

# **TENDER DOCUMENT (SHORT TENDER)**

## **OFFICE OF THE DEAN**

### **Lt. Shri Baliram Kashyap Memorial Medical College and Associate Maharani Hospital Jagdalpur (C.G.)**

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No/ /Dean/Purch./2015 Jagdalpur Dated / /2015

Sealed Tender are invited on behalf of Dean Govt. Medical College Dimrapal, Jagdalpur under Director General, Indian Council of Medical Research Ansari Nagar, New Delhi funded research project for the purchase of following equipments from the Manufacturer/Authorized dealer from all over India in Three envelope systems. Envelope-1 will contain E.M.D. and prequalification bid. Envelope-2 will contain techno commercial bid along with the brochure Envelope-3 will contain price bid only.

E.M.D. and prequalification bid will be checked first and if they are found correct the 2nd envelope of bidder containing techno commercial document will be opened and evaluated if they are found correct then only envelope for price bid will be opened. Therefore Envelope should be printed on cover about the document containing bid and marked as Envelope 1st, 2nd and 3rd.

#### **TERMS AND CONDITION :**

##### **Pre-qualification document, Envelope-1:**

- 1) In case bidder is a dealer he should supply letter of authorization from manufacturer. Tender document should accompany with a DD of rupees 3 Lakhs as E.M.D. in favor of Dean Govt. Medical College Dimrapal, Jagdalpur from national bank.
- 2) Bidders should submit sales tax, vat clearance certificate, PAN and TAN number.
- 3) Bidders should submit a document showing annual turnover of its firm of more than 50 Lakhs a year.
- 4) Undertaking/affidavit that firm has no vigilance case/CBI/FEMA case pending against it.

**Document for Envelope02:**

- 1) The name of items, quoted name of manufacturer along with letter of authorization quality insurance certificate, if any (ISI/CE/FDA/UL/BS/ISO etc) Guarantee and warrantee period for the item quoted.
- 2) List of past supply.
- 3) Detail of specification and feature of the equipments quoted and compliance statement in relation with the specification mentioned in tender document.
- 4) Clear scope of supply of equipment/Supply schedule/List of standard accessory if any.

**Envelope-3 Price Bid :**

In this should be mentioned for each item quoted. Price should be full and final without any extra charges. Applicable CST/VAT should be mentioned separately and price should be for Jagdalpur. The price should be quoted in following format.

Should contain price of items as below-

Serial No.	Name of items	Manufacturer	Unit price	Vat/Cast	Total

**OTHER TERMS AND CONDITION :**

- The E.M.D. of successful bidder will be retained till the final supply & installation of equipments is over and the E.M.D. of rest of bidder will be returned within 15 Days from the finalization of rate. Rate will remain valid till 12 months. Price should be full & final to destination inclusive of all taxes. Payment will be made after the supply/acceptance and successful installation of equipment. Instrument is required for microbiology dept. under research project funded by the Director General, Indian Council of Medical Research Ansari Nagar, New Delhi. The equipments should be supplied within 3 weeks from the date of supply order.
- The Dean Medical College Dimrapal, Jagdalur reserves all the right to accept of Reject any or all tender without assigning any reason.

- The tender document can be obtained from office of the Dean Medical College Dimrapal, Jagdalpur from 23/02/2015 Date up to 06/03/2015 during office hours on any working day on payment of rupees 1000 cash or DD in favor of Dean Medical College Dimrapal, Jagdalpur which will be non refundable.
- Tender can also be downloaded from [www.bastar.govt.in](http://www.bastar.govt.in) but has to submit manually such downloaded tender should be accompanied with a separate DD of rupees 1000 in the name of Dean Medical College Dimrapal, Jagdalpur.
- The list of equipments and their specification is attached herewith.

**Dean**

**Late shrr B.R.Kashyap Memorial  
Govt. Medical College Dimrapal, Jagdalpur**

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Phone - 07782-231506, Fax - 07782-223037 Email - [gmcjagdapur@gmail.com](mailto:gmcjagdapur@gmail.com)

deld@ @'kfp@fufonk@ekb0k@2014&15 txnyij fnukd @ @2015

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**OFFICE OF THE DEAN**  
**LATE BALIRAM KASYAP MEMORIAL**  
**GOVT. MEDICAL COLLEGE**  
**DIMRAPAL, JAGDALPUR DIST. BASTAR (C.G.)**  
**HVAC BSL-3 Seamless Virology Laboratory Renovation**

Sr. No.	Description	Unit	Qty.
<b>I CONDENSING UNITS</b>			
<b>1</b>	Air Cooled Condensing unit comprising of Scroll / Reciprocating Compressor and air Cooled Condenser		
1.1.1	8.5 TR	Nos.	1
1.1.2	5.5 TR	Nos.	1
1.2	Thermostat	Nos.	2
1.3	Refrigerant piping for condensing units with insulation	R.ft	120
1.4	Miscellaneous items like, controls for condensing units like expansion valves, Hand shut off valves, Catch all dryers, Stand for mounting outdoor units complete with first charged of refrigerant gas		
1.4.1	8.5 TR & 5.5 TR	Nos.	2
1.4.3	First charge of refrigerant gas	KG	RO
1.4.4	Stands for mounting the outdoor units	Nos.	2
<b>II AIR HANDLING UNITS</b>			
DOUBLE SKIN AIR HANDLING UNITS			
2.1	Double Skin air handing units fabricated from outer skin with 0.63 mm thick precoated G.I. sheet & plain 0.63mm thick inner G.I. sheet with 40mm thick injected puf insulation with Aluminum extruded frame work having thermal break profile with internal coving		
	Mixing Chamber		
	Prefilter Section with 10 micron pre filters		
	Section for mounting 5 micron microvee filters with filters		
	Cooling coil section with 6 rows deep DX cooling coil		
	Fan sector with Backward curve fan & with motor		
2.1.1	AHU 1/6000CFM / 125mm S.P.	No.	1
<b>III SHEET METAL WORKS AND INSULATION</b>			
<b>3.1</b>	Sheet Metal work Comprising of G.S.S. ducting with RTV sealan, sizes & quantities are as under		
3.1.1	24 G	Sq. ft	RO
3.1.2	22 G	Sq. ft	RO
3.2	Supply air duct with 13mm thick cross linked expanded polythylene insulation with adhesive & one side aluminium foil faced	Sq. ft	
3.3	Return air duct with 9mm theic cross linked expanded polyethylene insulation with adhesive & one side aluminium foil faced	Sq. ft	
3.4	G.I. Volume control damper	Sq. ft	10
3.5	G.I. Fire damper	Sq. ft	10
3.6	Fusible link	Nos.	1
<b>IV TERMINAL HEPA FILTERS</b>			
<b>4.1</b>	1. Flange type hepa fillters (high efficiency particulate air) designed to remove particles down to 0.3Microns from air streams with an efficiency of 99.97% the filter matrix comprises specially treated glass fiber media with machinne pleated aluminium seperators		
4.1.1	610x 610 x 305 deep HEPA Filter - Capacity 1000 Cfm.	Nos.	5
4.1.2	610x 610 x 105 deep HEPA Filter - Capacity 500 Cfm.	Nos.	2

4.1.3	305x 305 x 305 deep HEPA Filter - Capacity 250 Cfm.	Nos.	0
4.1.4	305x 305 x 150 deep HEPA Filter - Capacity 125 Cfm.	Nos.	3
<b>4.2</b>	Terminal mounted HEPA box in 16 G G,I, Construction epoxy painted and complte with volume control damper in 16 G GI and S.S 304 perforated sheet. HEPA box should complted with all accessories like pressure plate, gear for damper operation, DOP port etc.		
4.2.1	610x 610 x 305 deep HEPA Filter - Capacity 1000 Cfm.	Nos.	5
4.2.2	610x 610 x 105 deep HEPA Filter - Capacity 500 Cfm.	Nos.	2
4.2.3	305x 305 x 305 deep HEPA Filter - Capacity 250 Cfm.	Nos.	0
4.2.4	305x 305 x 150 deep HEPA Filter - Capacity 125 Cfm.	Nos.	3
<b>4.3</b>	Perforated sheet for HEPA filters	Sq. ft	40
<b>IV ELECTRICAL STRIP HEATERS</b>			
4.1	Electrical strip heaters		
4.1.1	3KW (1kw .....> 3)	Banks	2
4.1.2	1.5KW (0.5kw .....> 3)	Banks	1
4.2	Air Stat	Nos.	<b>1</b>
4.3	Humidistat	Nos.	<b>3</b>
<b>V ELECTRICAL PANEL AND CABLINGS</b>			
5.1	Electrical		
5.1.1	Electrical Panel for AHUs, Condensing units Etc.	<b>Nos.</b>	<b>1</b>
5.2	<b>ELECTRICAL POWER AND CONTROL CABLINGS:</b>		
	<b>SHEATHED ARMOURED COPPER POWER CABLES</b>		
<b>5.2.1</b>	3C X 4 sq. mm CU	Rft	30
5.2.2	4c x 4 Sq. mm CU	Rft	60
5.2.3	4c x 2.5 Sq. mm CU	Rft	80
<b>5.3</b>	<b>SHEATHED ARMOURED COPPER CONTROL CABLES</b>		
5.3.1	2c x 1.5 Sq. mm CU	Rft	30
5.3.2	4c x 1.5 Sq. mm CU	Rft	30
<b>5.4</b>	Earthing: Cu earthing for HVAC equipment & Controls	Rft	RO
5.5	Earthing Patti : 25mm x 3mm GI STRIP	Rft	RO
<b>5.6</b>	<b>GI PERFORATED CABLE TRAY IN 18 SWG (STandard length of 2.5 mtr.) of following sizes</b>		
5.6.1	100W x 25 H	Rft	RO
<b>VI QUALIFICATION, DOCUMENTATION AND VALIDATION</b>			
6.1	Charges for qualification, documentation & validation.	LOT	<b>1</b>
6.2	Magnehalic gauges with magnahelic gauge boxes in M.S. epoxy painted for measuring room pressure difference across the room. (0-10mm)	Nos.	<b>6</b>

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**DIMRAPAL, JAGDALPUR DIST. BASTAR (C.G.)**  
**Equipments Listed under General & Culture Facilities**

Sr. No.	Machine Name	Specification
1	Biological Safety Cabinet	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical : Certification:</b> NSF 49/Em 1249 pr eqiova;emt standard</p> <p><b>Design:</b> Approximately 4 feet length X 2 feet depth Bio Safety Cabinets Class II, Type A2; 304 Stainless steel interior Epoxy-coated steel exterior Removable, seamless, dished work surface with lift out knobs Door- Fully closing, Clear 1/4" tempered safety glass sash counter balanced wtih base stand.</p> <p>1. Bio-safety should be have LCD Display to show real time filter remaining life inside the cabinet.</p> <p>2. There Should be night mode in Bio Safety to run Bo-safety on 30% elctricity in night mode.</p> <p>3. There should be vacupant to inser cable or vaccum aspirator tube in the cabinet &amp; ducting+canopy.</p> <p><b>Circulation:</b> Class 100, Supply and exhaust through HEPA filters. Inflow velocity of 105 fpm (0.5m/sec) Down flow velocity of 55 fpm (0.3m/sec) 40% air recirculation.</p> <p><b>Light :</b> UV and sufficient illumination for work space.</p> <p><b>Gauges:</b> For Monitoring the condition of all HEPA filters as well as work space.</p> <p>Services Required: Installation &amp; onsite validation. Calibration <b>Certificates. Manuals :</b> Operation, maintenance &amp; part list with detailed specification Operational &amp; maintenance Training.</p> <p><b>Power Supply:</b> Should include 210- 240V/50 Hz.</p> <p><b>Recommendation:</b> Bio safety cabinets of Class II, Type A2 is recommended for all Viral Research Diagnostic labs (VRDL). Type B2 Biosafety Cabinets are commended only for Biosafety level 3 work.</p>
2	Labinar Air Flow	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and <u>maintenance my be forwarded with all the details for verification.</u></p> <p><b>Technical :Certification:</b> En 12469 or equivalent.</p> <p><b>Disign:</b> Vertical Laminar flow cabinet Approzimately 4feet lenght S2 feet depth, 304 SS interior, epoxy/ powder coated exterior Door fully closing with hinged sash. Support stand, solid one piece dished work surfaces.</p> <p><b>Circulation:</b>Down flow v elocity of 40-70 fpm, ISO Class 5 or higher air.</p> <p><b>Filters:</b> Hepa filter, (99.99% efficient of particles 0.3 micron) ULPA filter (efficiency of &gt;99.999% at 0.1 to 0.3 micron sizes) Provided with pre- filter)</p> <p><b>Light:</b> UV and sufficient illumination for work space</p> <p><b>Gauges:</b> for monitoring the condition of all HEPA filters as well as work space.</p> <p><b>Power Supply:</b> Should include 210-240v/50-60Hz</p>

3	Refrigerated high speed Bench top Centrifuge	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical : Certification:</b> CE or UL Certified</p> <p><b>Temperature range:</b> -20 to 40C</p> <p><b>Speed :</b> Up to 18000 rpm</p> <p><b>Display:</b> Digital for temperature for air and chamber, time and RPM/RCF, Microprocessor controlled.</p> <p><b>Drive System:</b> Brushless direct</p> <p><b>Programmable:</b> Programs -90-90 and with program recall facility</p> <p><b>Rotors:</b> Fixed angle rotor; 24x1.5ml tubes, 250m, Swing out Rotor and adopters for: 5-10ml tubes, 15m, 50ml and 250ml tubes., micro plate.</p> <p><b>Power Supply:</b> 210-240V/50-60 Hz or Suitable Power Supply.</p>
4	Vertical Autoclave	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical :</b> Fully automatic vertical autoclave, suitable for sterilization under working steam pressure up to 15 PSI or more and temperature of 121 c or more.</p> <p><b>Design:</b> Unit made of SS 304 chamber, approx inner dimensions 16" to 25" (Diameter x depth). Lid made of heavy gauge lid, die pressed s.s. 304 with ressure gauge, steam release valve and necessary safety valves, with foot lifting arrangement ot oper lid, programmable, with all functional accessories.</p> <p><b>Capacity :</b> 70 to 80 lit</p> <p><b>Display:</b> Time and temperature LCD display</p> <p><b>Alarm:</b> Low water level alarm and cut off/ Sensor open alarm</p> <p><b>Accessories:</b> Perforated carriers made up of SS 304 (3-4 Nos.)</p> <p><b>Power Supply :</b> 220/230 volts AC -50 Hz or Suitable Power Supply.</p>
5	PCR Workstation	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical : Size</b> about 2'x3'</p> <p>Construction - Powder Coated/ epoxy- coated ss. Work surface - Good quality Stainless Steel</p> <p>Lighting system- A builty-in ultraviolet light for decontamination fo consumables and equipment and fluorescent light for working.</p> <p>Vertical laminar flow</p> <p>Filters- Combines and ISO 5 (fs209E) Class 100 clean air environment, 99.99% - efficient HEPA filter and disposable prefilter</p> <p>Alarms- monitors the effectiveness of the workstation and alerts the operator if the HEPA filter or UV bulb needs replacement.</p> <p>Folding sash turns off the UV light and activates the blower and fluorescent light.</p> <p><b>Power supply : should include 220V/50Hz</b></p> <p>Optional - utility ports</p> <p>Nost- Cost of PCR workstation and Laminar airflow is almost same hence, it is advisable that the laminar airflow can be procured instead of PCR work Station.</p>



6	Thermal Cycler	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical : Design:</b> 96 well, with 6 separate peltier blocks to provide independent temperature zones to run gradient PCR with hot bonnet</p> <p><b>Capability:</b> 0.2ml, 0.5ml PCR tubes or microplates; to accommodate PCR volumes ranging form 10-100ul.</p> <p><b>Rum Mode:</b> Standard and fast run</p> <p><b>Temperature:</b> Range + 4-100C, Accuracy+/-0.25 from 35-99C, Uniformity &lt;0.5C (20 sec after reaching 95c)</p> <p><b>Ramp rate:</b> Maximum should be 5c/ sec and adjustable between 3-5 C/sec</p> <p><b>Program:</b> 7800 typical programs; with USB flash drive expansion</p> <p><b>Power Supply:</b> should include 210-240 v/ 50-60Hz</p>
7	Horizontal Gel Electrophoresis System	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical : 1.</b> Submerged gel electrophoresis apparatus with clear plastic constructionfor easy sample visualization.</p> <p>2. Tray should be UV transparent, lenght 12-15cm and width 12-15cm.</p> <p>3. Combs: 10-15 wells and 25-30 well. All combs of 1mm thickness.</p> <p>4. The unit should bear minimum 3 years comprehensive and 2 years non- comprehensive warranty.</p> <p>5. Must include 2 KVA online UPS.</p>
8	Gel Cocumentation System	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical : 1.</b> Gel imaging system to visualize i) Stained protein gels (coomassie, silver, UV light - excited fluorescent stains) and ii) Stained nucleic acid gels (ethidium bromide and other UV light - excited fluorescent stains)</p> <p>2. Fully automated microscope based computer control upgradable to chemiluminescence compact bench top instrument.</p> <p>3. With UV and visible light transillumination, motorized zoom lens; Transillumination and epi- Auto focus configuration. UV lighting system with image viewing area of at least 20/20cm. Automatic application given software to capture the image automatically.</p> <p>4. Camera - high speed USB technology for faster image capture and download. Auto focus configuration. At legal 7 Position computer controlled otorized filter wheels with filters.</p> <p>5. Auto exposure setting for optimum image exposure time.</p> <p>6. CCD resolution - 5 megapixel or more</p> <p>7. Excitation source - Trans- UV, 254, 365mm; Wide transillumination area:</p> <p>8. Provided with PC, Software compatibility: Windows.</p> <p>9. ID Gel analysis software with automatic band matching and free Lifetime upgradation and GLP complaint format.</p> <p>10. 2 D gel analysis software for densitometry analysis and spot counting with free lifetime upgradation.</p>

9	Micro Centrifuse Refrigeratd	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical :</b> Bench top, compact, Refrigeratd  Temperature setting : 0 to 40C  Fast Pre cooling and should maintain +4 C at Maximum speed  Upto 10 programs or more  Digital Display showing rpm, RCF and time  Speed up to 15000rpm  Rotor for 20x1.5 to 2ml tubes.  Auto balanching in situation of minor imbalance  Electrical Requirements: 120V/60Hz and 230V/50 Hz or suitable electrical supply  CE certified or equivalent.</p>												
10	Real Time PCR	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical :</b> 1. Table top model.  2. Complete system including basic system, essential accessories, the state-of- art computer workstation, acquisition software, startup kit inclusive of calibration standards etc.  3. Open system to accommodate Taqman, SYBR green and all other Fluorescent dye based chemistries.</p> <p>4. Peltier based 96 well block  5. Standard optical 96 well plates, 0.2ml strips, 0.2ml tubes compatibility  6. Min sampal value requirement -5  7. CCD Camera with halogen/LED and at least five excitation and five emission filters.  8. Multiplexing ability up-to five dyes in a single run,  9. Calibrated dyes at installation: FAM/SYBER Green, VIC/JOE, NED/TAMRA/Cy3, Rox/Texas Red, and Cy5, should offer flexibility in dye selection.  10. Facility to calibrate new dye within the wavelength range without addition of new filters  11. Passive reference dy ROX or any other calibrated dye and should be Optional  12. Optional for melt curve analysis  13. Temperature range 4C to 100C</p> <p>14 Sensitivity: Detection of 1 copy to template with dynamic range of 11 orders of magnitude.  15. Software applications for absolute and redative quantification comparative Ct, Standard Curve, Relative Standard Curve, Allelic Discrimination/ SNP Genotyping, Plus/Minus, Dissociation/ Melt Curve and HRM  16. 220V/ 50 Hz all accessories  17. CE Mark or equivalent.</p>												
11	Electronic Multichannel Pipette	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical : 3</b> Pipettes with volumes : 0.5 to 10ul, 5 to 10ul &amp; 50 to 1200ul</p> <p><b>Electronic multichannel pipette with spring loaded nose cone and Secondary adjustment</b></p> <table border="1" data-bbox="341 1890 1525 2042"> <tr> <td><b>Channel Format</b></td> <td>8- Channel</td> <td>8- Channel</td> <td>8- Cjamme;</td> </tr> <tr> <td><b>Adjustable Volume</b></td> <td>0.5 - 10ul</td> <td>5- 100ul</td> <td>50-1200ul</td> </tr> <tr> <td><b>Imprecision Volume (&lt;%ul) -</b></td> <td>/ +3.0% + 0.03ul/ 1ul;;</td> <td>+3.0% + 0.03ul/ 1ul;;</td> <td>+0.9%/+1.08ul/ 120ul;;</td> </tr> </table>	<b>Channel Format</b>	8- Channel	8- Channel	8- Cjamme;	<b>Adjustable Volume</b>	0.5 - 10ul	5- 100ul	50-1200ul	<b>Imprecision Volume (&lt;%ul) -</b>	/ +3.0% + 0.03ul/ 1ul;;	+3.0% + 0.03ul/ 1ul;;	+0.9%/+1.08ul/ 120ul;;
<b>Channel Format</b>	8- Channel	8- Channel	8- Cjamme;											
<b>Adjustable Volume</b>	0.5 - 10ul	5- 100ul	50-1200ul											
<b>Imprecision Volume (&lt;%ul) -</b>	/ +3.0% + 0.03ul/ 1ul;;	+3.0% + 0.03ul/ 1ul;;	+0.9%/+1.08ul/ 120ul;;											

		<b>Inaccuracy</b>	/ +3.0% + 0.03ul/ 1ul;;	+3.0% + 0.03ul/ 1ul;;	
		<b>Volume</b>			
		<b>Pipette type</b>	Electronic	air	Electronic air Cushion
		<b>Volume selection</b>	Adjustable	Adjustable	Adjustable
		<b>Volume Display</b>	4 Digits	4 Digits	4 Digits
12	20 Degree c Vertical Deep Freezer	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical :</b></p> <p><b>Capacity: 600-700 Litre</b></p> <p><b>Inner Shelf: 6-9</b></p> <p><b>Refrigerant: CFC Free</b></p> <p><b>Temperature Control :</b> Micro Processor controlled Digital Display with Temperature resolution of 0.1 C</p> <p>Alarms : Low/High Temperature Power Failure, Door Ajar</p> <p><b>Door Closing and Locking :</b> Self closing door with key door lock a</p> <p><b>Adjustment:</b> Adjustable leveling feet Standard</p> <p><b>Power Supply : 210-240V/ 50-60 Hz</b></p>			
13	80 C Vertical Ultra Low Freezer (Double Door)	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical : (Double Door): Galvanized Steel sheet body with epoxy paint</b> that resist chipping &amp; rust and vacuumed polyurethane form panels, other double door each with locking facility. alarm for audible &amp; visual fault acknowledgement, Low &amp; High temperature audio visual alarms, condenser fault alarm, remote contact alarm, open door alarm clean filter indicator and power failure alarm. Castor wheel &amp; leveling adjustor should be provided for adjustment and installation.</p> <p><b>Capacity: Approximately 650 - 700L</b></p> <p><b>Refrigerant: CFC &amp; HCFC free</b></p> <p><b>Cooling System:</b> Cascade Cooling sysem front to back air circulating system in condensor</p> <p><b>Door :</b> Triple silicon section seal fitted with decompression value faculty to lower air pressure inside the freezer for easy door opening.</p> <p><b>Inner Compartment:</b> Minimum 3 Compartments with doors, Downfeed Evaporators, Surge tank for extra refrigeration capacity.</p> <p><b>Temperature:</b> Range - 55 to -80 C, Stability +/-1 C uniformity +/-3 C or better.</p> <p>Additional Accessories: SS racks and cardboard boxes.</p> <p><b>Power Supply : 210-240V/ 50-60Hz.</b></p>			

14	Automated Elisa Microplate Washer	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical :</b></p> <p><b>Capability:</b> 96 well microplates and strips, with plat, round, or "V" bottom well Manifold: 12 Channels</p> <p><b>Vacuum and fluid delivery systems:</b> In built with positive displacement syring pump, drive with adjustable flow rates</p> <p><b>Manifold: 8 or 16 Channels</b></p> <p><b>Program:</b> Memory for around 50 programs including dispensing volume (50to 300ul/ well) and multispeed microplate shaking program</p> <p><b>Bottles:</b> wash, rinse and waste (Volume 4-6 Ltr.)</p> <p><b>Safety Devices:</b> LCD Display with Membrance Keypad.</p> <p><b>Power Supply:</b> 210-240V / 50-60Hz.</p>																								
15	Elisa Reader	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical :</b></p> <p><b>Capability:</b> 24,48 or 96 Well micro Plates</p> <p><b>Spectral Range :</b> 400-750mm, Accuracy + -1nm</p> <p><b>Absorbance:</b> 0-40D</p> <p><b>Range:</b></p> <p><b>Accuracy:</b> Up to 0.001 O.D.</p> <p><b>Light Source :-</b> LED Lamp</p> <p><b>Optical System :</b> Curve fittings formulas transformations &amp; control assy validation, with compatible interface with PC &amp; external printer.</p> <p><b>Accessories:</b> Spare Lamps 2 Nos.</p> <p><b>Power Supply:</b> 210-240V / 50-60 Hz.</p>																								
16	Adjustable Volume Single Channel Pipettes	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical :</b></p> <p>SIO 8655 CERTIFIED, Fully autoclavable, Single Channel Pipettes of Variable Volume Compatible with universal tips.</p> <table border="1" data-bbox="341 1496 1525 1758"> <thead> <tr> <th>Range</th> <th>Increment</th> <th>Accuracy</th> <th>Precision</th> </tr> </thead> <tbody> <tr> <td>0.2 to 2ul</td> <td>0.01ul</td> <td>12.0 to 2.5%</td> <td>10.0 to 2.0%</td> </tr> <tr> <td>1 to 10ul</td> <td>0.1ul</td> <td>2.5 to 1.0%</td> <td>2.0 to 0.5%</td> </tr> <tr> <td>2 to 20ul</td> <td>0.1ul</td> <td>3.0 to 1.0%</td> <td>2.5 to 0.4%</td> </tr> <tr> <td>20 to 200ul</td> <td>1ul</td> <td>1.8 to 0.6%</td> <td>0.7 to 0.2%</td> </tr> <tr> <td>100 to 1000ul</td> <td>5ul</td> <td>1.0 to 0.6%</td> <td>0.6 to 0.2%</td> </tr> </tbody> </table>	Range	Increment	Accuracy	Precision	0.2 to 2ul	0.01ul	12.0 to 2.5%	10.0 to 2.0%	1 to 10ul	0.1ul	2.5 to 1.0%	2.0 to 0.5%	2 to 20ul	0.1ul	3.0 to 1.0%	2.5 to 0.4%	20 to 200ul	1ul	1.8 to 0.6%	0.7 to 0.2%	100 to 1000ul	5ul	1.0 to 0.6%	0.6 to 0.2%
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17	Adjustable Volume Digital Multi Channel Pipettes	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical :</b>  <b>Technical Specifications :</b> Must be of a reputed brand, from manufacturer/ Authorized dealers having calibration facility in Maharashtra. Necessary evidence to be provided.  <b>SIO 8655</b> Certified digital multichannel pipettes of variable volume compatible with universal tips.  <b>Applications:</b> Provision for 6,24,96 well applications</p> <table border="1" data-bbox="341 533 1527 734"> <thead> <tr> <th data-bbox="341 533 635 584">Range</th> <th data-bbox="635 533 922 584">Increment</th> <th data-bbox="922 533 1214 584">Accuracy</th> <th data-bbox="1214 533 1527 584">Precision</th> </tr> </thead> <tbody> <tr> <td data-bbox="341 584 635 658">5 to 50ul</td> <td data-bbox="635 584 922 658">0.5ul</td> <td data-bbox="922 584 1214 658">2.0 to 0.7%</td> <td data-bbox="1214 584 1527 658">8 Channel 12 Channel</td> </tr> <tr> <td data-bbox="341 658 635 734">30-300ul</td> <td data-bbox="635 658 922 734">5ul</td> <td data-bbox="922 658 1214 734">1.5 to 0.3%</td> <td data-bbox="1214 658 1527 734">8 Channel 12 Channel</td> </tr> </tbody> </table>	Range	Increment	Accuracy	Precision	5 to 50ul	0.5ul	2.0 to 0.7%	8 Channel 12 Channel	30-300ul	5ul	1.5 to 0.3%	8 Channel 12 Channel
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18	Fine Analytical	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical :</b>  <b>Single Pan Analytical Balce</b> with highest accuracy for weighing processes; readouts to have at least four decimal places. Equipped with a draft shield chamber to eliminate interfering ambient effects.  <b>Weighing Range:</b> 0.01 -60g  <b>Readability :</b> 0.1mg  <b>Calibration :</b> External  <b>Display:</b> LCD Display  <b>Verification Interval:</b> 0.001g  <b>Pan Size :</b> 80-100mm  <b>Power Supply :</b> 210-240V/ 50-60 Hz.</p>												
19	Water Bath (for Medical College Labs)	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical :</b>  <b>Water Bath</b> made of stainless steel, from manufacturer/ authorized dealers havein installation in reputed institutes/ firms.  <b>Capacity :</b> Anti- corrosive 4 chambers each with capacity of 3-4 lit.  <b>Temperature :</b> ambient ot 100 C, with Digital temperature display &amp; 0.1 C readability, microprocessor controlled.  <b>Power Supply:</b> 210-240V/ 50-60 Hz</p>												

20	Magnetic Stirrer (for Medical College Labs)	<p><b>General :-</b> Tender is invited from reputed original manufacture or their authorized agents/dealers only. Information regarding installation in India and satisfactory service and maintenance my be forwarded with all the details for verification.</p> <p><b>Technical :</b></p> <p><b>Design:</b> Compact, Light weight, SS body, Chemical and corrosion resistant construction: Approximately 40L X 30W X 5H(cm)</p> <p><b>Certification:</b> CE/ISO 9001</p> <p><b>Speed:</b> Range 0-1200rpm; Control - Analog;</p> <p><b>Stirring Volume :</b> up to 1000ml</p> <p><b>Display:</b> Digital, microprocessor controlled</p> <p><b>Power Supply:</b> Should include 210-240V/ 50-60Hz</p>
<b>Miscellaneous Equipment tender for Virology Diagnostic Laborarory (Medical College Level)</b>		
21	Uninterrupted Power Supply 5KVA	<p><b>Output :</b> Output Power Capacity 5400 Watts / 6000 VA  Max Configurable Power 5400 Watts/6000VA  Nominal Output Voltage 230V  Output Voltage Note Configurable for 220: 230 or 240 Nominal output Voltage  Output Voltage Distortion Less than 5%  Other Output Voltages 220, 240  Topology Double Conversion Online  Waveform Type Sine wave  Output Connections (1) Hard Wire 3- wire (H N +G)  Bypass Built-in Static Bypass</p> <p><b>Input:</b> Nominal input Voltage 230V  Input Frequency 40-70 Hz (auto sensing)  Input Connections Hard Wire 3 wire  Input Voltage range for main operations 160- 285V  <b>Battery :</b> Compatible External battery system for half hr backup</p> <p><b>Surge Protection and filtering :</b>  <b>surge energy rating 480 Joules</b>  Filtering Full time multi-pole noise filtering: 0.3% IEEE surge let - through: zero clamping  response time: meets IL 1449</p> <p><b>Physical:</b>  Maximum Height 400 to 450 mm  Maximum Width 100 to 150 mm  Maximum Depth 700 to 710 mm  Net Weight &lt; 20KG</p> <p><b>Operating Environment</b>  Operating Environment 38-40 C  Operating Relative Humidity up to 95%  Audible noise - &lt; 60 dBA</p> <p><b>Warranty - 03</b> years followed by AMC 2 years</p>

22	Uninterrupted Power Supply 3KVA	<p><b>Output :</b> Output Power Capacity 2400 Watts / 3000 VA  Max Configurable Power 2400 Watts/3000VA  Nominal Output Voltage 230V  Output Voltage Note Configurable for 220: 230 or 240 Nominal output Voltage  Efficiency at full Load 93.0%  Output Voltage Distortion Less than 3%  Output Frequency (sync to mains) 50/60Hz +/- 3 Hz  Other Output Voltages 220, 240  Crest Factor 3: 1  Topology Double Conversion Online  Waveform Type Sine wave  Output Connections (1) Hard Wire 3- wire (H N +G)  (2) IEC 320 C13  Output Voltage THD &lt; 3% linear load  Efficiency at Half Load 92.0%  Bypass Built-in Static Bypass</p> <hr/> <p><b>Input:</b> Nominal input Voltage 230V  Input Frequency 40-70 Hz  Input Connections Hard Wire 3 wire (1PH+N+G)  Input Voltage range for main operations 140- 280V  <b>Battery :</b> Compatible External battery system for 01 hr backup  Replacement battery cartridge note 72V, SMF or Flooded battery compatible, internal charger  2A - 13A Programmable</p> <hr/> <p><b>Control panel Multi</b> -function LCD status and control console  Audible Alarm Audible and visible alarms prioritized by severity  Emergency Power Off  <b>Filtering :</b> Full time multi - pole noise filtering : 0.3% IEEE surge let- through : Zero  clamping response time Maximum.  Height &lt;100mm  Maximum Width 400 - 450mm  Maximum Depth 480 - 490mm  Net Weight 10 -12KG.  <b>Warranty :</b> 03 years followed by AMC 02 years</p>
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**DEAN**  
**LATE B.R. KASHYAP MEMORIAL,**  
**GOVT. MEDICAL COLLEGE,**  
**DIMRAPAL JAGDALPUR**