

## INVITATION FOR QUOTATION

**HSCC/PUR/KCGMC/Low Value/Medical College Items/2017/MC-Feb (3)**

**Dated: 20<sup>th</sup> February, 2017**

**To**

**All Bidders**

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**Subject:** Invitation for Quotations for supply of Low Value Items for Various Medical College Departments of Kalpana Chawla Medical College, Karnal, Haryana.

Dear Sirs,

1. HSCC (India) Ltd. for and on behalf of Director General, Medical Education & Research, Panchkula, Govt. of Haryana invites your most competitive quotation for the following goods of the respective Departments are details below:

**Annexure - I (Including name of items, Specification and Quantity)**

- (I). Department of Pathology
  - (II). Department of Microbiology
  - (III). Department of Pharmacology
2. Quotation:
    - 2.1 The contract shall be for the full quantity as described above.
    - 2.2 Corrections, if any, shall be made by crossing out, initialling, dating and rewriting.
    - 2.3 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
    - 2.4 The unit price/ rate of the item should be clearly indicated in the tender. Rates /Prices quoted shall be Inclusive of all taxes, duties, forwarding, and insurance & transportation up to the destination, Kalpana Chawla Medical College – Karnal.
  3. Each bidder shall submit only one quotation.

4. Evaluation of Quotations:

The Purchaser shall evaluate and compare the quotations determined to be substantially responsive i.e. which;

- 4.1 are properly signed; and
- 4.2 confirm to the terms and conditions, and specifications.
- 4.3 final considerations of equipments shall be based on the quality of equipments during demonstration / inspection.

5. The Quotations would be evaluated item wise.

6. Award of contract:

- 6.1 The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest rate for the item subject to quality of the items during demonstration / inspection.
- 6.2 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and cancel the bidding process and reject all quotations at any time prior to the issue of Purchase Order, without assigning any reason.

7. Delivery period shall be within **07** days from date of placement of order.

8. Payment shall be made only in Indian Rupees as follows:

**Satisfactory Acceptance and delivery - 100% of total cost**

100% Payment on submission of following documents (Duly signed & stamped at your end):-

- Copy of Purchase order.
- Consignee receipt in original issued by KCGMC/HSCC
- Invoice in favour of consignee/Director, KCGMC, Karnal through HSCC (I) Ltd
- Warranty Certificate in original.

9. All supplied items shall be under warranty of **12** months from the date of successful acceptance and date of delivery of items.

10. You are requested to provide your offer as follows:

<b>Sr. No.</b>	<b>DESCRIPTION</b>	<b>ITEM No.</b>	<b>Closing date &amp; time for submission &amp; receipt of tender</b>	<b>Date and time of Opening of Techno – Commercial Tenders</b>
I	Equipment for Department of Pathology	1 to 9	01.03.2017 at 14:00	01.03.2017 at 14:30
II	Equipment for Department of Microbiology	1 to 24		
III	Equipment for Department of Forensic Medicine	1 to 4		

**NOTE:** (Under any unforeseen circumstances if the due date for submission of Tender is declared as holiday then the tender shall be submitted & opened on the next working day at the scheduled time).

The quotations will be opened in HSCC office, NOIDA as mentioned above in the presence of renderer or their authorised agents as they may choose to attend.

11. Information brochures/ Product catalogue, if any, must be accompanied with the quotation clearly indicating the model quoted for.
12. Sealed quotation to be submitted/ delivered at the address mentioned below:

**General Manager (Procurement)**  
**HSCC (India) Ltd.**  
**E- 6 (A), Sector -1.**  
**NOIDA – 201 301.**

**THE COVER SHOULD BE SUPERSCRIBED WITH THE FOLLOWING:**

Reference to letter of enquiry.  
Due date of opening.  
Serial No of the Items.

13. Quoted amount should be in Indian Rupees only.
14. For all items, the Technical Evaluation Committee may opt for Demonstration of the items. The Committee may also ask for Demonstration / Inspection before supply / delivery of the items for quality assurance.
15. Insurance shall be arranged/borne by supplier.

**Note:** Please indicate the quotation reference no. (Given at the top of page 1 of this letter) and Serial No of the Items on the top of the envelope.

The details of various medical equipment shall be also made available at [www.hsccltd.co.in](http://www.hsccltd.co.in), and modification/amendments etc, if any, shall only be notified on website only.

We look forward to receiving your quotation and thank you for your interest in this project.

General Manager (Procurement)

### I. DEPARTMENT OF PATHOLOGY

SL NO.	NAME OF EQUIPMENT	QTY (Nos)
1	Balance Chemical with Weights	2
2	2x2 Slide Projector	2
3	Overhead Projector	1
4	Microprojection apparatus	2
5	Dark Room Lamp, Developing Troughs Chemical etc for Photo Artist	1 Set
6	CENTRIFUGE HIGHER POWER	2
7	Incubator	1
8	Balances - Sensitive Balance	2
9	Balances – Chemical Balance with Weight Box	2

### VI. DEPARTMENT OF MICROBIOLOGY

SL NO.	NAME OF EQUIPMENT	QTY (Nos)
1	SERUM INSPISSATORS	2
2	ANALYTICAL BALANCE CHEMICAL	3
3	LOVIBOND COMPARATORS	1
4	DISTILLED WATER PLANT	2
5	DISTILLED WATER PLANT ALL GLASS	1
6	STAINING TROUGHES	60
7	ANAEROBIC APPARATUS	3
8	HORIZONTAL GEL ELECTROPHORESIS COMPLETE SET	1
9	B.O.D. INCUBATOR	2

10	ULTRA VIOLET (U.V.) LAMPS	1
11	VENEREAL DISEASES RESEARCH LABORATORY (V.D.R.L.) SHAKER	2
12	OVERHEAD PROJECTOR	1
13	WATER BATH (SEROLOGICAL)	2
14	VORTEX MACHINE	3
15	SPIRIT LAMP	100
16	SLIDE CABINET FOR 1000 SLIDES	20
17	SLIDE TRAY (ALUMINIUM) HORIZONTAL	50
18	MAGNIFYING LENS	6
19	STOP WATCH READING 1/5 SECOND	10
20	AUTOMATIC AIR SAMPLER	1
21	COPLIN JARS	100
22	HOT PLATE WITH DIGITAL DISPLAY	2
23	DIGITAL PH DETERMINATION APPARATUS	1
24	COLONY COUNTER SPECIFICATION (DIGITAL)	1

#### VII. DEPARTMENT OF FORENSIC PHARMACY ITEMS

SL NO.	NAME OF EQUIPMENT	QTY (Nos)
1	Balance Chemical	1
2	Dissection sets	4
3	Microtome with knife	1
4	Instrument Cabinet	2

## I DEPARTMENT OF PATHOLOGY

### 1. **Balance Chemical with Weights**

1. Readability 0.001 to 0.1 gms;
2. Capable of weighing upto 200 gms
3. Electronic Digital display.
4. Overload Protection.
5. Provided with A.C. Adaptor.
6. Matt finish steel pan.

### 2. **2x2 Slide Projector**

Should be complete with linear tray and remote control for focusing and projection screen spring loaded 70' x 50' on Tripod stand.

### 3. **Overhead Projector**

- a. Should have imported halogen bulb double 24v x 250w having desired intensity control switch and motorized cooling system.
- b. Should be equipped with imported double fresnel lens and silver coated mirror for sharp image and free from color aberration

### 4. **Microprojection apparatus**

### 5. **Dark Room Lamp, Developing Troughs Chemical etc for Photo Artist**

## CLINICAL Laboratory

### 6. **CENTRIFUGE HIGHER POWER**

#### *Technical Specifications:*

Original Stainless Steel swing rotor.

Multiple Stainless Steel Brackets for convenient replacing.

Fast acceleration and deceleration function: The fastest acceleration is less than 30 s; the shortest deceleration is less than 35 seconds.

Microprocessor control, LCD, display, driven by DC brushless motor, and ten different programs can be stored.

Electronic door interlock, stainless Steel Chamber.

Specialized button to show RCF during operation. The parameters can be revised freely during a run.

Should be equipped with leading technology of brushless induction motor with frequency drive

#### *Technical Parameter*

Max Speed	6000 r/min
Max RCF	5120×g
Time Setting range	0~99min Short time Centrifugation
The shortest Acc/Dec Time	30/35s

Noise Level	<65 dB(A)
Power Supply	AC 220V 50Hz 3A
Dimensions	370×432×250mm(L×W×H) Appox
Weight	Equal to or Less than 15 kg

### ***Rotor***

No. 1 Angle Rotor	12×15ml
No.2 Swing Rotor	4×50ml
No.3 Swing Rotor	16×15ml
No.4 Swing Rotor	24×5ml

## **7. Incubator**

1. Temperature range of +5 to 80° C
2. Single door with interior glass, exterior stainless steel for a clear view without a drop in temperature.
3. Chamber made of high-quality, corrosion-resistant and easily cleanable stainless steel for the working chamber and housing.
4. Precise and homogenous temperature control independent of chamber volume and load.
5. Forced filter air circulation.
6. No. of shelves: 2-3; Timer: 1 minute to 99 hours
7. Over temperature protection
8. Chamber volume: 80 – 150 litres
9. Temperature Uniformity: ±1°C
10. Temperature homogeneity between top and bottom shelves should be maintained
11. unit should be capable of withstanding continuous storage and operation at ambient temperatures of 0°- 50°C and relative humidity of 15-90%
12. Suitable for input power of 220-240V AC, 50 Hz, fitted with suitable plug for Indian conditions
13. Size 24''x24''x24''
14. The equipment should be BIS/EU/USFDA certified

## **8. Balances - Sensitive Balance**

Electronic weighing with LCD display & complete with metal casing & transparent wind shielded cover.  
Weighing range 1mg – 200gms.  
Reproducibility – 0.1mg.  
Pan size – minimum 80mm.  
Automatic Internal adjustment.  
Electrical adapter for mains 230-240 V / 50-60 HZ. Tare & other adjustments

## **9. Balances – Chemical Balance with Weight Box**

The Chemical Balance for measuring various chemicals etc should be highly precise & to be supplied with various precision weights contained in a box.

## II DEPARTMENT OF MICROBIOLOGY

S.NO	NAME OF THE ARTICLE	SPECIFICATIONS	Qty.
1.	<b>SERUM INSPISSATORS</b>	<p>Serum Inspissators, Inspissator Tank –</p> <p>made of rust-proof stainless steel sheet SS316. Tank capacity – 50-70 liters.</p> <ul style="list-style-type: none"> <li>• Tray also made of stainless steel.</li> <li>• Tray size: 31” x 24” (80x60cm). Outer body: 41” x 26” x 16” (104x65x40cm), having a set of slopes to provide an angle of 8-10 degree to the media containers</li> <li>• A constant water level setup ensuring compensation of evaporation losses.</li> <li>• The total heat up time – 2- 2.5 hours.</li> <li>• Digital controller, with an LED/LCD display to indicate set and actual temperature.</li> <li>• Resolution - 0.1C, uniformity - 0.5-1C and standard working temperature - 85C</li> <li>• Operating temperature range for the inspissator controller - 0C to 100C.</li> <li>• Provision of spare heaters, optional</li> <li>• It should be CE/FDA approved</li> <li>• Training to laboratory personal</li> <li>• Operating and detailed service manual should be supplied</li> </ul>	2
2.	<b>ANALYTICAL BALANCE CHEMICAL</b>	<ol style="list-style-type: none"> <li>1. Description of function <ul style="list-style-type: none"> <li>• Electronic balance is required for precision weighing of Lab samples.</li> </ul> </li> <li>2. Operational Requirements</li> </ol>	3



		<ul style="list-style-type: none"> <li>• Microprocessor based single pan analytical balance with high accuracy and precision is required.</li> <li>• Reading of the weight by digital display.</li> <li>• Electronic top loading balance with transparent case.</li> <li>• The balance should have functions of piece counting, percent weighing, formulation, dynamic weighing with automatic and manual start and provision for data interface.</li> </ul> <p>3. Technical Specifications</p> <ul style="list-style-type: none"> <li>• Weigh accurately up to 3rd decimal place</li> <li>• Fully automatic time and temperature controlled internal calibration and balance should be capable to adjust itself</li> <li>• Auto zero setting</li> <li>• Weighing capacity 0.001- 200g</li> <li>• Readability 0.001gm</li> <li>• Repeatability 1mg or less</li> <li>• Setting time 1.5secs</li> <li>• Suitable for internal and external adjustment weights</li> <li>• Balance should have : facility for user administration and password protection</li> <li>• Balance should have <ul style="list-style-type: none"> <li><input type="checkbox"/> Liquid Crystal Display (LCD) for display</li> <li><input type="checkbox"/> Stainless steel square weighing pan of size 80-100mm</li> <li><input type="checkbox"/> IR sensors for hands free operation</li> <li><input type="checkbox"/> Warns if balance is not correctly levelled</li> <li><input type="checkbox"/> Automatic and detachable draft shield</li> <li><input type="checkbox"/> Detachable and adjustable terminals</li> <li><input type="checkbox"/> Including user administration and password protection</li> <li><input type="checkbox"/> Integrated automatic safety functions for external routine operations</li> </ul> </li> </ul>	
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		<input type="checkbox"/> Alphanumeric data entry of 4ID's System Configuration Accessories, Spares and consumables As specified Environmental factors <ul style="list-style-type: none"> <li>• Shall meet IEC-60601-1-2:2001(or equivalent BIS) General requirements of safety for electromagnetic compatibility.</li> <li>• Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.</li> </ul> Power supply <ul style="list-style-type: none"> <li>• Power input to be 220-240VAC, 50Hz</li> <li>• Suitable UPS with maintenance free batteries with minimum one hr backup should be supplied with the system</li> <li>• Resettable over current breaker shall be fitted for protection</li> </ul> Standards and Safety <ul style="list-style-type: none"> <li>• System should be US FDA or European CE approved</li> <li>• Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450</li> <li>• Should be compliant to ISO 13485: Quality systems-medical devices-Particular requirements for the application of ISO 9001 applicable to manufactures and service providers that perform their own design activities.</li> </ul>	
3.	<b>LOVIBOND COMPARATORS</b>	The comparator should be a compact, lightweight colorimetric unit suitable for both mobile and static water analysis. It should provides the basis for a comprehensive easy-to-use analysis system.  Each CHECKIT Comparator Disc contains a continuous colour scale for exact colour matching between standard and sample. pH value Test range from 4-10.	1
4.	<b>DISTILLED WATER PLANT</b>	1. The complete outer and inner jacket, condenser tubes are made of Stainless steel. 2. The apparatus capable of producing pyrogen free distilled water as per IP/BP standards. 3. The instrument should have low water cut off device,	2

		<p>water level indicator and control panel.</p> <ol style="list-style-type: none"> <li>4. Capacity : 5-6 ltrs/hr.</li> <li>5. Chamber -: Stainless Steel 304 quality.</li> <li>6. Air Heater: should have ISI Mark.</li> <li>7. Heat up Time: 20- 30 min. from Ambient.</li> <li>8. Mounting: Clamp for wall mounting.</li> <li>9. It should have BIS or CE or ISO certified.</li> </ol>	
5.	<b>DISTILLED WATER PLANT ALL GLASS</b>	<p>All glass- double distillation unit, Horizontal type</p> <ul style="list-style-type: none"> <li>• Capacity- 4 liters</li> <li>• With Borosilicate boiler, borosilicate condenser &amp; replaceable silica heater</li> <li>• Automatic low level water cut off device</li> <li>• With Accessory: RO System</li> </ul>	1
6.	<b>STAINING TOUGHS</b>	Made of stainless steel, approx. size: 60 x 30 x 10 cms.	60
7.	<b>ANAEROBIC APPARATUS</b>	<p>Should be Transparent unbreakable jar with 3.5 Liters capacity</p> <ul style="list-style-type: none"> <li>• Sturdy lid, clamp and sealing ring with built in safety features.</li> <li>• System with compound gauge.</li> <li>• Supplied with Stainless steel Petri-plate carrier, stainless steel test tube carrier and gas pack pkt.</li> </ul>	3
8.	<b>HORIZONTAL GEL ELECTROPHORESIS COMPLETE SET</b>	<ol style="list-style-type: none"> <li>1. Should have reading capability of 1 to 96 wells individually. Should have 10-15 and 25-30 wells. All combs of 1mm thickness.</li> <li>2. Should have a linear measurement range of 0 to 3.000Abs.</li> <li>3. Should have wavelength range from 340 to 750nm.</li> <li>4. Should have a photometric accuracy of <math>\pm 2\%</math> or better.</li> <li>5. Should have a resolution of 0.001Abs.</li> <li>6. Should have variable speed plate shaking capability.</li> <li>7. Should have easy access 8 position filter wheel</li> </ol>	1

		<p>8. Machine should be supplied with at least 6 standard filters.</p> <p>9. Should have automatic filter selection.</p> <p>10. Should have automatic calibration before each reading.</p> <p>11. Should have at least 6 second reading speed.</p> <p>12. Should have facility for storage of calibration curves.</p> <p>13. Should have different types of blanking facility like air wise and well wise.</p> <p>14. Should be capable of reading U.V and flat type wells</p> <p>15. Should use halogen light source and two spare bulbs should be provided.</p> <p>16. Should have internal thermal printer and 5 rolls of thermal should be supplied along with the unit.</p> <p>17. Should have external printer connectivity option.</p> <p>18. Firm will have to supply compatible UPS with minimum half hr backup along with the equipment free of cost.</p> <p>19. Original literature of equipment and consumables should be submitted.</p> <p>20. User's list should be attached with satisfactory report for the last three years from three blood bank users with contact details.</p> <p>21. Demonstration of performance of equipment is compulsory in nearby area for technical evaluation failing to which will be a disqualification.</p> <p>22. System should be USFDA or European CE approved. Also the system should be IVD approved</p> <p>23. Electrical: The equipment should be able to run on the existing electrical provision</p> <p>24. B) ELISA Plate Washer</p> <p>25. Should have capability to wash flat, U or V bottomed micro plates or 8 or 12 well strip plates.</p> <p>26. Should have 8 or 12 way manifold</p> <p>27. Should have programmable washing time, volume and soaking time.</p>	
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		<p>28. Should have minimum 6 wash cycles.</p> <p>29. Should have continuous operating cycle.</p> <p>30. Should have residual volume less than 2µl.</p> <p>31. Should have removable and autoclavable plate carrier.</p> <p>32. Should have in-built vacuum and dispensing pumps to ensure accurate and quite washing.</p> <p>33. Should have waste bottle with full bottle alarm or sufficient mechanism to avoid spillage and damage to equipment</p> <p>34. Should work with input 200 to 240Vac 50 Hz supply.</p> <p>35. Should be European CE or US FDA or BIS approved product.</p> <p>36. Firm will have to supply compatible UPS with minimum half hr backup along with the equipment free of cost.</p> <p>37. Original literature of equipment and consumables should be submitted</p> <p>38. User's list should be attached with satisfactory report for the last three years from three blood bank users with contact details.</p> <p>39. Demonstration of performance of equipment is compulsory in nearby area for technical evaluation failing to which will be a disqualification.</p> <p>40. Electrical: The equipment should be able to run on the existing electrical provision</p>	
9.	<b>B.O.D. INCUBATOR</b>	<ul style="list-style-type: none"> <li>• Double walled construction, inner chamber stain less steel, inner glass/ transparent door</li> <li>• Facility for adjustable shelves to convenient heights, 10 removable shelves of stainless steel/ anodized aluminum to be supplied.</li> <li>• Interior lighting facility, insulated door fitted with heavy hinges handles locking, mechanical door lock.</li> <li>• <b>Should be capable of operating at Temperature range 5° to 50°C with accuracy +/- 0.5°C high quality, environment friendly refrigerant for a long time. relative humidity of 15-95%.</b></li> <li>• Independent temperature measuring through PT 100</li> </ul>	2

		<p>sensor with indicator LCD display</p> <ul style="list-style-type: none"> <li>• Recovery time short, precise regulation of temperature and acoustic alarm.</li> <li>• Digital safety thermostat (class 3)</li> <li>• Adjustable ventilation rate 10 – 100% thin form air circulation.</li> <li>• <b>Size of inner chamber approximately 50x60x50 cm.</b></li> <li>• All consumables required for installation and standardization of system to be given free of cost.</li> </ul> <p>Power Supply:</p> <ul style="list-style-type: none"> <li>• Power input to be 220-240VAC, 50Hz fitted with plug compatible with local electrical socket.</li> <li>• Resettable over current breaker shall be fitted for protection</li> <li>• Suitable Stabilizer/CVT</li> <li>• Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.</li> </ul> <p>Standards and Safety:-</p> <ul style="list-style-type: none"> <li>• Comprehensive onsite training for lab staff and support services till familiarity with the system.</li> <li>• Should be FDA or European CE approved or equivalent standard product.</li> <li>• Should be compliant to ISO 13485:/ ISO 9001Quality systems or equivalent.</li> </ul> <p>Documentation:</p> <ul style="list-style-type: none"> <li>• Certificate of calibration and inspection from factory.</li> <li>• User/Technical/Maintenance manuals to be supplied</li> <li>• Attach original manufacturer’s product catalogue and specification sheet. Photocopy/ computer print will not be accepted.</li> <li>• All technical data to be supported with original product data sheet. Please quote page number on compliance sheet as well</li> </ul>	
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		<p>as on technical bid corresponding to technical specifications.</p> <p>Although adequate infrastructure is present for the installation, but any additional requirement in terms of infrastructure, electrical changes and ambient temperature maintenance to be done by the supplier</p>	
10.	<b>ULTRA VIOLET (U.V.) LAMPS</b>	Features: high turbulence; non wetting surface; high reliability low maintenance	1
11.	<b>VENEREAL DISEASES RESEARCH LABORATORY (V.D.R.L.) SHAKER</b>	<p>It should have a ability to accommodate the blood bottle slides or the flasks by the spring holder. Used for VDRL Tests, Blood Grouping Tests, agglutination Tests, Mixing of solutions in small bottles, beakers &amp; flasks etc.</p> <p>Speed: 0-1200rpm</p> <p>Platform size: 300x300mm, Power consumption 230/220V AC.</p> <p>Digital display and microprocessor controlled.</p> <p>Stirring volume: upto 1000mm</p>	2
12.	<b>OVERHEAD PROJECTOR</b>		1
13.	<b>WATER BATH (SEROLOGICAL)</b>	<ul style="list-style-type: none"> <li>• Temperature range from ambient temperature 0° to 100°C.</li> <li>• Thermostatic control with an accuracy of plus minus 0.5°C</li> <li>• Double walled inside stainless steel and outside mild steel sheet painted in epoxy powder coating.</li> <li>• Bath consists of two pilot lamp, temperature control knob and ON/OFF switch to work on 220/230 volts AC supplied with or without stirring arrangement without racks and thermometer.</li> <li>• Lid of water bath is made of stainless steel 316 Qty. <ul style="list-style-type: none"> <li>• Capacity: anticorrosive 4 chamber each with capacity of 3-4lit</li> </ul> </li> <li>• Audible warning safety signals should be there for high/low temperature warnings, and dry running protection.</li> <li>• Instrument should have lift up bath cover; Carrier racks should be given for flasks and test tubes racks.</li> <li>• A cock should be provided to facilitate draining of bath</li> </ul>	2

		<p>contents.</p> <ul style="list-style-type: none"> <li>• Water bath protective media should be there to prevent contamination and formation of algae.</li> <li>• Heating capacity - 2 KW; should have all the accessories required for the functioning of the equipment.</li> <li>• Equipment should be FDA / CE certified or equivalent standard of repute.</li> <li>• It should be ISO 9001:2000 or other equivalent quality certification.</li> </ul> <p>All electrical peripherals required for smooth functioning e.g. voltage stabilizer should be provided with the equipment</p>	
<b>14.</b>	<b>VORTEX MACHINE</b>	<p>Vibrating neoprene rubber cup accommodates a variety of sizes of test tube/flasks. Short, rapid, eccentric stroke, motor driven Neoprene cup. Vacuum Rubber pads are provided at bottom. The mixer consists of an enamel finished housing containing the motor with the motor with an eccentric drive. Intensity of agitation controlled by varying the position in which the test tube is held. The thyristorized speed controller enables step less adjustment of degree of oscillations. Machine supplied with complete with speed control, cord and ON/OFF switch and indicator to work on 220V, 1Ph, 50 Hz. AC supply. Instrument should be ISI complaint and marked (or other equivalent standardization in case of imported equipment).</p> <p>Small flasks or bottles mixer – 1</p> <p>Rugged construction, heavy base, for continuous use. Variable shaking speed. Degree of agitation, gentle to violent, is controlled by speed regulator. The Erlen Meyer flasks from 125 to 1000 mL capacity can be shaken at one time even without balancing. The full torque is always applied to oscillating mechanism irrespective of speed setting. Fitted with fraction H.P. motor. works on 220 Volts, 1 Ph, 50 Hz, AC supply. Capacity: 4 Flask, Timer 0-30 mins. Instrument should be ISI complaint and marked (or other equivalent standardization in case of imported equipment).</p>	3
<b>15.</b>	<b>SPIRIT LAMP</b>	<p>The Lamps should be have the capacity of 120 ml with wick &amp; to be sturdy, thickmade of Stainless Steel</p>	100
<b>16.</b>	<b>SLIDE CABINET FOR 1000 SLIDES</b>	<p>Wooden cabinet with aluminium slide trays in form of drawers.</p>	20
<b>17.</b>	<b>SLIDE TRAY (ALUMINIUM)</b>	<p>The Tray should be made of Aluminium having capacity for 20</p>	50



	<b>HORIZONTAL</b>	slides.	
<b>18.</b>	<b>MAGNIFYING LENS</b>	Circular lens with steel handle	6
<b>19.</b>	<b>STOP WATCH READING 1/5 SECOND</b>	Stop watch of good quality reading at 1/5 second with LED/LCD display reading at 1/5 display	10
<b>20.</b>	<b>AUTOMATIC AIR SAMPLER</b>	<ul style="list-style-type: none"> <li>• Should have the configurations: Total Suspended Particulates (TSP), PM10 and PM205.</li> <li>• The instrument should have a speed controlled brushless blower for accurate, quiet operation and 2 filter holders for easy exchange in the field.</li> <li>• Should have an integrated real time clock, wide graphic display and dedicated keypad allow for user friendly sample programming. The equipment should have the selection from automatic 3 and 6 day runs or creation their own program selectable from 1 min to 168 hours.</li> <li>• The equipment should be microprocessor controlled system for measurement of ambient and orifice flow temperatures, ambient and venturi pressures for true mass or volumetric flow standardized with selectable reference temperature.</li> <li>• Measured parameters should be logged every five seconds and recorded as five minute averages for the 24 hours run period. Data memory should be for 730 sampling reports should be saved. Data is accessible on the display should be able to download to a PC via Modem (optional).</li> <li>• Flow Range: 1000 – 1400 L/min</li> <li>• Flow Stability: <math>\pm 1\%</math> of set flow rate</li> <li>• Power Requirements: 220-240 VAC, 50 Hz, 15 AMP.</li> <li>• Allowable environmental temperature operating range: 0-50°C</li> <li>• Detachable base: Inlet head should be easily attached on site.</li> </ul> <p>All accessories required for functioning and calibration to be provided</p>	1
<b>21.</b>	<b>COPLIN JARS</b>	Should be made of plastic for keeping 10 slides.	100

22.	<b>HOT PLATE WITH DIGITAL DISPLAY</b>	Workable On 220/230v Thermostatically Controlled Between 40-70 Degree Celcius With Copper Cover Of Size 9x12 Inches.	2
23.	<b>DIGITAL PH DETERMINATION APPARATUS</b>	Digital with LCD display <ul style="list-style-type: none"> <li>• PH range from 4-14</li> <li>• Combined electrode</li> <li>• Resolution 0.1</li> <li>• Accuracy <math>\pm 0.01</math></li> </ul>	1
24.	<b>COLONY COUNTER SPECIFICATION (DIGITAL) :-</b>	1. Auto Mark Pen. 2. Wolffhuegel Grid Glass Plate. 3. 110 mm Magnifying Lence. 4. FourDigit Resettable Electronic Counter. 5. Net Weight- 3.5 Kgs. 6. Supply- 230V AC 50Hz	1

### **III DEPARTMENT OF FORENSIC MEDICINE**

<b>Sr. No.</b>	<b>Item Name</b>	<b>Qty.</b>	<b>Specifications</b>
1	Balance Chemical	1	1. Readibility 0.001 to 0.1 gms. 2. Capable of weighing upto 200 gms. 3. Electronic Digital Display. 4. Overload protection. 5. Provided with AC Adapter. 6. Matt finish steel pan.
2	Dissection sets	4	Consisting of cartilage knife, bone cutting forceps, scissors- straight and curved, enterotome, scalpels, knives with spare blades, probe metal scale graduated in cms etc. made up of good quality stainless steel.
3	Microtome with knife	1	1. High precision machine suitable for both delicate as well as hard tissue

			<p>sectioning.</p> <p>2. Manual type with specimen clamps, user selectable coarse feed wheel turn direction, retraction on/off function and blade holder for disposable blades.</p> <p>3. Section thickness setting 0.5 <math>\mu\text{m}</math> with settings in 0.5,1,2,5 increments at different levels.</p> <p>4. Section increment :</p> <p style="padding-left: 40px;">From 0 to 2 <math>\mu\text{m}</math> in 0.5 <math>\mu\text{m}</math> steps.</p> <p style="padding-left: 40px;">From 2 to 10 <math>\mu\text{m}</math> in 1 <math>\mu\text{m}</math> steps.</p> <p style="padding-left: 40px;">From 10 to 20 <math>\mu\text{m}</math> in 2 <math>\mu\text{m}</math> steps.</p> <p style="padding-left: 40px;">From 20 to 60 <math>\mu\text{m}</math> in 5 <math>\mu\text{m}</math> steps.</p> <p>5. Specimen advance 28 mm or more.</p> <p>6. Vertical stroke 60 mm or more.</p> <p>7. Provision of step trimming.</p> <p>8. Adjustable specimen clamp at least 50 x 45 mm with orientation in x y axis.</p> <p>9. Single disposable blade holder for accommodating both high and low profile blades</p> <p>10. Lateral coarse feed.</p> <p>11. Integrated removable section waste tray.</p> <p>12. Spare low and high profile blades in dispenser pack of 50 blades: 6 packets each.</p> <p>13. The equipment should be USA-FDA and European–CE approved.</p> <p><b><u>Accessories:-</u></b></p> <p>1. Orientale specimen clamp in x y axis</p> <p>2. Disposable blade holder which accommodate both high and low profile blades.</p> <p>3. Spare low and high profile blades in dispenser pack of 50 blades: 6 packets each.</p>
4	Instrument Cabinet	2	<p>Steel Instrument cabinet, Rust proof 90x50x185cm (+/-5 cm) -glass door</p> <p>-5 shelves adjustable with good bearing capacity.</p>