



**ESIC MEDICAL COLLEGE & PGIMSR
EMPLOYEES STATE INSURANCE CORPORATION
K.K. NAGAR ASHOK PILLAR ROAD, CHENNAI-78.**

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512-U/11/18/2013/UG/Equipments

Dated: 16.12.2013

TENDER NOTICE No: 005

Sealed and super scribed tenders are invited by The Medical Superintendent, ESIC Hospital, K.K.Nagar, Chennai-78 for the supply of Equipments & Instruments from reputed manufacturers / or their authorized dealers / distributors in the prescribed tender forms for 'SUPPLY, INSTALLATION, COMMISSIONING & MAINTENANCE OF THE FOLLOWING EQUIPMENTS'

Annexure I-Application Form, Annexure II-Terms & Conditions, Annexure III-Company Profile, Annexure IV-Declaration Form and specifications can be downloaded from the website www.esipgimsrchennai.org / www.esic.nic.in / www.esichennai.org.

The application fee and EMD drawn in favor of The Medical Superintendent, ESIC Hospital, K.K.Nagar, Chennai-78 should be enclosed in the Techno - commercial bid.

Sl.No	Item Name	Quantity	EMD (₹)	Cost of Application (₹)
<u>DOUBLE BID SYSTEM</u>				
<u>Group A</u>				
<u>PHARMACOLOGY DEPARTMENT</u>				
1	Spectrophotometer (UV Visible range)	1	5550	250
2	Physiographs with Transducers and other relevant accessories (may substitute kymographs)	1	3250	250
<u>Group B</u>				
<u>PATHOLOGY DEPARTMENT</u>				
1	Research Microscope	1	30000	250
2	Rotary microtome	1	9000	250
3	Autopsy Tables	1	9000	250
<u>Group C</u>				
<u>MICROBIOLOGY DEPARTMENT</u>				
1	U.V.Transilluminator with photography	1	16200	250
2	CO2 Incubator	1	7500	250
3	Electrophoresis complete set	1	3300	250

Sl.No	Item Name	Qty	EMD(₹)	Cost of Application(₹)
<u>SINGLE BID SYSTEM</u>				
<u>Group D</u>				
<u>PATHOLOGY DEPARTMENT</u>				
1	Microscopes Monocular	60	32400	250
2	Binocular Microscope	11	8250	250
3	Hemocytometer with red and white pipettes with Improved Neubauers counting chamber	60	6300	250
4	Chemical balance with weights	2	2100	250
5	Hot air oven	2	1800	250
6	Demonstration eye pieces	6	1800	250
7	Sahlis hemoglobinometer	60	1800	250
8	Electric vacuum embedding bath	2	1500	250
9	Hot Plates electric	2	1200	250
10	Paraffin embedding bath	2	1200	250
11	Centrifuge machine	1	900	250
12	Slide cabinet for 1000 slides	6	900	250
13	Paper electrophoretic apparatus	1	900	250
14	Polarizing attachment for microscopes	1	750	250
15	Water bath 57 degree Celsius	1	600	250
16	Photoelectric colorimeter	1	600	250
17	Incubator	1	600	250
18	Distilled water still	1	600	250
19	pH meter electric	2	450	250
20	Waterbath rectangular	1	300	250
21	Electric Band Saw	1	300	250
22	Laboratory Stirrer	1	300	250
23	Balance for weighing organs	1	300	250
24	X ray viewing box	2	300	250
25	Box weight analytical	2	300	250
26	Ultraviolet lamp	1	300	250

Group E <u>PATHOLOGY DEPARTMENT</u>		Qty	EMD(₹)	Cost of Application(₹)
1	Micrometer Stage	2	Nil	250/-
2	Drill for boring glass (standard)	2		
3	Blow piece with bellows for bending glass (standard regular)	2		
4	Saws, Wire for cutting bones	1		
5	Surgical instruments for grossing standard 1. Brain knife(2no's) 2. Enderotome(1no) 3. SS knife for cutting organs(2no's)	1 set		
6	Weighing machines for cadaver	1		
7	Double demonstration eye piece	2		
8	Sternal puncture needle adult size	2		
9	Sternal puncture needle child size	2		
10	Liver biopsy needle	2		
11	Staining racks in stainless steel	6		
12	Micrometer ocular	1		
13	Automatic timer	2		
14	Magnifying lens (Regular)	6		
Group F <u>MICRO BIOLOGY DEPARTMENT</u>		Qty	EMD(₹)	Cost of Application(₹)
1	Microscope Students Type	55	33000	250
2	B.O.D incubator	1	2250	250
3	Serum inspissators	2	1800	250
4	Autoclave	1	1500	250
5	Balance, Chemical	2	1200	250
6	Distilled water plant all glass	1	1200	250
7	Hot air steriliser	1	900	250
8	Memmert incubator	1	750	250
9	Anaerobic apparatus	1	700	250
10	Distilled water plant	1	300	250
11	PH Determination apparatus (digital pH meter)	1	Nil	250
12	Micrometer eye pieces	2	Nil	250
13	Micrometer stage	2	Nil	250
Group G <u>COMMUNITY MEDICINE DEPARTMENT</u>		Qty	EMD(₹)	Cost of Application(₹)
1	Dissecting Microscope	30	9000	250
2	Ice Lined Refrigerator (I.L.R.)	1	1900	250
3	Microscope oil immeresion	2	1200	250
4	Autoclave	1	650	250
5	Incubator, electric	1	550	250
6	Balance Analytical 200 gm	3	350	250
Group H <u>COMMUNITY MEDICINE DEPARTMENT</u>		Qty	EMD(₹)	Cost of Application(₹)
1	Comparator, Nessler	1	Nil	250/-
2	Centrifuge clinical , high speed with telcometer	1		
3	Still for distilled water	1		
4	Extraction Apparatus, fat, complete	1		
5	Hydrometres, Spirit	3		
6	Salters baby weighing machine	2		
7	Weighing machine adult	4		
8	Filter, Pasteur chamberland, complete set	1		
9	Filter, berke fed	1		
10	Harpenders Callipers (for skinfold thickness)	1		
11	Sterilizers, electric (Medium size)	1		
12	Height measuring stand	1		
13	Barometer, Fortin's	1		
14	Balance for weighing food stuff Capacity 2 Kg	1		
15	Hydrometres, milk	3		
16	Hydrometers: (1) wet BULB (2) dry BULB	1 1		
Group I <u>PHARMACOLOGY DEPARTMENT</u>		Qty	EMD(₹)	Cost of Application(₹)
1	Digital Kymograph	10	5250	250
2	Animal trolley with 12 cages	4	3600	250
3	Starling's long extension kymographs with time markers. The ideal Respiration Pump (500 cc. CAP.)	1	2800	250
4	Flame photometer	1	1650	250
5	Electrical kymograph with Electrodes, Ordinary and non polarisable, Insulated wires, time markers, electric signals, Mercury manometer, perfusion apparatus, myograph lever, small pulley's upright stands and chemicals etc.,	5 sets	1500	250
6	Metabolic Cages (Dieuretic Study)	4	1500	250
7	Metal mincing machine	1	1200	250
8	Stimulator Electronic Arthus Thomas	1	1000	250
9	Chemical Balance - Sensitive	1	1000	250
10	Autoclave electric	1	1000	250

11	Copper Trays	20	900	250
12	Oxygen Cylinders with Trolleys 20 cu.ft	2	900	250
13	Carbon-di-oxide cylinder	2	900	250
14	Deionizer	1	800	250
15	Assembly for mammalian classes	1	750	250
16	Microscopes ordinary	4	700	250
17	Brodi's operation tables	1	650	250
18	Assembly for perfusion apparatus for mammalian heart	1	650	250
19	Electrocardiograph	1	650	250
20	All glass distillation apparatus cap.2 litres	1	650	250
21	Bell jars Assorted	4	600	250
22	Holder for platinum wireloop	100	600	250
23	Dissection instrument	6	550	250
24	Cook's Pole Climbing Apparatus	1	550	250
25	Vacuum & Pressure Pump Cenco	2	550	250
26	Automatic electric recording drums	1	500	250
27	Electro-Convulsimeter	1	500	250
28	Incubators	1	500	250
29	Incubator Electric	1	500	250
30	Museum drugs specimen jars	30	450	250
31	Rotarod Assembly	1	450	250
32	Four Unit isolated organ bath palmer F.67	1	450	250
33	Frog Boards Palmer c. 120	20	450	250
34	Balance Semi micro	1	450	250
35	Specimen jars Acrylic 250x165x140 mm.	16	450	250
36	B.P. Apparatus	8	450	250
37	Specimen jars Acrylic 220x150x100 mm.	20	400	250
38	Postmortem instruments sets complete	2	400	250
39	Actophotometer	1	400	250
40	Hot air oven size 14"x14"x14"	1	400	250
41	Suction pumps	1	400	250
42	Specimen jars Acrylic 220x195x80 mm.	16	400	250
43	Antihistamine Chamber with manometer	1	350	250
44	Manometers mercury Palmer C-200	6	350	250
45	Cautery machine, electric Blendstone	1	300	250
46	Animal Balance Triple Beam.	2	300	250
47	Filtering apparatus sietz filter and Millipore filter	1 each	300	250

	Group J PHARMACOLOGY DEPARTMENT	Qty	EMD(₹)	Cost of Application(₹)
1	Colorimeters	1	Nil	S.no: 1 to 54 <u>Application Fee : 250/-</u>
2	Analgesimeter	1		
3	Plain stand	20		
4	Chemical Balance-ordinary	2		
5	Water bath, metal	2		
6	Dispensing Balance with metric system weights	10		
7	Digital pH meter	1		
8	Long Extension for paper palmer A-130	2		
9	Temperature controlled water bath 37°C	1		
10	Vortex mixer	2		
11	Machine for big animals like dogs (>5 Kgs)	1		
12	Apparatus for isolated rabbit intestine etc.	2		
13	Instruments Sterilliser Electric size 12" x 8"x6"	1		
14	CENTRIFUGE(2000-3000 rpm)	2		
15	Microscope students type with mechanical stage and oil immersion.	1		
16	Hook grip rods	20		
17	Plethysmograph assorted	1		
18	Magnetic stirrer B.T.L.	1		
19	Machine for small animals like rats and guinea pig (upto 5kg's)	1		
20	Jacquets graphic chronometer	1		
21	Tablet Disintegration Machine Glass tubing (length of 6 ft.)	1		
22	Pestle and Mortar	15		
23	Water bath 4 hole electrically heated	1		
24	Stethoscope	8		
25	Varnishing Tray with foot lever	1		
26	Distillation apparatus	1		
27	Distilled water still Manesty Electrical Cap. 2 gallo per hour	1		
28	Skin and Rectal Thermometer	1		
29	Waring Blender M.S.E.	1		
30	Centrifuge Electric international R.P.M. 3000	1		
31	Electric Hot Plate	2		
32	Hair Aesthesiometer-Palmer W.290	2		
33	Jackson's Enterograph	1		
34	Smoking Burners Palmer A-291 and A-265	1		
35	Tetanus Set Palmer H2O	1		
36	Standard X Block	10		

37	Mechanical Stromhur	1	Nil	S.no: 1 to 54 <u>Application</u> <u>Fee : 250/-</u>
38	Metronome Palmer B-5	1		
39	Cork borer set of 12	1 set		
40	Tambours mareys Palmer C.5 & C.11	2		
41	Piston Recorder Palmer C.51	1		
42	Condons Drop Recorder – Palmer B-75	1		
43	Crucibles with tongs	10		
44	Pneumograph Palmer E	1		
45	Oncometer Kidney	1		
46	Oncometer Heart	1		
47	Iron Spatula	50		
48	Glass mortar and pestles capacity of 500 and 200 cc	1 Each		
49	Cannulas Differrterial Cannulae			
	a)Arterial Cannulae	16		
	b)Venous Cannulae	16		
	c)Syms Cannulae	16		
50	Suppository moulds	10		
51	Razor Hone	2		
52	Prof.Inchleys Drop Recorder-Palmer B.78	1		
53	Multimeter	1		
54	Tracheal Canula Metal Palmer E.76	1		

Pre - bid Conference for Group - A Equipments: 27.12.2013 – 11.00 A.M in DMS Chamber

Pre - bid Conference for Group - B Equipments: 30.12.2013 – 11.00 A.M in DMS Chamber

Pre - bid Conference for Group - C Equipments: 31.12.2013 – 11.00 A.M in DMS Chamber

GROUP	LAST DATE FOR RECEIPT OF TENDER	TIME OF CLOSING TENDER	DATE OF OPENING TENDER	TIME OF OPENING TENDER
A,B,C	06.01.2014	10.30 A.M.	06.01.2014	11.00 A.M.
D & E	07.01.2014	10.30 A.M.	07.01.2014	11.00 A.M.
F,G & H	08.01.2014	10.30 A.M.	08.01.2014	11.00 A.M.
I	09.01.2014	10.30 A.M.	09.01.2014	11.00 A.M.
J	10.01.2014	10.30 A.M.	10.01.2014	11.00 A.M.

If the date of opening of tender happens to be a holiday, the tender will be opened on the next working day.

Tender documents duly completed in all respects should be dropped in the Tender Box kept in the First floor of the hospital on or before the date and time mentioned above.

Medical Superintendent

SPECIFICATIONS FOR GROUP – A EQUIPMENTS

1. SPECTROPHOTOMETER (UV VISIBLE RANGE)

- It is a single beam, accurate, reliable and versatile instrument for spectrophotometric analysis of any concentration.
- Range 340 to 960nm with facility of automatic concentration, transmission and absorbance measurements.
- Data display & LED display for wavelength in nm.
- And equipped with extra sets of test tubes.

2. PHYSIOGRAPHS WITH TRANSDUCERS AND OTHER RELEVANT ACCESSORIES (MAY SUBSTITUTE KYMOGRAPHS)

- Digital Physiograph two channel for recording strain gage parameter in one channel and EKG in the other channel with Force transducer and standard accessories.
- Complete set without computer.

SPECIFICATIONS FOR GROUP – B EQUIPMENTS

1. RESEARCH MICROSCOPE

Research Microscope for Transmitted Light Bright field studies and Reflected light Fluorescence attachment

Stand	Rugged and sturdy stand with the following features
	Power supply external for Transmitted light and Reflected Light Long life LED Illumination system
	Co-axial coarse and fine harmonic drive focusing knobs, low positioned for convenient operation.
	Built-in filter 6 position filter wheel and grey filter set containing 3 grey filters 0.015, 0.06 and 0.25.
	4 position reflector turret for fluorescence filter sets and upgradable for LED fluorescence.
	Built-in variable field diaphragm for transmitted light illumination.
	Suitable for transmitted light studies viz., bright field, dark field, simple polarization and Reflected light Fluorescence and should be upgradable for TL Phase contrast studies.
	With Anti-fungus treatment
Optics	Infinity Colour Corrected System optics
Binocular Photo tube	Binocular photo tube with an Upright image and 20° inclination and suitable for 23mm Field of view and above eyepieces and 100:0/0:100 ratio for observation and documentation. Inter pupillary distance adjustment from 55-75mm. It should have 'Siodentopf' design by which we can have two different viewing heights.
Eyepieces	10x with field of view of not less than 23. Both the eyepieces should have diopter adjustment of ± 5 . It should capable of accepting reticules. Eyepieces with eyecups
Nose peice	6x revolving nosepiece (capable of accommodating upto 6 objectives) mounted on ball bearing with highly precise click stops and should have slots for up gradation for DIC.

Mechanical Stage	Dual layered with hard coat anodized surface with a stage plate of 220x170mm and mechanical stage of 75x50 with right and drive. Specimen holder for one hand operation, spring lever left
Illumination	Powerful Long Life LED illumination with minimum 10,000 hours of life time should be quoted
	The illumination control knob and ON/OFF switch should be low positioned for convenient operation.
Condenser	Condenser 0.9/1.25H
Objectives	Planachromatic A-Plan Objectives of 2.5x,5x/0.12,10x/0.25, 40x/0.65,100x/1.25 oil.
Fluorescence attachment	Fluorescence light attachment with Powerful LED illumination for fluorescence excitation should be offered
	Suitable LED illumination should automatically come in the light path, the moment a specification Fluorescence filter set is swung in
Live Streaming of slide images	Provision for slide imaging and real time viewing for demonstration purposes
Provision for multiple person viewing	Provision suitable for five persons viewing at the same time
Simple polarizer	Provision should be available
Phase contrast imaging	Provision should be available
Darkfield imaging	Provision for darkfield condenser should be available

2. ROTARY MICROTOME

- Heavy duty base to provide absolute support for mechanism and knife holder.
- Aluminium covering to protect the parts.
- Total feed excursion – 28mm.
- Feed adjustment - 1 to 50 microns in steps of 1 micron.
- Opening of object clamp – ball and flange type – 37mmx27mm.
- Total feed excursion – 28mm.
- Overall size – appx. 16x10x9 inches.
- Surface grinding on base, horizontal, vertical and inclined slide for smooth and accurate motion.
- Ratchet wheel, CAM, and CAM weight are made of gun metal.
- Axel and Catcher made from special steel.
- 120mm razor fabricated from highest quality fine grain tool steel.
- Object hold, knife holder, tightening key.
- Dust cover and oil for lubrication.
- Safety razor attachment.
- Honing stone ten inch size.
- Leather strap with clamping device.
- Razor 120 mm /140mm/160mm with back handle in case.
- Full instrument with accessories to be packed in card board box.

3. AUTOPSY TABLE

- Made of good, heavy gauge stainless steel
- Body supports 2 in number made of stainless steel 6 inches wide removable type.
- Six position head rest
- Crusher for disposal
- Provision for hot and cold water with swings spout.
- Lever handles for waste / drain
- Deep and large SS sink with overflow
- Provision for hot and cold water
- Self cleaning / washing sprinkler on sides

- Dimension 2600 mm (W) x 850mm (D) x850mm (H)
- Carrying capacity around 200kg

SPECIFICATIONS FOR GROUP – C

EQUIPMENTS

1. U.V.TRANSILLUMINATOR WITH PHOTOGRAPHY

- 12 BIT SCIENTIFIC GRADE CCD CAMERA (2/3" format), with Anti-reflective coating and Micro Lens which should give true 12-bit optical images, not through extension of the dynamic range.
- Should have MEGAPIXEL RESOLUTION (atleast 1.4 megapixels)
- Should have auto image capture for single button click to automatically control camera zoom, focus and iris as well as exposure time
- Wide dynamic range of 0-4.0 OD, Greater than 70 db signal to noise
- Full screen refresh rate of atleast 30 frames per second for real time
- Viewing 8-48 mm motorized zoom lens
- Image acquisition in 4 unique resolution/sensitivity modes for maximized flexibility
- Darkroom should be chemiluminescence imaging ready
- Darkroom with touch panel for turning on/off all light sources & changing filters
- Auto shut-off of lights after taking image
- All lights & filters should be controlled through software too
- Should have 5-Position Motorized Filter Wheel for multiplex imaging
- Dual wavelength with dual intensity
- UV Transilluminator (302 and 365 nm) with EVENSCAN for even excitation & faster image acquisition & imaging area of atleast 21 x 26 cm.
- Independent source for Transilluminated White Light (Fold-Down Fiber-optic WHITE LIGHT TABLE) with imaging area of atleast 21 x 31 cm
- Dual Epi-White Lights
- Dual Epi-UV Lights (Dual wave length 254 & 365 nm)
- Software for acquisition, enhancement, editing, annotation, archiving & analysis for proteins & nucleic acids gel electrophoresis.
- Equipment should be supplied with a Laptop compatible with the above software (Intel Pentium i3 , OS - Windows 7, 80GB HDD, 1GB RAM, DVD Read/Write, 14" Screen)

2. CO2 INCUBATOR - With sterilization cycle

- Microprocessor controlled Co2 incubator with Ultraviolet contamination control
- Temp. range : 5° C above ambient up to 50°C
- Fan free inner chamber to avoid cross contamination.
- Inner chamber capacity of - approx 100-150 litre
- Air - jacketed system with thick insulation for better temperature retention in case of power failure.
- Single piece seamless and weld less stainless steel interior for smooth cleaning & disinfection.
- Exterior – 18 gauge, steel, powder coated.
- Outer door safety sensor
- Shelves – perforated stainless steel, @ four in no.
- Temperature recovery ≤ 3 minutes in case of door opening for 30 sec at 37°C.
- Spatial Temp. accuracy $\leq 0.3^\circ\text{C}$ & Temp. fluctuation $\leq 0.1^\circ\text{C}$
- Drift free infrared sensor for measurement of CO2.
- Constant humidity $\geq 95\%$ RH.
- Condensation free interior to prevent growth of contaminants during culture
- Display of set & achieved parameters like Temp. , % of CO2 & humidity.
- Electronic audio-diagnosis system with potential-free alarm audio & visual.

- Power supply 230V \pm 15%, 52Hz \pm 3%
- It should be UL/CE/FDA approved
- Training to laboratory personal
- Operating and detailed service manual should be supplied.

3. ELECTROPHORESIS COMPLETE SET

- Horizontal gel electrophoresis apparatus
- UV transparent Gel tray provided with stable silicon gaskets
- 7x10 cm gel, two comb slots, includes 8-and 15-well combs and gel.
- Safety cover with attached sheathed power chords
- Color coded power supply leads .
- Power supply –
 - power supply – 200-230V/50Hz
 - Output – 0-250 V
- Gel specification
 - Gel sizes, cm (W× L):7 × 10
 - Sample Throughput: 8-30
 - Base Buffer Volume, L: ~0.27
 - Cell size, cm (W × L × H) : 9.2 × 25.5 × 5.6
 - Distance to Electrode, cm : 14.5
 - Bromophenol blue dye migration rates: ~4.5cm/hr (at 75V)
- LED digital display
- Auto shut-off safety feature
- Voltage-stabilizer

SPECIFICATIONS FOR GROUP – D **EQUIPMENTS**

MONOCULAR STUDENT MICROSCOPE

- Body-Sturdy anti rust body with critical movements based on ball –bearing & wire guides so that smooth precise manipulation is ensured.
- Mechanical stage Coaxial low drive mechanical stage
- Focusing system Coaxial coarse & fine focusing control with focus adjustment s & fine adjustment knobs
- Condenser holder Rack and pinion mounted condenser holder
- Built in illumination base with precentered 6V20 W halogen light source along with a efficient collector lens system. A led light source is preferable.
- POWER SUPPLY Vac 50 Hz single phase
- Nose piece Quadruple nose piece based on precision ball bearing mechanism enables smooth objective change
- Condenser Abbe condenser with aperture iris diaphragm. NA1.25 provided with a filter holder and blue holder.
- Objectives Achromatic objectives
- Antifungal treated
- Made from exceptionally high quality optical glass
- Precision engineered for parfocal and centered viewing
- Achromatic objectives 4x, 10x, 40x, spring loaded 100x oil spring loaded
- Monocular inclined observation head 45degree inclined
- Rotatable thro 360 degree
- Anti reflection optical coatings of prisms to enhance the brightness o f the image
- Wide field eye piece
- WF 10 x compatible with an optionally available eyepiece micrometer.

BINOCULAR MICROSCOPE

- 45° inclined with 360 degree rotatable binocular tube
- Co – axial built in Mechanical stage with fine vernier graduation
- Designed with convenient coaxial adjustment for Jerk free smooth slide manipulation through 50x75mm
- Dust proof quadruple / quintuple ball bearing revolving nose piece with positive click stops

- Co-axial coarse & fine focusing adjustment knobs. Fine motion, graduated to 0.002mm
- Sub stage Abbe type N.A. 1.25 condenser with rack and pinion, continuously variable iris diaphragm with built in swing out filter holder.
- With built-in illumination 6V – 20W halogen lamp
- Mechanical Tube length 160mm , with battery backup.

HEMOCYTOMETER WITH RED AND WHITE PIPETTES WITH IMPROVED NEUBAUERS COUNTING CHAMBER

- Inside cell of chamber: an area of 9sq.mm (3X3 Sq.mm) divided in to 9 squares of 01mm side by means of triple lines. The central small square is further divided by triple lines into 5X5 = 25 smaller squares each with side 1/5 of a mm.
- Each of the square is further divided in to 4X4=16 smallest squares with side equal to one twentieth of a mm.
- Thus dimension of individual cell of 0.05X0.05X0.0025mm

CHEMICAL BALANCE WITH WEIGHTS

- Capacity : 0 – 1 kg
- Sensitivity of 1mg.

HOT AIR OVEN

- Lab model with three side heating elements
- Construction with double walled construction.
- Inner chamber made of Aluminium or stainless steel sheet.
- Outer chamber is made of mild steel sheet, finished with powder coated paint.
- The gap between the walls is filled up with special grade glass wool for proper insulation to avoid heat losses.
- Inner chamber has ribs for placing the shelves at convenient levels.
- Supplied with 2 or 3 removable shelves.
- It is fitted with heavy hinges with a ball catcher, spring loaded door closing device.
- Door is duly insulated.
- Elements: heating elements are made of high quality nickel/chrome plated nichrome wire which are put inside beads and placed at the bottom and in both the side ribs for uniform temperature all over the work space.
- Temperature Control: temperature is controlled by imported capillary type thermostat from 50°C to 250°C +/- 1°C.
- Temperature control knob is graduated in centigrade degrees.
- Ovens are supplied without thermometer.
- Ventilation: air ventilators are placed near the top of the both sides to remove hot gasses and fumes if any.
- Control Panel: comprising of switch to ON/OFF the power, switch to select high or low rates of heating, thermostat control knob and indicators for mains and thermostats. Supplied with cord and plug.
- Suitable to operate on 220 volts, 1ph, 50Hz, AC Supply.
- Optional Accessories: Air circulating fan, digital display temp indicator, digital display temp controller cum indicator in lieu of thermostat., microprocessor based PID temp. controller cum indicator in lieu of thermostat., L shaped thermometer (Mercury) or straight type.
- Timer :Size of inner chamber WXHXD = 455X455X455mm,
- No. shelves=2.

DEMONSTRATION EYE PIECES

- Eye piece with a pointer

SAHLIS HEMOGLOBINOMETER

- 1 set Consists of comparator, hemoglobin tube, hemoglobin pipette, stirrer, Pasteur pipette etc.,

ELECTRIC VACUUM EMBEDDING BATH

- Stainless steel body
- Minimum two pots
- Pot depth – 160 mm, pot diameter 150 mm
- External diameter – LxWxD – 670x380x270 mm
- Gauge – vacuum
- Temperature control – digital PID controller
- Minimum temperature – Ambient + 5 °C
- Maximum temperature – 100 °C
- Temperature setting accuracy 0.1 °C
- Power- 2000 W

HOT PLATES ELECTRIC

- Rectangular or round Hot plate
- Cast Iron top 200mm, with Energy regulator
- Sizes: 250X400X150mm, digitally controlled (optional)
- S.S. Top
- Works on 220V AC

PARAFFIN EMBEDDING BATH

- Inner Wall with S.S. sheets
- Slide drying chamber at bottom
- Copper cups and tubes with lids and handle
- Temperature range: ambient +/- 5 to 65°C
- Works on 220V AC.

CENTRIFUGE MACHINE

- Laboratory equipment centrifuge machine high speed
- Heavy duty Sturdy MS Body,
- Well painted finish,
- Maximum speed of 6000RPM at 10/12 tube of 15ml total square body,
- Lid lock manual type,
- Speed control by analogue knob,
- Digital display of timer,
- Timer time 0-60 minutes speed display is digital,
- Speed setting with help of knob,
- Auto off if lid is open,
- Lid breaking system provided,
- Power consumption 500Watt,
- Power requirement 220V and 50 to 60Hz,
- Weight approx. 15Kgs,
- Total noiseless operation,
- Non vibration,
- Complete with head and power lead.

SLIDE CABINET FOR 1000 SLIDES

- Stainless steel, 1000 capacity Wrap proof, break proof for storage of prepared microscopic slides.
- Have slots to accommodate 1000 slides with lid. Wooden with hinged lid, slides are held in numbered slots and there is an index inside the lid.

PAPER ELECTROPHORETIC APPARATUS

- To be used in horizontal and vertical electrophoresis
- Agarose gel based electrophoresis
- Should be compatible with clinical electrophoresis gel analysis software

- Should have an optional I E F chamber for isoelectric for using
- Standard chamber should have a heat shield for use in high resolution application
- Should have option for future upgradation
- More efficient data storage/quality coated
- Widest menu with proteins, lipoprotein, hemoglobin, immunofixation & isoenzymes
- Precise antisera application for IFE with reproducible lane coverage
- Continuous loading of different assays
- Sample application technology to ensure full protein application
- Should have safety features
- Integral electrodes to be supplied
- Warranty for 2 years
- Service engineers to be based in Chennai
- Integrated cooling by Aluminium Block

POLARIZING ATTACHMENT FOR MICROSCOPES

- Standard type

WATER BATH 57 DEGREE CELSIUS

- Double walled, inner stainless steel and outer mild steel sheet and glass window fixed on the front for visibility of sample.
- Heating mechanism should comprise of set of heat us corresponding to faster and lower heating
- Should have stirrer and speed regulator, should operate on 220/230 volts AC/DC.
- Digital temperature controller cum indicator from 5 °C to 80 °C with an accuracy of +/- 1 °C.

PHOTOELECTRIC COLORIMETER

- Wavelength Range: 400-700nm with 8 optional filters
- Filter's peak: 420nm, 440nm.
- Wavelength(Typical): 490nm, 520nm, 540nm, 570nm, 600nm, 700nm
- Measuring Modes: % T, ABS, CONC and K Factor
- Photometric resolution: 0.1%T, 0.01 ABS up to 1.99 ABS (O.D.)
- Display: 3 – Digit LCD
- Concentration Setting Limit: absorbance read out (with decimal point removed)
- Sample value (Min.): 1ml in 4ml cuvet/test tubes
- Director: hermetically sealed photodiode
- Power: 230V+/-10%, 50Hz.

INCUBATOR

- Double walled chamber
- Two doors inner plexi doors
- Three side heating elements on three side of equipment.
- Digital temperature controller cum indicator with forced air circulation fan
- Inner size: 24"x24" X36" (approximate)
- No. of shelves: 03

DISTILLED WATER STILL

- Automatic sensors made available to keep the system in standby mode, when system is not in operation
- Output Ltrs/Hr: 10 lt /hr double distilled
- Quality of distillate: grade 1
- Conductivity us/cm: < 0.2 us/cm, On line conductivity provided to monitor quality of output water.
- Cooling water input for condemnation: 2ltrs/min X 2 inputs ,Water recycling available, no wastage of water
- Power: 230v, 50/60Hz, 2 phase, 12KW approximately

PH METER ELECTRIC

- Digital Electronic (Table/ hand held model)
- Comprehensive range of PH meters which includes digital PH meter,
- Hand held PH meter,

- PH testing meter etc. PH meters are made up using best quality parts and equipments. PH Range: 0-14PH.
- Mill Volt range: 0 to 1999mv.
- Resolution: 0.01ph, 1mv.
- Repeatability: +/- 0.01PH +/- 1mV.
- Accuracy: 0.01 PH+/- 1 digit, 1mV +/- 1 digit.
- Temperature compensation: 0 to 100deg C.
- Operating temperature: 10 Deg C to 50 Deg C.
- Display: 3.5 digit LED display.
- Supplied accessories: Electrode, Stand, dust cover and instruction manual.

WATERBATH RECTANGULAR

- Thermostatic Control/; Boiling water baths with lids having 8 – 12 holes
- Temperature range from ambient to 95°C.
- Thermostatic control with an accuracy of +/- 1C.
- Double walled with inner wall of stainless steel and outer of MS powder coated, with Lids of SS.
- The unit is provided with immersion type heaters top work on 220VAC.
- The unit is supplied with indicating lamps, main chord and Plug.
- Size of the inner chamber-approx. 355x405x100mm;15kw

ELECTRIC BAND SAW

- For cutting bones, Manual Band Sawing Machine
- Technical Specifications:
- Max. Job Height in mm 200
- Max. Throat in mm 200
- Table Size (L x W in mm) 600 x 600
- Blade Speed in mtr /min. 20 - 100
- Blade Size (L x W x T in mm) 3505 x 27 x 0.9
- Saw Motor Capacity in HP 3
- Coolant Motor Capacity in HP 0.16
- Overall Size (L x W x H in mm) 900 x 700 x 2100
- Approx weight in Kg 400

LABORATORY STIRRER

- Standard Type

BALANCE FOR WEIGHING ORGANS

- Sealed stainless steel surface, should be robust and easy to clean.
- Platform size approximately 235x5x170 mm.
- Display should be protected against soiling by fluids.
- Sealed battery compartment.
- One gram graduation.
- Automatic switch off, HOLD function, pre-TARE function.
- With a capacity of upto 10 kgs.
- To weigh in Kg only.
- Batteries to be included.

ULTRAVIOLET LAMP

- Features: high turbulence; non wetting surface; high reliability low maintenance.

X RAY VIEWING BOX

- Regular size, 4 panel side by side X – Ray View box illuminator
- Standard features: 2 lamps (F15IT8/D) per panel,
- Roller gravity film holding systems,

- Durable steel construction,
- Thin 3” profile,
- Chip Resistant hospital white finish,
- Continuous bottom film ledge,
- Even view reflective system,
- UL and cUL listed,
- Centralized cluster on/off switching;
- FAS – film activated switching,
- MS – Master Switch,
- Hospital Grade Plug Specs: surface wall mount 4 panel side by side 56”X17” viewing area overall Dimensions: 56” L 21” H3 3/8 D.
- Illumination: 2000cd/m2.
- Approximate weight 84lbs

SPECIFICATIONS FOR GROUP – E

EQUIPMENTS

MICROMETER STAGE

- Standard Type

WEIGHING MACHINES FOR CADAVER

- Bathroom type Digital weighing scale upto 130kg

STAINING RACKS IN STAINLESS STEEL

- To hold the slides in vertical position before and after staining to hold 10 to 20 slides.

AUTOMATIC TIMER

- Standard Type

SPECIFICATIONS FOR GROUP – F

EQUIPMENTS

MICROSCOPE STUDENTS TYPE

- 45 degree inclined monocular head, rotatable through 360 degree fitted with fungus resistant, anti-reflection coated prism and Locked-in Eyepiece.
- Magnification: - 40X ~ 1000X.
- Plain Stage: with Clips and Stain Resistant Finish.
- Stage size 125m X 145mm with traverse area 50 X 70 mm. True co-axial low drive mechanical stage.
- Quadruple revolving nosepiece
- Focusing by co-axial coarse and fine focusing controls, with a focus adjustment range of 25 mm
- Compensating wide field single eyepiece WF10x (F.N.18).
- Objective lenses: Anti-fungus achromatic objectives 4x, 10x, 40x (spring) and 100x (spring, oil immersion).
- Fully Coated Optical System
- Abbe condenser 1.25 N.A. focusable with rack & pinion through 20 mm and a continuously variable iris diaphragm with removable blue filter.
- Built-In Illumination System with halogen light (6V20 W) illuminator. Detachable power cord with 3pin plug.
- Durable acid resistant epoxy coated finish.
- Supplied with Nylon/ Vinyl Cover.

B.O.D INCUBATOR

- Double walled incubator with Capacity: 3.5 cu.ft (650 x 400 x 400mm -H X W X D)
- Temperature Range: 5 °C to 60°C (accuracy of +0.5 °C)
- Microprocessor based Temperature Controller with Sensor: + 0.2°C.
- Refrigeration system with hermetically sealed compressor.
- Fin & Tube type air-cooled condenser.
- Castor wheels for easy movement
- Polished 304 Grade Stainless Steel inner Chamber.
- Outer made of Mild Steel with powder coated.
- Magnetic gasket, handle, lock for door.
- Facility for viewing inner chamber through sub doors
- Sub doors made of acrylic
- Adjustable ventilation rate from 10 to 100%
- Stainless Steel meshed trays.
- Fully automatic operation.
- Illumination by low wattage lamp.
- Should be supplied with Voltage Stabilizer

SERUM INSPISSATORS

- Inspissator Tank –made of rust-proof stainless steel sheet. Tank capacity – 50 -70 liters.
- Tray also made of stainless steel.
- 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
- A constant water level setup ensuring compensation of evaporation losses.
- The total heat up time – 2- 2.5 hours.
- Digital controller, with an LED/LCD display to indicate set and actual temperature.
- Resolution - 0.1C, uniformity - 0.5-1C and standard working temperature - 85C
- Operating temperature range for the inspissator controller - 0C to 100C.
- Provision of spare heaters, optional
- It should be CE/FDA approved
- Training to laboratory personal
- Operating and detailed service manual should be supplied.

AUTOCLAVE

- Double walled vertical autoclave with wing out nut locking system.
- Vertical type
- Inner Chamber Size : 550-650 x 350-450 x 350-450mm
- Electrical Power : Power input to be 220-240VAC, 50Hz,/440 V 3 Phase as appropriate fitted with Indian plug
- Working pressure and Temperature : 5-30 Psi up to 135 degree C
- Material of construction -Inner chamber , Jacket, Door : SS
- Outer Chamber : SS (insulated properly)
- Steam generator : Non corrosive SS /Chromium plated Brass
- Heater Plate : Brass/Stainless steel
- Pipe Line : Complete with SS
- Stand : Stainless Steel/High quality non corrosive steel
- Instrumentation Temperature , Pressure and vacuum gauges
- Stainless steel Steam jacket insulated with high grade glasswool
- Water level indicator with automatic low water level cut off device
- Joint less gasket
- Pressure switch and safety valve, self-locking of door when chamber is under pressure : vacuum breaker for jacket .
- Supplied with one pressure gauge, two safety valves, one pressure release valve, one SS basket, one wing out opener and suitable heating element.
- User manual in English
- Service manual in English
- Certificate of calibration and inspection from factory.
- Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist.
- Should be supplied with SS perforated drum one in number.

- Requirements at installation:
Necessary Pipeline works for water inlet and steam outlet should be done by the provider. Cable for connecting to wall socket should also be provided.

BALANCE, CHEMICAL

- Weighing capacity – upto 200gms
- Accuracy – 10 µgms
- Pan size 80-120 mm
- Linearity - ± 0.002 gm
- Repeatability - ± 0.002 gm
- Level indicator to be provided
- Glass shield, dust cover to be provided
- Durable and strong control keys
- Easy to clean design

DISTILLED WATER PLANT ALL GLASS

- All glass – double distillation unit, Horizontal type
- Capacity – 1.5 litre
- With Borosilicate boiler, borosilicate condenser & quartz heater.
- Automatic low level water cut off device.

HOT AIR STERILISER

- Inner Chamber -Stainless Steel Size 450mm(w) x 450mm (H) x 450mm (D) approx
- The Dimensions can vary within 2.5 cms on any side
- Out Chamber –Mild Steel with white enamel
- No. of Shelves -3 (Adjustable) stainless steel
- Timer -5-120 minutes
- Temperature range and accuracy - 50°C to 250°C $\pm 1^\circ\text{C}$
- Temperature control knob –graduated in centigrade
- Digital indicator cum controller (electronic)
- Auto-cut temperature mode on higher and lower side with alarm
- Air circulation Fan
- Operable at 220 Volts and 50 Hz.
- Supplied with original manufacturers service manual

MEMMERT INCUBATOR - (Bacteriological digital incubator)

- Double walled, inner chamber made of 18 SWG stainless steel and outer body made of mild steel, finished in powder coating.
- Inner chamber dimensions : 350-450 mm(H) X 350-450 mm(W) X 350-450 mm(L)
- Double door facility with inner door of glass.
- Heating elements on all three sides provided with three heat control switch.
- Temperature range from ambient to 70 °C
- Temperature uniformity ± 0.5 °C
- Temperature control ± 0.2 °C
- Digital temperature display.
- Power supply 230V $\pm 15\%$, 52Hz $\pm 3\%$
- Supplied with @ 3 perforated shelves and cord plug connector.

ANAEROBIC APPARATUS

- Transparent unbreakable jar with 3.5 Liters capacity
- Sturdy lid, clamp and sealing ring with built in safety features.
- System with compound gauge.
- Supplied with Stainless steel Petri-plate carrier, stainless steel test tube carrier and gas pack pkt.

DISTILLED WATER PLANT

- Heavy gauge stainless steel-inside and outside - distillation unit, Vertical type
- Capacity – 5 litre
- With immersion type heater.
- Brackets for wall mounting.
- Automatic low level water cut off device.

pH DETERMINATION APPARATUS (DIGITAL PH METER)

- Digital with LCD display
- P^H range from 4-14
- Combined electrode
- Resolution 0.1
- Accuracy ± 0.01

MICROMETER EYE PIECES

- Glass diameter: $\phi 24$
- Material: Blue plate glass
- Plate thickness: 1mm
- Vapor deposition: Top surface
- Diopter Adjustment Range: ± 5 dpt
- Stationary Scale: 8mm/8div
- Movable Scale : 1mm/100div
- Accuracy of Measurement: 0.01mm

MICROMETER STAGE

- Mounted on stainless steel slide mount
- With cover-glass
- Supplied with protective cover
- Graduated Scale of length 1-20 mm, subdivided giving smallest graduation of 10 micrometer
- Thickness (mm) – 1.1-1.5
- Thickness tolerance (mm) – ± 0.1
- Line width (mm) – 0.001
- Line width tolerance (mm) – 0.001-0.005
- Accuracy – 1-2
- With Internationally traceable certificates of calibration

SPECIFICATIONS FOR GROUP – G **EQUIPMENTS**

DISSECTING MICROSCOPE

- Eye piece 10 x
- Adjustable mirror
- All brass chrome plated parts like pipe, knobs & lens holding arm. Magnification 10x and 20x
Optical lens binoculars, Wide glass stage having two stage clips & detachable hand rests
- Wooden storing carrying case with fitting for lens

ICE LINED REFRIGERATOR (I.L.R.)

- Temperature controlled by microprocessor controller.
- CFC-free polyethylene insulation course · Superior refrigeration effect with an optimized evaporator and condenser design.

- Dual interior layer design features built-in ice packs to keep the chamber temperature at a range of 2 to 8°C for up to 24 hours at an ambient of no warmer than 43 °C without power, presuming the ice-packs are fully charged,
- Meet WHO/UNICEF standards. Ambient rating from 10~ 43 °C.
- Temperature Control. Digital temperature display. Power on/off indicator. Cabinet temperature range 2 °C to 8 °C.
- Ergonomic Design. Safety lock to prevent unauthorized access. Stainless steel interior for cleanliness and ease of use.
- Drainage system for easy cabinet cleaning.

MICROSCOPE OIL IMMERSION

- Hinged type horse shoe base inclinable from 1-90 degree Mechanical tube length: 160±1mm triple revolving nose piece with click stop
- Focusing by separate coarse & fine adjustment with graduated scale
- Fixed square stage 120X120 mm with detachable mechanical stage
- Sub stage Abbe's condenser NA 1.25 with iris diaphragm Swing out filter holder movable by rack & pinion Illumination Built-in 12v 20 watt halogen with rheostat intensity control.
- Base mounted on/off switch, heavy-duty 3-wire grounded electrical system and plug.
- Adjustable down stopper to prevent accidental breakage of the specimen slide optical combination
- Eye piece objective magnification: 5X,10X,15X,10X45X & 100X oil 100X-1500X
- Huygenian (any two) achromatic Accessories: sub stage pin type lamp 20 W - 220V
- Eye piece 10X WF Interchangeable Monocular Inclined tube inclined at 45 degree
- Draw tube ; Co-axial Mechanical stage ; wooden cabinet with Lock & Key.

AUTOCLAVE

- Electric vertical minimum size of 250X 450 and load 1.5 KW Should be double wall
- Microprocessor based electrically heated vertical steam sterilizer Pressure range 15-20 psi adjustable Pressure control switch with digital display
- Outer & inner chamber of stainless steel Inner chamber made of atleast 18SWG SS sheet Inner chamber size 400X400X600mm or cylindrical with a Dia of 400mm and a height of 600 mm Stainless steel steam jacket insulated with high grade glass wool
- Water level indicator with automatic low water level cut off device Joint less gasket Water inlet & drain valves with standard safety features Supplied with standard accessories
- Power input 220-240 V/50 Hz AC Single phase 380-400 V AC 50 Hz Three phase fitted with appropriate Indian plugs & sockets Certificate of calibration & inspection.

INCUBATOR, ELECTRIC

- Width 45 cm, Diameter 45cm, Height 60 cm, Volume 125 lit. Microprocessor controlled
- Temperature range: +5° C to 80°C
- Interior chamber: Stainless steel for easy cleaning and decontamination
- Digital display for temperature and time.
- Timer: 1 min. to 100 hours and hold position.
- Heating by natural convection for homogenous temperature distribution. Minimum turbulence and no cross contamination.
- Adjustable safety thermostat for temp set at 10C increment.
- Temp Accuracy + 10C
- Internal glass door for the observation
- With minimum two adjustable shelves.
- Power 220-240 V; 50/60 Hz

BALANCE ANALYTICAL 200 GM

- Analytical Balance, Capacity 200 Grams, Readability 0.0001 Gram Overall Length 8.4 In, Overall Width 12.6 In, Overall Height 11.9 In Weighing Surface Width 3.3 In, Weighing Surface Depth 3.3 In
- Max 200 Grams, Application Modes Counting and Percent Weighing
- Metal Housing Material, AC Power Unit, UL, cUL, CE Standards, Includes In-use Cover

SPECIFICATIONS FOR GROUP – H

EQUIPMENTS

COMPARATOR, NESSLER

- A system for visual colorimetric chemical analysis suitable for both laboratories & field use Features an adjustable base unit allowing it to be used directly with the comparator or with nessleriser.
- Day light cabinet Provides a constant & stable light source corrected to CIE standard Illuminant C using a tungsten halogen lamp & a calibrated colour temperature correction filter.
- Nessleriser attachment :accepts 2 Nessler's Cylinders, either 113 or 250 mm path length .
- Nessler's cylinder glass 113mm & 250mm path length Matched pair Nessler cylinder stand hardwood with opal glass base plate to hold 6 Nessler's cylinders.
- Cells for comparator: Test tubes square 13.5 mm, 10ml plastic with stopper, Pack of 5 Optical glass cell, rectangular, path length 5mm, 25mm & 40mm.
- Accessory glass colour standard & appropriate reagents.
- Colour discs for comparator: ammonia, chlorine, hardness, nitrite, dissolved oxygen.
- Colour disc for Nessleriser: Chlorine, Fluoride, dissolved oxygen.

CENTRIFUGE CLINICAL , HIGH SPEED WITH TELCOMETER

- With max speed of 6000 RPM at 10/12 tube of 15 ml total square body
- With lid lock manual type, speed control by analogue knob, digital display of timer, power consumption 500 watt, power requirement 220 V & 50 to 60 Hz, wt. approx 15 kgs
- Total noiseless operation, non-vibration, complete with head & power lead

STILL FOR DISTILLED WATER

- Casted aluminum, electrically operated wall mounting, body and condenser jointless.
- Specially meant for pyrogen free distilled water. Fitted with automatic ejection heater.
- Condenser and baffle cups are made of stainless steel.

EXTRACTION APPARATUS, FAT, COMPLETE

- For determination of fat content of milk & milk products and common food items including junk foods

HYDROMETRES, SPIRIT

- 270mm long, covering a range span of 0.050°, sub-divided in 0.001°

SALTERS BABY WEIGHING MACHINE

- Capacity 25 Kg. \pm 100 gm ,material: metal

WEIGHING MACHINE ADULT

- Capacity 150 kg \pm 0.5 kg
- Size: 320mm X 62mm
- Net weight 2.5 kg approx

FILTER, PASTEUR CHAMBERLAND, COMPLETE SET

- Made of porcelain tube that contains a ring of enameled porcelain through which inflow pipe fits the core of a porcelain pipe made up of metal pipe with holes through which water flows out and is collected

FILTER, BERKE FED

- Container capacity: 8 lit. Typical output per day : 80 lit.
- CandleTwo in no. 2.75"x5" Imperial Supersterasyl ATC ceramic candle4, empty weight: 2.7 kg

HARPENDERS CALLIPERS (FOR SKINFOLD THICKNESS)

- Dial graduation: 0 mm - 20 mm, Measuring range 0 mm – 80 mm measuring pressure 10gms/mm²
- Repeatability 0 mm - 20 mm Accuracy 99%
- Accessories - carrying case

STERILIZERS, ELECTRIC (MEDIUM SIZE)

- 300X150X100mm

HEIGHT MEASURING STAND

- Frame work with metal material.
- Fully folding stand with light weight.
- 100% accuracy with inches, millimeter and in centimeters measuring.
- Maximum height measuring capacity is 210cm. Suitable for research purpose.

BAROMETER, FORTIN'S

- Entire construction of metal.
- The metric and English system scales read from 25" to 32" and 64 to 81 cms respectively with reflector behind scale and cistern.
- The Vernier is worked by a milled head of the side operating with rack and pinion and reads 0.1" 0.1 cm.
- Mounted on wood with Aluminium pipes and Aluminium fitting with soda glass tube but w/o thermometer.

BALANCE FOR WEIGHING FOOD STUFF CAPACITY 2 KG

- Capacity: 2Kg. \pm 10g.
- Size: 16cm x 14cm x 12cm
- Unit Weight: 750gms. approx

HYDROMETRES, MILK

- 160mm long.
- Scale calibrated in °SG, sub-divided every 0.001 and adjusted at 15.6°C (60°F).

HYDROMETERS: (1) WET BULB (2) DRY BULB

- Wooden Thermometer easy to use, read fast
- 270 x 80 x 10 mm; range:-10-50° C; Accuracy:1°C
- Material: wood

SPECIFICATIONS FOR GROUP – I **EQUIPMENTS**

DIGITAL KYMOGRAPH

- Microprocessor controlled 10 speed variations.
- Speed range 0.12 to 2.5mm per sec.
- Presetable programs.
- Time preset or rotation preset facility.

- Soft touch controls.
- Back lit LCD Display.
- Memory function, supplied with 150 x 150 mm cylinder.

ANIMAL TROLLEY WITH 12 CAGES

- Fabricated from 1 square hollow pipe & angle of S.S 304 quality material.
- The racks are mounted on four heavy duty 4, dia castors for easy handling and quiet transportation.
- Complete with argon arc joints and mirror finish.
* Available to hold 24 animal cages of size: 29 x 22 x 14 cms. (LxBxH). Rack size: 39 x 12 x 60 (LxBxH).

STARLING'S LONG EXTENSION KYMOGRAPHS WITH TIME MARKERS. THE IDEAL RESPIRATION PUMP (500 CC. CAP.)

- Super Speed Kymograph.
- Respiration Pump. 500cc. capacity geared motor coupled.
- All Main's A.C. Time

FLAME PHOTOMETER

- Microprocessor Control with Filters, Na, K, Li, Ca,-Double display Filters-Narrow band-pass interference filters for sodium, Potassium, Calcium and Lithium available.
- Power supply – Regulated Power Supply to take care of mains variation of voltages between 200 to 250 V Amplifier- Highly stable, High Gain all IC amplifier.
- Display- large, Bright Seven Segment LED Panel meter to display 0-100 scale with negative and over range indication.
- Compressor- with built in regulator and Air Filter to deliver stable and moisture/oil free air supplier.
- Ignition System- Auto Ignition.
- Atomiser- Non-corroding, easily accessible and can be cleaned without putting out the flame.
- Sample Take up rate- 5ml/min approximately.
- Nominal Input Voltage- 220V, 50HZ

METABOLIC CAGES (DIEURETIC STUDY)

- Classic metabolism cages with electronics to monitor the receptacles for food & water.
- Each may be removed without disturbing the animal.
- Optional infrared beam arrays can be mounted on either side of the cage to monitor coordinate activity and rearing behavior.
- Each cage is comprised of interchangeable parts which can be cleaned in a standard vivarium wash station.

METAL MINCING MACHINE

- Featured with noise free motor, and light weight body, fast cutting, corrosion resistance and high tensile strength.

STIMULATOR ELECTRONIC ARTHUR THOMAS

- Thomas Selectable pulse per second in different steps and pulse width, continuous variable volt in multiple of 1 & 10 with Internal, External and Single pulse mode.

CHEMICAL BALANCE - SENSITIVE

- (Micro) digital.
- Balance beam scale, Capacity: 120g/0.01g; 220g/0.01g; 320g/0.01g ; 620g/0.01g ; 1200g/0.01g ; 2200g/0.01g; 3200g/0.01g.
- Power: AC/DC with lithium battery.
- Display: LCD/LED with back light, Pan Size: diameter 130mm

AUTOCLAVE ELECTRIC

- Size 550x750 mm Seamless made of thick aluminum provided with safety valve, pressure gauge for the pressure inside the unit, steam releasing valve, electric heater running on 220v, 50hz, the electric heater 3kw capacity, bakelite handle to carry the unit, unit based on heavy metal three leg stand, supplies with power cable and one spare gasket and one spare heating element.
- To be provided with pressure gauge, steam release cock, spring to any required point from 10 psi to 20 psi with accuracy, a drain cock, a double safety valve along with water inlet.

COPPER TRAYS

- Size: 10" x 8" x 1"

DEIONIZER

- Two of capacity 20 litres per hour and 6 litres per hour (mixed bed type) connected in series

ASSEMBLY FOR MAMMALIAN CLASSES

- A versatile assembly serving both for heart perfusion and as an all-purpose thermostatic organ bath.
- The transparent perspex bath is 12"x9"x8" and rests on a metal stand: A 1"x3/8" thick edge at the top makes clamps etc. carrying the uprights and Temperature of the bath is regulated (CONSTANT).
- Thermostatic sensitivity 2C.
- The stirrer unit is completely independent, and dips into the bath in one corner, and fixes on its special stainless steel upright.
- A perspex connection box is fitted to the bath frame, and carries all the electric leads and connections.
- Two pilot lamps indicate the thermostat and stirrer operation.
- Extra accessories to enable the unit to be used as an all-purpose organ bath (2 unit) are:
 1. Double set of glass inner vessels.
 2. Oxygen tubes.
 3. Warming coils.
 4. Levers with stainless steel capillary.
 5. Four uprights with boss heads.
 6. X blocks.

Complete assembly with upright stand, double reservoir, mercury manometer.

MICROSCOPES ORDINARY

- Laboratory Microscopes, tube length 160 mm with smooth rack and pinion coarse adj. graduated fine motion, with 2 Huy. eyepieces x10 and x15 (or x5) Achromatic objectives x10, x45 (SL) and x100 Oil Immersion objective with imported capsule mounted by us; built in graduated Mechanical Stage, NA 1.25 condenser with iris with rack and Pinion adj. filter holder with day light filter plano concave reflecting mirror moving in gimbals.

BRODI'S OPERATION TABLES

- Modern Experimental Operating Table.
- Now with all steel frame designed for greater stability.
- Stainless steel top 127x45 cm. in two halves slopping towards the central drain, warming chamber, castors, moving handles, with animal holder, stainless steel tray and two uprights.

ASSEMBLY FOR PERFUSION APPARATUS FOR MAMMALIAN HEART

- With double thick organ bath system and complete set of glasswares and accessories.

ALL GLASS DISTILLATION APPARATUS CAP.2 LITRES

- Automatic Electrically Heated, all Borosil glass distillation apparatus with heavy metallic stand, plug and cord operable on 220V AC.
- Auto cut device & double stage.

DISSECTION INSTRUMENT

- Sets containing Surgical Standard Scissors-2, Curved Scissors-2, Pointed Scissors-2, Artery forceps-2, Mosquito Artery forceps-2, Scalpel handle-2, Plain forceps-2, Toothed forceps-2, Small retractors-2 etc. Probes-2, hooks-2.
- To be supplied with proper cover and box.

COOK'S POLE CLIMBING APPARATUS

- Should be having 2(two) chambers, an outer chamber made of thick plywood sheet with an observation window and inner animal chamber made of clear acrylic sheet with a brass bar at the bottom.
- A built in shock of 200V AC, 50 Hz single phase with min of 0.2mA and is to be controlled by min of 11 position solid state timer up to 30 seconds.
- Should be having output terminal for kymograph/recorder.
- Animal dropping tray to be provided to keep the equipment clean.

VACUUM & PRESSURE PUMP CENCO

- Single stage oil sealed air cooler V-belt and mounted on a base plate with belt guard etc. with a suitable HP motor operable on 220V AC. Displacement lit. /minut.

AUTOMATIC ELECTRIC RECORDING DRUMS

- New Super Ten Electrical Kymograph: For Pharmacology and Drug Assay; close mesh gear train; 10 speeds; 1 rev. in 1 min. to 1 rev. in 12 hours 30 minutes.
- Speed selection through a convenient dial knob.
- Special heavy duty motor.
- No backlash no slow starting on slow speeds.
- Jerk free movement.
- Stainless steel spindle with screw lift 15x15 cm cylinder with leveling screws, pilot lamp, plug and cord.

ELECTRO-CONVULSIOMETER

- Should be able to use for producing minimal and supra minimal seizures required for assaying of anti-epileptic and anticonvulsant drugs.
- Should provide minimum 50Hz stimulus current which can be adjusted 0.15mA to 330mA in steps, with one pair corneal electrode 4,6 or 8mm cups.
- And one pair of ear clips work on 220 A.C.
- Should contain electronic timer device from 0.1 to 3 seconds in steps to control the stimulus current and LED indicator for duration of stimulus.

INCUBATORS

- Single door with glass window.
- S.S. inner chamber.
- Sleeves from stainless steel mesh.
- Heaters on three sides.
- Temperature upto 80 degree C with Prismatic Glass Thermometer L shaped.
- Inner Chamber size 40x40x40 cm. (16"X16"X16")

INCUBATOR ELECTRIC

- Size 14" x 14" x 14".
- These are controlled by thermostat of hydraulic cabinet to sensitivity of 800c with 10c beaded heating elements which are placed at sides and bottom in the ribs.
- These incubators are doubled walled, inside wall with stainless steel or aluminium and outside wall with enamel painted mild sheet and door with double viewing glass.
- Apart from these, incubators are built in l shape horizontally consist tow pilot lamps, shelves, with on/off switch working on 220/230 volts a. C, equipped with digital temperature control indicators

ROTAROD ASSEMBLY

- With 3 digit counter
- Should have 5 chambers, 75mm width each with a rotating rod of 25mm diameter having speeds of 5,10 15,20 and 25 r.p.m.
- Digital rpm indicator and digital time counters.
- Each counter runs from the beginning of the test until the animal falls from the drum to the lane.
- Electronic change of speed from 4 -120 rpm.

FOUR UNIT ISOLATED ORGAN BATH PALMER F.67

- Organ bath tube.
- Reservoir coils.
- Tissue holders.
- Water circulation pump - for maintaining uniform temperature.
- Gas diffusers (aerator controllers)
- Temperature controllers: analogue or digital (as per model)
- Frontal writing lever.
- Couplers set four sets of glass inner vessels. Oxygen tubes, warning coils, fixit levers and holders.

BALANCE SEMI MICRO

- Easy access doors, PAN SIZE 2.5 TO 5 INCH, CAPACITY 100 GM.
- Advanced stabilization software.
- System Diagnostic.
- Underhook capability.
- LCD (Liquid Crystal Display) Display.
- 0.01mg Semi-Micro Resolution.
- Splash Proof Keyboard & Display.
- GLP/GMP/ISO Compliance.

B.P. APPARATUS

- Aneroid Sphygmomanometer Apparatus with wheels Mercury-free Square shape dial approx. 145mm x 145mm Adjustable height of stand Adjustable gradient for easy reading Five (5) wheels equipped with stopper for anti-slip mechanism Standard cotton cuff 2 tube adult latex bladder Standard latex bulb Air release valve with spring Standard end valve Spiral PVC tubing (1.8m).

ACTOPHOTOMETER

- Actophotometer with 3 digit display
- The frame is equipped with 32 infrared photocells, 16 placed in axis X and 16 placed in axis Y.
- The Photocell work at a wavelength of 950 nm and its information is multiplexed at a rate of 40Hz.
- Hole board plate is provided with 16 holes of diameter and detection depth 1, Should contain incorporated electric shock facility (variable) 0 to 100 volts for activating rats and indicating on meter. cm.

HOT AIR OVEN

- Size 14"x14"x14"
- Lab model with three side heating elements
- **Construction:** with double walled construction.
- Inner chamber made of Aluminium or stainless steel sheet.
- Outer chamber is made of mild steel sheet, finished with powder coated paint.
- The gap between the walls is filled up with special grade glass wool for proper insulation to avoid heat losses.
- Inner chamber has ribs for placing the shelves at convenient levels.
- Supplied with 2 or 3 removable shelves.
- It is fitted with heavy hinges with a ball catcher, spring loaded door closing device.
- Door is duly insulated.

- **Elements:** heating elements are made of high quality nickel/chrome plated nichrome wire which are put inside beads and placed at the bottom and in both the side ribs for uniform temperature all over the work space.
- **Temperature Control:** temperature is controlled by imported capillary type thermostat from 50°C to 250°C +/- 1°C.
- Temperature control knob is graduated in centigrade degrees.
- Ovens are supplied without thermometer.
- **Ventilation:** air ventilators are placed near the top of the both sides to remove hot gasses and fumes if any.
- **Control Panel:** comprising of switch to ON/OFF the power, switch to select high or low rates of heating, thermostat control knob and indicators for mains and thermostats.
- Supplied with cord and plug. Suitable to operate on 220 volts, 1ph, 50Hz, AC Supply.
- **Optional Accessories:** Air circulating fan, digital display temp indicator, digital display temp controller cum indicator in lieu of thermostat., microprocessor based PID temp. controller cum indicator in lieu of thermostat., L shaped thermometer (Mercury) or straight type.

SUCTION PUMPS

- 1 / 4 hp heavy duty motor fitted to oil immersed vacuum pump.
- Two wide mouth glass bottles of approx. 1600 ml each.
- Synthetic airtight rubber lids.
- Non-collapsible pvc tubing.
- Two separate vacuum gauge for each system.
- Vacuum of electric suction 700 mm + 10mm hg.
- Complete vacuum of vertical foot suction 600 mm hg.

ANTI-HISTAMINE CHAMBER WITH MANOMETER

- Should be a complete Histamine aerosol apparatus having a Acrylic box with nebulizer Sphygmomanometer and Chloroform bellows for assay of antihistamine drugs on Guinea-pig etc.

MANOMETERS MERCURY PALMER C-200

- All Manometers are fabricated from true-bore Borosilicate glass, floats are perfectly lapped to eliminate leakage and are fitted with feather weight Stainless Steel capillary.
- Standard Mercury Manometers : Without stopcock, with adjustable scale.

CAUTERY MACHINE, ELECTRIC BLENDSONE

- Constructed on heavy cast iron angles covered with thick gauge mild steel sheet duly powder coated.
- Electrically operated. Stainless Steel Top.
- Adjustment of the cutter for upward & downward position.
- Total unit on casters for easy mobility.

ANIMAL BALANCE TRIPLE BEAM

- This Balance provides sensitivity and long service by use of covered, self-aligning agate bearings and precision hardened knife edges.
- Magnetic damping speeds weighing by quickly arresting beam oscillation without affecting sensitivity or accuracy.

FILTERING APPARATUS SIETZ FILTER AND MILLIPORE FILTER

- Made from solid S.S. bar for effective filtration of all types of liquids.
- Capacity min of 14cm to take 140mm filter pad cap.500ml.
- To be supplied with filter pads 50 nos.

SPECIFICATIONS FOR GROUP – J **EQUIPMENTS**

COLORIMETERS

- Filter photo Colorimeter Digital Photo.
- Colorimeter with 8 filters, mains operated.

ANALGESIOMETER

- Radiant heat type with digital timer
- Thick pure aluminum plate (12mm) provides a very high temperature stability and even surface distribution.
- Plate temperature can be held at a set point between above ambient to 70°C (+/- 0.2°C).
- A built-in timer activated by an external foot switch allows the precise measurement of the reaction time (0.1 sec resolution).
- Remote foot-switch controls the test start/stop allowing rapid Hands-free experiments.
- Provided with the calibration certificate of the temperature indicator.

PLAIN STAND

- Plain stand : 38cms.
- High Stainless upright.

CHEMICAL BALANCE-ORDINARY

- (Analytical) with weight box.
- Best quality with divided doors show case, capacity 250 gms.
- Sensitivity 1-2 mgm having all stone agates fitted in open graduated beam.

WATER BATH, METAL

- 3 inch diameter, Thermostatically controlled double walled, complete with contact thermometer and stirrer.

DISPENSING BALANCE WITH METRIC SYSTEM WEIGHTS

- 50 gms with s.s pans, Single Brass beam equal arm double Pan with extended support balance with metric system weights Should be in Teakwood case on wooden/formica base.
- Capacity 250gms.,sensitivity 1mg.

DIGITAL PH METER

- Digital Electronic (Table/ hand held model); comprehensive range of PH meters which includes digital PH meter, Hand held PH meter, PH testing meter etc.
- PH meters are made up using best quality parts and equipments.
- **PH Range:** 0-14PH.
- **Mill Volt range:** 0 to 1999mv.
- **Resolution:** 0.01ph, 1mv.
- **Repeatability:** +/- 0.01PH +/- 1mV.
- **Accuracy:** 0.01 PH+/- 1 digit, 1mV +/- 1 digit.
- **Temperature compensation:** 0 to 100deg C.
- **Operating temperature:** 10 Deg C to 50 Deg C.
- **Display:** 3.5 digit LED display.
- **Accessories:** Electrode, Stand, dust cover and instruction manual.

LONG EXTENSION FOR PAPER PALMER A-130

- Should be able to take paper min. of 2 meters length and consists of a bar upon which one cylinder can slide.
- The arm should be forked to be slided over the drum and leg fixed in position.
- Levelling screws should be provided for accurate alignment with drum.

TEMPERATURE CONTROLLED WATER BATH 37°C

- Thermostatically controlled, double walled.
- Glass window on two opposite sides contact thermometer with relay.
- Complete with stirrer.
- Size not less than 450 x 375 x 375(18" x 15" x 15")

VORTEX MIXER

- Designed with a heavy cast aluminum body to provide optimum bench-top stability.
- The mixer has two modes of operation: Continuous operation when you need to mix a quantity of tubes in sequence; intermittent operation is activated by touching the cup attachment with a test tube.
- Equipped with a single tube mixing cup for single tube mixing and a soft foam pad and mixing platform for mixing 1 - 4 test tubes simultaneously.
- To be supplied with a fractional workable motor on 220V AC completed with indicator, plug & cord

MACHINE FOR BIG ANIMALS LIKE DOGS (>5 KGS)

- Animal weighing scale; livestock scale: Slipproof -pan, waterproof-design, with railing and door.
- High legs for rough ground.

APPARATUS FOR ISOLATED RABBIT INTESTINE ETC.

- A cylindrical copper bath with heating element controlled by thermostat.
- Complete unit with uprights, glass inner vessel & Oxygen tube with platinum tip frontal lever from SS capillary tubing.
- Fitted on teak base board.

INSTRUMENTS STERILLISER ELECTRIC

- Size 12" x 8" x 6".
- Provided with timer from 1 to 60 Min with double safety valve, steam releasing valve, pressure gauge for the pressure inside the chamber, and one pressure gauge to show the pressure of outer chamber both the chamber made of stainless steel lid of the unit made of heavy duty gun metal piece for extra safety, gasket, water level indicator to see the water inside, heavy duty power plug with socket provided with the unit.
- Should be able to sterilize day to day Blunt Surgical Laboratory Instruments.

MICROSCOPE STUDENTS TYPE WITH MECHANICAL STAGE AND OIL IMMERSION.

- Laboratory Microscopes, tube length 160 mm with smooth rack and pinion coarse adj. graduated fine motion, with 2 Huy.
- eyepieces x10 and x15 (or x5) Achromatic objectives x10, x45 (SL) and x100 Oil Immersion objective with imported capsule mounted by us; built in graduated Mechanical Stage, NA 1.25 condenser with iris with rack and Pinion adj.
- filter holder with day light filter plano concave reflecting mirror moving in gimbals.

HOOK GRIP RODS

- Muscle Grip with 6mm Dia.
- Stem to fit boss heads.

PLETHYSMOGRAPH ASSORTED

- High Resolution Volume.
- Resolution:0.01ML, Accuracy+/-0.01ml.
- Easy to use Pedal switch.
- LCD Graphic Display.
- Connectivity to computer.

MAGNETIC STIRRER B.T.L.

- The stirrer with a hot plate is made of metal sheet with stainless steel top which serves as a hot plate.
- Its stirring and heating units are thermally insulated with asbestos sheet laminated with asbestos cement.
- It is fitted with an electronic regulator to control the speed of the stirrer.
- A energy regulator adjust the heating of the hot plate.
- The apparatus work on 220/230v ac.
- Laboratory magnetic stirrer is finished in oven baked paint.

MACHINE FOR SMALL ANIMALS LIKE RATS AND GUNEA PIG (UPTO 5KG'S)

- Animal weighing scale; livestock scale: Slipproof -pan, waterproof-design, with railing and door.
- High legs for rough ground.

JACQUETS GRAPHIC CHRONOMETER

- To record the timelines for respiration in animals etc.

TABLET DISINTEGRATION MACHINE GLASS TUBING (LENGTH OF 6 FT.)

- Hooper diameter of minimum 2".
- Should be fitted with min 4 steel hammers fixed to a disc and Shaft being revolved at the speed of 3000 RPM.
- Rotation in vertical manner is made by FHP Motor which carries a specially designed Basket to hold 6 Nos. of Tablets/Capsules under specified weight, moving vertically in temperature controlled glass vessels/Beakers placed on Hot Plate.
- having special type of starter facility operatable on 220 Volts AC supply.

WATER BATH 4 HOLE ELECTRICALLY HEATED

- 3 inch diameter, Thermostatically controlled double walled, complete with contact thermometer and stirrer.

VARNISHING TRAY WITH FOOT LEVER

- Size 14 inch x 20 inch, Should be able to use for varnishing purposes of smoked papers

DISTILLATION APPARATUS

- Manesty type with spare heater.

DISTILLED WATER STILL MANESTY ELECTRICAL

- Cap. 2 gallo per hour
- Manesty type, stainless steel construction.
- Electrically operated capacity 4 lit./hr.
- Heater of 4 KW capacity.

WARING BLENDER M.S.E.

- Double con, Warings sealed, precision, hi-tech ball bearing system Easy to clean electronic membrane control panel with Pulse Mode provides precision operation.
- The Standard in Quiet Operation.
- Waring encases its industry-leading 3.75-HP motor for quiet operation.
- The Standard in Stability.
- Deeper, wider, full traction rubber non-skid feet keep the blender stable.
- Container Stainless steel with stainless steel blades - stainless steel clamp-on lid with rubber gasket and stopper.

CENTRIFUGE ELECTRIC INTERNATIONAL R.P.M. 3000

- Digital speed indicator
- Step less speed regulator with zero start switch.
- Digital automatic timer 0-99 mts.
- Dynamic brake.
- Unbalance cutout switch.
- Brush wears indicator
- Castors for full mobility

- Lid-interlock.
- Digital temperature indicator-cum controller.
- Hermetically sealed refrigeration unit.
- Key operated mains switch.
- The centrifuge lid should have electrical interlock.
- Lowest temperature 0⁰ C, 3.2 KVA.

TETANUS SET PALMER H2O

- Complete unit on two stands with mercury cup and magnet.

STANDARD X BLOCK

- Machined from solid brass rod.
- To hold 9mm and 6mm dia rods.

MECHANICAL STROMHUR

- Ludwig's "Stromuhr" consists of a XJ- shaped glass tube dilated at a and a', the ends of which, h and i, are of known calibre.
- The bulbs can be filled by a common opening at k.
- The instrument is so contrived that at b and b', the glass part is firmly fixed into metal cylinders, attached to a circular horizontal table.

CONDONS DROP RECORDER – PALMER B-75

- Three Silver spirals

PNEUMOGRAPH PALMER E

- ECorrugated rubber tube with side clips, open link chain

ONCOMETER KIDNEY

- Kidney oncometer, for measuring blood flow through the kidney.

RAZOR HONE

- Razor Hone double sided (Coarse & Fine) motorized

TRACHEAL CANULA METAL PALMER E.76

- Made of Brass with adjustable Air-vent.
- Should be able to use for endo-tracheal intubation of big animals like Dog & Cats.

ANNEXURE-I

TENDER FOR THE SUPPLY OF EQUIPMENTS & INSTRUMENTS REQUIRED FOR
USE IN THE ESIC MEDICAL COLLEGE & PGIMSR, K.K NAGAR, CHENNAI-78

To

The Medical Superintendent
ESIC Hospital
KK Nagar
Chennai-78.

Sir,

Sub: Forwarding of Tender documents for Equipments & Instruments. Reg

We have pleasure in submitting our tender for _____

We enclose herewith a Demand Draft No. _____ Dt _____ for Rs. _____
drawn in favour of the Medical Superintendent, ESIC Hospital, K.K Nagar, Chennai-78 towards
Earnest money Deposit.

We bind ourselves to the conditions prescribed in the Tender Notification.

We agree to have the Earnest money forfeited in case of failure in full or part to undertake
the contract upon the acceptance of this tender.

OFFICE SEAL:

SIGNATURE:

DESIGNATION:

NAME & ADDRESS:

Annexure II

TERMS AND CONDITIONS FOR THE SUPPLY OF EQUIPMENTS & INSTRUMENTS

1. Sealed tenders will be received up to and including the date stipulated by the Medical Superintendent, ESIC Hospital, K.K Nagar, Chennai -78 for the purchase of Equipments & Instruments.
2. **FOR SINGLE BID SYSTEM.**
The sealed envelope containing the completed tender super scribed as “**SINGLE BID TENDER FOR THE SUPPLY OF EQUIPMENTS & INSTRUMENTS GROUP _____(Group name) _____ (Name of Equipment) for the Department of _____(Name of the department) Due on _____ (Last date of submission)**” “ should be addressed to The Medical Superintendent, ESIC Hospital, K.K Nagar, Chennai-78.
3. **FOR DOUBLE BID SYSTEM.**
The sealed envelope containing the completed tender super scribed as “**TECHNICAL BID FOR THE SUPPLY OF EQUIPMENTS & INSTRUMENTS GROUP _____(Group name) _____ (Name of Equipment) for the Department of _____(Name of the department) Due on _____(Last date of submission)**” on first envelope and “**PRICE BID FOR THE SUPPLY OF EQUIPMENTS & INSTRUMENTS GROUP _____(Group name) _____ (Name of Equipment) for the Department of _____(Name of the department) Due on _____(Last date of submission)**” on the second envelope.
Both the envelopes are again to be sealed and put in a single envelope super scribing “**TENDER FOR GROUP _____(Group name) _____ (Name of Equipment) for the Department of _____(Name of the department) Due on _____(Last date of submission)**” should be addressed to The Medical Superintendent, ESIC Hospital, K.K Nagar, Chennai-78.
4. Postal delays if any, will not be condoned.
5. Tenders will be opened at the office of the Medical Superintendent, ESIC Hospital, K.K Nagar, Chennai-78 on the stipulated date & time in the presence of the tenderers/representatives who choose to be present.
6. The two part bids i.e. Techno-commercial and price bid prepared by the Bidder shall comprise the following:
 - A. **Techno-commercial Bid (Unpriced Bid):** This should include the following:
 - Bid security (EMD) should be furnished in accordance with instructions.
 - Detailed technical specification of items quoted along with the catalogue/literature, make and model of the equipments offered without indicating price.
 - Statements of Deviations from tendered Commercial conditions, if any.
 - Statements of Deviations parameter wise from tendered specifications, if any.
 - Authority letter from manufacturer in case bid is submitted by agents.
 - Bidders have to indicate the name and address of the bankers.
 - Documentary evidence that the goods and ancillary to be supplied by the bidder are eligible goods and services and conform to the bidding documents.
 - B. **Price bid:**
 - The information given at Techno commercial bid should be reproduced in price bid with prices indicated. Any deviation in this regard will render the bid liable for rejection.
 - Rates should be typed in words as well as in figures, free from erasing, cutting and overwriting.
 - Price quoted should match with the items quoted in technical bid.
 - Each and every page of the quotation should be separately numbered and duly signed.
 - In case the price quoted cannot be matched with the item/s quoted in technical bid, the bid shall be liable to be rejected.
 - **Rates and Sales Tax/ VAT must be quoted separately.** The price should be all inclusive lump sum price offered for each item including cost of the equipment, freight, Insurance, transit insurance, packing forwarding etc. and including charges for installation and commissioning with all men and material required for the same and including charges for the quoted warranty period.
 - The rates quoted should be F.O.R ESIC Medical College & PGIMSR, K.K Nagar, Chennai - 78. No other charges in addition will be payable on any account over and above the lump sum

price quoted in the price bid. The rates quoted in ambiguous terms such as “Freight on actual basis” or “Taxes as applicable extra” or “Packing forwarding extra” will render the bid liable to rejection.

- In the two-bid system, only Techno-commercial bid (un-priced bid) will be opened first on the date mentioned in the presence of bidders who choose to be present. The price bid of the firm whose equipment is technically viable fulfilling the specifications and all other conditions alone will be considered for evaluation.
- **For goods offered from abroad, the prices in the corresponding price schedule shall be entered separately in the following manner:**
 - a) the price of goods quoted FOB port of shipment
 - b) the amount of freight and insurance and price of goods quoted CIP port of entry in India
 - c) the price of goods quoted should be on DDP basis at consignee site in India as indicated in the Price Schedule and Consignee List;
 - d) wherever applicable, the amount of custom duty with CDEC applicable on CIP value on the goods to be imported; ESIC will issue Customs Duty Exemption Certificate (CDEC) where applicable.
 - e) the charges for Loading/Unloading, Inland transportation, Insurance and other local costs, Incidental cost to delivery of the goods from the port of entry in India to Consignee Site shall be borne by the tenderer.
- A Certificate that the quoted items have not been supplied to any other organization/institution at a rate, lower than quoted here should be enclosed.
- For imported goods, the price quoted shall not be higher than the lowest price charged by the tenderer for the goods of the same nature, class or description to a purchaser, domestic or foreign or to any organisation or department of Govt. of India.
- If it is found at any stage that the goods as stated have been supplied at a lower price, then that price, with due allowance for elapsed time will be applicable to the present case and the difference in cost would be refunded by the supplier to the purchaser, if the contract has already been concluded.

7. Tender currencies

- The tenderer supplying indigenous goods or already imported goods shall quote only in Indian Rupees.
- For imported goods if supplied directly from abroad, prices shall be quoted in any freely convertible currencies say USD, Euro, GBP or Yen. As regards price(s) for allied services, if any required with the goods, the same shall be quoted in Indian Rupees only if such services are to be performed /undertaken in India.
- Tenders, where prices are quoted in any other way shall be treated as non-responsive and rejected.

8. Bid Security (EMD)

The tender must be accompanied by EMD as mentioned against the equipment in the form of Demand Draft only drawn in favour of The Medical Superintendent, ESIC Hospital. K.K Nagar, Chennai-78, payable at Chennai. The tenders not accompanied by EMD is liable for rejection. For EMD exemption, if any, necessary documents for exemption should be submitted, otherwise tender will be liable for rejection. Advance stamp receipt for the refund of EMD should be enclosed with the tender documents.

9. The tender should be type written and every correction in the tender should invariably be attested by full signature by the tenderer with date before submission of the tenders to the authorities concerned failing which the tender is liable for rejection.
10. Either the authorized Indian agent on behalf of the principal/OEM or principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.
11. If an agent submits bid on behalf of the principal/OEM, the same agent shall not submit a bid on behalf of another principal/OEM in the same tender for same item/product.
12. Copies of purchase order for having supplied to Government Hospitals / reputed institutions should be enclosed. The rates quoted in the purchase order should not be deleted or made illegible. A certificate duly authenticated from any other users of the equipment about satisfactory performance should also be enclosed.
13. Firms should also give a certificate that spares/ consumables/ reagents of the equipment quoted will be freely available at least for five years after warranty period.
14. **The rates quoted should be valid for one year from the date of approval of the tender by the competent authority.**

15. Only the item/s of manufacturers or their authorized distributor/stockist would be considered.
16. Successful bidder shall not be entitled to any rate revision of price for any reason except that allowed by Government of India.
17. For the equipment where reagents, cartridge, consumables, etc. are required. The price bid must include: A) Rate list indicating the prices and packing prevalent on date of tendering. B) List indicating cost and life of consumables C) The rate for reagents, consumables etc. should remain constant during the warranty period.
- 18. The equipments should be Guaranteed/ Warranted (Comprehensive) for a minimum period of three years from the date of satisfactory installation and inspection.**
19. Tenderer should be able to demonstrate the product quoted by him to the Technical Evaluation Committee in Chennai within the stipulated period as and when asked for.
20. The company will get only one chance for demo. In case the company fails to arrange the demo the tender shall liable to be cancelled.
21. The date for demonstration shall be fixed with mutual consent on telephone/e-mail and the same shall be confirmed in writing or by fax. In any case not more than two weeks time shall be given to arrange for demo.
22. The successful bidder should furnish Performance Security Deposit @ 10% of the value of the contract.
23. Photocopy of latest ITR/ PAN No. should be enclosed with the completed tender.
24. Firm should undertake to enter into **Annual Maintenance Contract (AMC/CMC)** for equipment as well as for accessories attached, **for minimum period of five years** after completion of warranty period and accordingly quote the rates of AMC/CMC for five years. **The rates for AMC (Labour) should not exceed 3% and for CMC should not exceed 10% of the unit cost and should remain fixed for five years.** Firm should undertake to keep the equipment in running order throughout the year and in case of equipment going out of order during warranty/AMC/CMC the fault will be attended within 24 hours and rectified within 7 days of lodging the complaint.
25. If the equipment needs calibration, the firm shall be responsible for calibration as part of CMC/AMC.
26. The Medical Superintendent, ESIC Hospital, K.K. Nagar, Chennai-78, will be at liberty to terminate the tender proceedings without assigning any reasons thereof. The bidder will not be entitled for any compensation whatsoever in respect of such termination.
- 27. One copy containing terms and conditions and schedule of this tender should be signed by the tenderer at the bottom of each page with the office seal duly affixed and returned along with the tender.**
28. Declaration form and Company profile formats enclosed must be filled in and signed by the tenderers and enclosed along with the tender. Tenders received without the Declaration form shall not be considered.
29. No articles shall be supplied to the Hospital except on requisition in writing signed by the Medical Superintendent or by an officer authorized by him/her in writing to do so.
30. The contract should not be sublet without the prior written permission of the Medical Superintendent.
31. For imported items, Customs duty exemption certificate, wherever applicable, will be issued by the Medical College & PGIMS and the price to be quoted accordingly. The tenderer will assist in opening of Letter of credit for an amount of 90% of the cost of the instruments and undertake all the activities related to release of equipments from customs in the presence of an official of ESI CORPORATION and deliver the same at central stores on the same day of release from the customs. Any demurrages on account of delayed clearance from the customs will be borne by the tenderer. The Medical College & PGIMS will provide all the documents necessary for clearance from the customs and the same should be indicated by the tenderer.
- 32. BIDDERS ARE FREE TO QUOTE FOR ONE OR MORE EQUIPMENTS BUT SEPARATE ENVELOPE FOR EACH EQUIPMENT SHOULD BE USED AND SEPARATE DEMAND DRAFT TOWARDS EMD FOR EACH EQUIPMENT SHOULD BE ENCLOSED, FAILING WHICH THE QUOTATION FOR THAT EQUIPMENT WILL BE TREATED AS UNRESPONSIVE AND SUMMARILY REJECTED. QUOTATIONS FOR SEPARATE EQUIPMENT BY THE SAME BIDDER SHOULD BE SUBMITTED IN SEPARATE ENVELOPE AND SHOULD NOT BE PUT IN A COMMON COVER.**
33. TENDER DOCUMENTS THAT ARE BEING SUBMITTED IN PERSON ARE TO BE DROPPED IN THE TENDER BOX KEPT IN THE FIRST FLOOR OF ESIC HOSPITAL.

34. Bidders in their own interest shall ascertain the eligibility of whatsoever concessions and exemptions are eligible and applicable to the Medical College & PGIMS and shall advise the purchaser and quote accordingly.
35. **Delivery Schedule.**
Within 60 days after placement of supply order. The delivery should be at the place shown by the receiving officer within the premises of the Medical College at the cost of the supplier. For imported items an enhanced delivery period, if required can be agreed and the same should be indicated clearly. If the successful tenderer fails to execute the supply within the stipulated period, penalty of 2 % of the value of the order will be levied for a delay of one week or part of the week subject to a maximum of up to 10%. Failure to execute the supply will lead to cancellation of supply order and the Performance security will stand forfeited.
36. The payment towards the supply is subject to receipt of inspection note/performance certificate to the effect that the items supplied are conforming to the supply order placed.

MEDICAL SUPERINTENDENT

Annexure III

COMPANY PROFILE

1. Name of the firm
2. Full address
3. Telegraphic Address
4. Telephone no.
5. Tele/Fax no.
6. Date of establishment of firm
7. Is your firm registered under
 - The Indian Factories Act
 - Companies Act
 - Any other Act
8. Name & address of your Bankers.
Stating the name in which the
Account stands
9. Are you on the list of approved
Contractors of any other authority
(if so please give details)
10. Give details of any Govt. contract
Executed during the last 12 months
11. Are you a Manufacturer If so
Please furnish the items you
Manufacture
12. Are you a small scale industry
Registered with appropriate
Authority.
13. Are your products certified by ISI?
If so furnish details
14. Any other information which you
Consider necessary to furnish

DATE

SIGNATURE:

NAME & ADDRESS:

Annexure IV

DECLARATION FORM

We _____ having our office
at _____ do declare that we have
carefully read all the conditions of Tender for the supply of _____ and
abide by all the conditions set forth therein by the Medical Superintendent, ESIC Hospital, K.K Nagar,
Chennai-78.

We further declare that we _____ possesses valid license bearing
No _____ Valid upto _____

DATE:

SIGNATURE:

SEAL:

NAME & ADDRESS: