE SLIDE, THEN RETURNS TO THE ORIGINAL POSITION AS SOON AS THE HAND IS

		REMOVED. STAGE SIZE STAGE SHOULD BE RECTANGULAR 216 x 150mm SURFACE STAGE MOUNTED ON THE MAIN BODY.STAGE SHOULD ACCOMODATE 2 SLIDES AT A TIME. STAGE SHOULD BE PROVIDED WITH UPPER LIMIT STOPPER. OBJECTIVES OBJECTIVE N.A W.D PLAN ACHROMAT 4x 0.10 30.0MM PLAN ACHROMAT 10x 0.25 10.50MM PLAN ACHROMAT 40X 0.65 0.56MM, PLAN ACHROMAT 100X OIL 1.25MM 0.20MM 40X and 100X should be SPRING-LOADED and values of WD is Approximate 02 microscopes with 20x objective lens (N.A. 0.40 /W.D.-0.17)IN ADDITION IS REQUIRED CONDENSER ABBE CONDENSOR ILLUMINATION SYSTEM 6V – 30W HALOGEN BULB PRECENTRED AND PREFOCUSSED. COARSE/ FINE FOCUSING FINE: 0.2mm PER ROTATION, COARSE: 37.7mm PER ROTATION, MINIMUM READING: 2 MICRONS ON LEFT- SIDE FINE CONTROL KNOB. User manual Quality Certification: System should have EU, CE and ISO certification.
11.	**Block Filing Cabinet**	1 Holding Capacity - 20,000 blocks in numerical manner 2 Block type – block embedded in embedding rings/ disposable cassettes 3 Wheels for movement 4 Double door with chrome plated handle and lock 5 Made of aluminium / stainless steel
12.	**Slide Filing Cabinet**	• Holding Capacity - 50,000 slides of size (25x75mm) in vertical position • Wheels for movement • Double door with chrome plated handle and lock • Made of aluminum / stainless steel

13.	**Roto-Scriber for Labeling Glass Slides**	1 Automatic adjustment as soon as it is brought into the writing position 2 Shuts down when released from hand 3 No tools necessary to replace the rotating writing tips 4 Light weight <100g 5 Operating voltage: 12V/AC 6 Current consumption: 400mA 7 Max idle speed- 20000U/min (rpm) 8 Material of housing- Aluminium 9 Surface- Anodised 10 Transformer operated 11 Replacement writing tips- 20
14.	**Non-Motorised Upright Research Microscope along with Fluorescence in-SITU Hybridization (FISH) Imaging Workstation**	**1.** Microscope Stand: **Should have non motorized Z-focus drive with minimum step resolution of 10nm-15nm with touch pad control. 6-8 Position non motorized fluorescence filter turret, 6-7 position non motorized nosepiece facility with slot for DIC.** **2.** Observation Tube: **Trinocular Observation tube with inclination angle of 15- 30 degree; field of view minimum 22mm or more. Dual mounts to mount monochrome for FISH and colored CCD Camera for regular imaging Three way light distributions of approximately 100:0/20:80/0:100.** **3.** Condenser **:Swing-out Fully non motorized condenser suitable for all magnifications should be provided** **4.** Revolving Nosepiece: **Non Motorized nosepiece with a slot of minimum 6-7 positions with DIC slot should be provided** **5.** Eyepieces: **Paired Widefield Eyepieces of 10X with minimum field of view about 22mm or better, focusable & adjustable diopter setting should be provided.** **6.** Illumination: **12V 100W transmitted Halogen illumination. (Provide five nos. of spare bulb** **7.** Objectives: • Plan Apochromat 4X/5X NA 0.16-or better • Plan Apochromat 10x/ NA 0.40 or better • Plan Apochromat 20x/ NA 0.75or better (Spring) • Plan Apochromat 40x/ NA 0.90 or better (Spring loaded preferably) • Plan Apochromat 60x or 63x / NA 1.35 or better (Oil, Spring) • Plan Apochromat 100X/1.40 or better (Oil, Spring)

		8. Non Motorized Stage: **X-Y Non Motorized Scanning stage with Adapter for (8-9 slides at a time or better** **9.** Fluorescence Illumination: **should provide high Intensity 130W Mercury or 120W metal halide Illumination. The light source should be fiber coupled to the microscope with lifespan of minimum1500-2000 hrs. Shutter should be standard** **10.** Fluorescence Filters: **Complete fluorescence filter set for all FISH Applications** **(a)** One complete filter block for DAPI (b) One complete filter block for FITC (c) One complete filter block for TRICTC/ TxRed (d) One complete filter block for FITC/TRITC/DAPI (Tripple Band) (e) One complete filter block for Gold (f) One complete filter block for Spectrum Aqua All the filters should be narrow band pass filters of very high quality and efficiency. There should be position for normal bright field microscopy 11. Color CCD Camera: • Digital CCD camera with high sensitivity and low noise. • Chip size should be 2/3” • High resolution of 1360x1024 pixels with pixel size of 6.45 x 6.45um • Digitization depth – 12 bit • Frame rate of 15- 17 frames per second (fps) in full resolution • C-mount adapter 1X 12. Monochrome CCD Camera: • Digital CCD camera with high sensitivity and low noise. • Chip size should be 2/3” • High resolution of 1360x1024 pixels with pixel size of 6.45 x 6.45um • Digitization depth – 12 bit

		• Frame rate of 15 -17 frames per second (fps) in full resolution • C-mount adapter 1x **13.** Automated FISH Spot Scanning System with Analysis Software Database Management Software Database Management Software should be a modern paperless laboratory design management software. As a powerful search tool to filter specific cases and cells by any field and/or subtext. A flexible image gallery for viewing of all case images. Support multiple languages, Thumbnail images of RAW, Processed FISH or completed images should be seen in database, generate highly configurable customized reports (Word/PDF). • FISH Spot Scanning Analysis- Up to 12 fluorochrome channels per image, Handles interphase and tissue samples with two, three or more probes, Extended focus image generation from focus image series, Spot counting facility and advanced algorithms for classification of cells based on signal with static data. Exporting 3D scanned data for external 3D analysis and visualization. Full toolset for validation of slide statistics and results.Accurate signal count even on signal clusters. Capability to analyse additional fields even after scan is finished. Automatic Image exposure and enhancement, together with the auto-conversion of image sequences at various focal planes (3D Z- Stacking).Automatic background, contrast, brightness, focus and sharpness adjustments, to enable optimal display of the faintest signals in a few seconds. Integrated quantitative signal and objective analysis module. Cell or object segmentation, followed by morphology and intensity analysis to extract the exact data required. **14.** Workstation: **Computer workstation, intel xenon Processor, 3.6 GHz with minimum 32 GB RAM, minimum 2 TB HDD, 1GB Graphic memory, 27 inch TFT screen ; should be Compatible to the system should be provided. UPS for computer, original licensed preloaded MS Office and windows 7 professional 64 bit, Antivirus, Laser color Printer, External 1TB portable hard disk.** **15.** Secondary Hard Disk: **Internal Secondary Hard Disk capable or mirroring and backing up Data** **16.** UPS: **3- 4 KVA Online UPS with 60 minutes back up should be provided** **17.Power Supply : Capable of working on 220-240 volts/50 Hz. All required adapters should be suppled free of extra cost. Good quality hospital grade Indial pugs should be given** **18.** Printer: **All-in-one color laser printer should be provided** **19.** Certificates: **Complete hardware system should be CE/FDA certified.** **20**. Mounting Table: A glazing granite table top strong enough should be supplied for adequate installation. Enough open space should be available for writing purpose. Price of installation table should not be separately quoted 21. Accessories: Halogen Bulbs (5); Lens cleaning paper (10 packs); metal halide bulb, 120 W or mercury 130 W (One) ; Immersion oil ,fluorescence free for fluorescence microscopy (one 475ml). All these should be provided free of

		cost. unit rates of all consumables should be quoted separately, which will be valid for 5 years 22. Kindly quote prices for following items separately which will be valid for 5 years • Complete fluorescence filter set for all FISH Applications. Price for each filter should be quoted separately • Complete Review station for FISH spot counting analysis with latest computer and high resolution monitor 23. Onsite training by trained service engineer and application scientist to be provided free of cost for at least 7 sessions/ 2weeks 24. FISH software upgradation : It should be done free of cost during warranty and AMC period 25. Warranty & CMC: 5 years Warranty and 5 years AMC/CMC to be provided. 26. Penalty clause: In no case the instrument should remain in non-working condition for more than 2 days, beyond which a penalty of 2% of machine cost will be charged per day. 27. The vendor should have a good service and application support backup along with instruments to provide an effective application related trouble shooting and support (Response time <24 hours). 28. All technical bids comparative statement to the tender specifications must be enclosed along with the reference page no. paragraph no. from the original catalogue of equipment. The bid for the particular equipment may be summarily rejected in case bid fails to provide compliance statement with its reference from the catalogue. 29. Onsite demonstration of instrument from bidding firms should be provided if required 30. Undertaking from the specifications committee stating that the specifications are broad based, general in respect to the requirement of instrument and not made to suit any particular firm or brand **NOTE** 1) Installation of equipment must be done by principals engineer to qualify the quality standards as per manufacturer at n additional cost 2. Penalty clause would be applicable if the vendor fails to deliver the equipment ordered within specified time as appropriately decided by the institute at rate decided by purchase committee.
15.	**Refrigerated Centrifuge**	1. Microprocessor controlled Refrigerated Centrifuge 2. Table top model with digital display 3. Swing out rotor 4. Temperature range- 2^0C to 4^0C 5. Maximum speed- 5000 rpm 6. Capacity- 8 x 50 ml round bottom tubes with adaptor for 16 x 10 ml tubes 7. Inner protection lid for sealing rotor to prevent spilling 8. Diagnostic digital display for errors (imbalance/ lid locket etc)

		9. Power 220 V ± 10 V 10. Comprehensive onsite warranty for five years 11. Compliance certificate, Catalogue, User manual 12. Quality certification: System should have EU, CE and ISO certification

Tender Group – MIU

1.	**Plotter Printer**	• Capable of borderless printing large poster on Roll Paper and Water resistant Cloth Media (Cotton-Polyester) (upto A '0" size) • Roll paper size 20 inch to 44 inch wide • PC Compatible – Window XP/7/8 • Resolution 2400 x 1200 dpi or more • Ten or more colour printing with individual high capacity (300ml or more) pigment ink • Speed : Economy mode – 10 or more sq. meter/hr • Memory: 256 MB ore more • Connectivity: Parallel and serial high speed USB • Essential accessories – - Essential software for best quality printing - Operating Manual/CD • Power: 220 ± 20 volts • Voltage Stabilizer – 1.0 KVA (Branded)

Tender Group – Ortho

1.	**-80 ^{0} Electrical Freezer**	Upright freezer, 20.0 cu ft. 230v 50 hz Technical specifications: Capacity: 550 -570 L; 20 cu ft. Temperature range: programmable Temperature range from -50 to -86^{o} C in 1 deg increments, even at ambient temperature up to 32^{o}C Control: microprocessor control of temperature and alarms with non-volatile memory Cascade refrigeration: hermetically two sealed two stage cascade system with capacity to cope in high ambient conditions Insulation: polyurethane foam, around 5"- 5.1", 110 - 130 mm thick. Chamber: latch able inner door to minimise cold air loss when external door is opened and reduce power consumption to maintain temperature Shelves: 4- 5 compartment with 3-4 adjustable height. Corrosion resistant Stainless Steel Shelves. Security: keyed locks on outer doors and lids to keep out un-authorised users Power: on and off switch is located behind locked door panel preventing power from being accidently turned off Battery backup: activates alarm and displays temperature during power outage Online power backup which provides power supply for minimum 2 hours in case of any emergency power cut. Alarms: audible and visible alarms for temperature filter clean, power out, low battery, system fail, and fault analysis. Diagnostic software, built into the front control panel, assist trouble shooting fault condition.

		Door seal: inner door fitted with low temperature safe silicone seal to prevent temperature loss when opening outer door Outer door: fitted with low temperature safe silicone triple point seal, providing tight fit Filter: Reusable filter rinse clean. Electric Power: Programmed start up: random start up times have been programmed, 1-1.5 minutes apart, preventing power supply overload should multiple freezer restart simultaneously following a power failure. Certification: Should be CE/ FDA certified Ambient condition: engineered to maintain internal temperature of -86^{o} C, even when operated in ambient temperature condition of up to 32^{o} C.
2.	**Cell Separator**	Double spin bone marrow aspirate cell separator. CE / USFDA approved company Disposable kit compatible with the double spin bone marrow aspirate cell separator having bone marrow aspiration cannula, set of syrines for aspiration and transfer and processing and use. Containers for spinning the aspirate, filters, reagent rack, and other accessories for processing the BMA

Tender Group – Ophthal

1.	**Virtual Reality Surgical Simulator**	• Model eyes with stand • Simulator • Cataract eye interface, cataract instrument set • Simulation environment configurable for superior or temporal access to the eye • Vitreoretinal eye interface, instrument set for training of posterior segment surgery (optional) • Training modules, updated from time to time (optional) • Software, updated from time to time (optional)
2.	**Virtual Reality Direct Ophthalmoscopy Simulator**	• Model eyes • Simulator with provision for wide range of clinically relevant retinal conditions and normal retina • Motorised platform (Optional) • Training modules, updated from time to time • Software, updated from time to time • Compatible direct ophthalmoscope
3.	**Virtual Reality Indirect Ophthalmoscopy Simulator**	• Model eyes • Simulator with provision for wide range of clinically relevant vitro- retinal conditions and normal retina • Motorised platform (Optional) • Training modules, updated from time to time • Software, updated from time to time • Compatible indirect ophthalmoscope
4.	**Farnsworth Munsell 100-Hue test**	• Trays containing 85-100 removable color reference caps (incremental hue variation) spanning the visible spectrum • Carrying case • Test Scoring Software • Computer: MAC or Windows

		• Compliance with ISO and other quality system requirements
5.	**ETDRS Chart**	• Include Illumination Box - one per chart • 4 meter range • Revised 2000 series • Translucent
6.	**Distance Randot Steroacuity test**	Booklet — 4 tests in 1 booklet Range — 400 sec of arc to 60 sec of arc Standard 3-D Viewers — One pair Pediatric 3-D Viewers — One pair
7.	**High-Definition Document Camera**	• High definition high output resolution • Zoom ≥16x • Professional image sensor to deliver colours at high definition and high resolution image, single and continuous image capturing, image rotation possible • Transmit image in real time without delay • Internal memory ≥ 240 images, expandable to 32GB • Compatible with USB flash drives • One-touch synchronous audio/video recording • Jointless, highly flexible gooseneck, 3600 viewing angle • Close up upto 3cm possible for fine details • Adjustable side lamp to prevent reflections • Built-in microphone • Built-in power supply • Compatible with interactive whiteboards, PC and Laptop • Wired / wireless mouse • LED lamps • Standard accessories • Compatible software, updated from time to time
8.	**Fly Test for Steroacuity**	• For stereo acuity testing. • Original booklet (Fly Test). • Original polarised glasses.