

SR. No.	Name Of The Item	Specification	No. Required
1	Analytical Balance : upto 200g/1gm increment	<b>Specification</b>	2
2	Urinometers calibrated (Mercury based instruments to be replaced with other alternatives)	<b>Urinometers</b> Urinometers calibrated, Urinometers ( set requires a small amount of urine for testing, )	20
3	Hot air oven (More than 200 litres)	<b>HOT AIR OVEN</b> Digital display controlleer equipment suitable for daily usage. Should have double walled construction, special high quality insulated steel. Facility for adjustable shelves, 10 removable shelves to be provided. Size of inner chamber approx 55x55x70 cm approx with internal lighting facility (more than 200 Liters) Insulated door fitted with heavy hinges, mechanical door lock. Temperature range 30-250oC, digitally temperature setting accuracy Temp sensor and display for temperature (LCD). Forced uniform air circulation, Digital safety thermostat. Delayed start and stop function, high quality heating element Supplied with cord & plug, operate at 220V/50 Hz AC supply	2
4	Digital Colorimeters	<b>Digital Colorimeters</b> Calorimeters • Filter photo Colorimeter Digital Photo. • Colorimeter with 8 filters, mains operated Power Supply Power input to be 220-240VAC, 50Hz.	5

5	Student Microscopes	Monocular Research Microscope with LED Light source With coaxial coarse and fine motion Coaxial mechanical stage, Movable condenser and having coated objectives, three eye pieces 10,40 & 100x oil immersion, 10x eye piece.	5
6	Glucometer with strips	Battery Operated Total Automatic Compact size	2
7	Thermometer 0–250 degree Celsius (Mercury based instruments to be replaced with suitable alternatives)	<b>Thermometer- Digital</b> Thermometers 0-250° C Digital, Battery Operated.	5
8	Semi autoanalyser	<b>Semi Auto Analyzer</b> The system should have endpoint, kinetic, fixed time and turbidimetric mode, open system, capable of estimating Electrolyte, Immunoassay, turbidimetric assay etc. Tungsten halogen lamp with lamp saver facility, The aspiration volume should be 100 ul to 780 ul complete visual range , memory of atleast 500 patient tests. online graphic display of reaction second to second Index mode for calculation of LDL/VLDL/IRON TIBC and Bilirubin etc is desirable , previous blank and standard memory facility Should cover UV and Complete visual spectrum internal(inbuilt printer facility)+D13	2
9	Boiling Water baths	<b>Boiling Water baths</b> Useful for dual purpose. It is a combination of serological and routine rectangular water bath with holes and concentric rings. Standard double wall construction. Immersion heaters are provided for heating to attain temperature range from 5° C above ambient to 110° C ± 1 °C. Should having lids and 8-12 Holes. Digital temp. Indicator-cum-Controller. The equipment to work on 220v AC 50 Hz single phase.	2

10	<p>Constant temperature water bath Tank Capacity:(Temperature range 5 to 80 degree Celsius)</p>	<p><b>Constant temperature water bath Tank Capacity: (Temperature range 5 to 80 degree Celsius)</b> Useful for dual purpose. It is a combination of serological and routine rectangular water bath with holes and concentric rings. Standard double wall construction. Inner chamber made out of highly polished stainless steel sheet and exterior made out of thick mild steel duly finished power coated paint. Immersion heaters are provided for heating to attain temperature range from 5° C above ambient to 80° C ± 1°C. Digital temp. Indicator-cum-Controller. The equipment to work on 220v AC 50 Hz single phase. Chamber size in mm &amp; inches L x W x H 300 x 225 x 175 mm Approx Capacity approx 15 ltrs. Approx.</p>	1
11	<p>Laboratory Reagent Refrigerators, capacity 200 lit.</p>	<p><b>Deep freezer</b> Specification:- 100% CFC-Free , one -door freezer, to be used as free standing freezer. Capacity (gross):= 140 litres (up to 200L) Cooling system static , Defrosting of freezing compartment, initial manually. Temperature range of freezer compartment-9 °C TO -25 °C Which can be set by user for specific temperature. Housing material and door, steel, coated, white, Polyurethane foam 'PUF' insulation., Door hinges right or left as desired, reversible., Fungus-resistant door gasket., Door with key lock, Adjustable feet for leveling. Interior container made of white plastic. At least three shelves with wire baskets External digital temperature display for freezer compartment with high accuracy sensor mounted inside the chamber suspended in air. Alarm for Over cool as well as for under temperature, power fail, door open conditions Electricity Requirements. a. Supply Voltage : 230 ±10 V , AC, 50/60 Hz, Voltage and line cord/power cord</p>	2

12	Complete Chromatographic Unit for paper & TLC	<p><b>Complete chromatographic unit for Paper &amp; TLC:</b>  Specifications:Chromatography tank with cover for plates of different sizes, Size 20x20 cm , Moveable applicator with inbuilt thickness arrangement between 0 to 2mm (minimum div. 0.25mm) infurther consists of the following components. Spreader (applicator) made of electroplated brass., Perspex base of 114x23 cm to support glass plates., Plate rack alluminium, anodised for ten 20x20cm or 20x10cm plates., Developing tank with lid.with all Accessories for T.L.C. Apparatus</p>	2
13	Centrifuge clinical for 8 tubes	<p><b>CENTRIFUGE</b>  Operational Requirements  Aerodynamic compact construction for vibration free performance  Table top version  Technical Specifications  Tube Capacity :No. 24 – 36 :Size 5 – 15 ml  Should have a digital timer /RPM adjustor  Body should be made of strong fabricated &amp; corrosion resistant steel  Control panel – for start/stop switch, dynamic brakes, step less speed regulator with zero start switch &amp; speed indicator with timer and protective fuses. Door interlock  Maintenance-free brushless drive motor with exact speed preselection and display. Speed range 100 to 6000 rpm and above,  RPM : Up to 6500-7000, System Configuration Accessories, spares and consumables Centrifuge complete with Swig and basic rotors and four buckets- 01 set.  Power Supply  Power input to be 220-240VAC, 50Hz as appropriate</p>	2
14	pH meters of wide range digital	<p>PH meters  Digital pH meter</p> <ul style="list-style-type: none"> <li>• Digital with LCD display</li> <li>• PH range from 4-14</li> <li>• Replacable electrode</li> <li>• Resolution 0.1</li> <li>• Accuracy <math>\pm 0.01</math></li> </ul>	5

15	Fixed volume pipettes -- 1ml,0.5ml,0.2ml, 0.1ml and 0.02ml	Fixed volume pipettes -- 1ml,0.5ml,0.2ml,0.1ml and 0.02ml (each) Samplers (Fixed volume pipettes) different volume range 1ml,0.5ml,0.2ml,0.1ml and 0.02ml ( Set Price )	25
16	Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)	<p><b>Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)</b> Technical Specifications: Horizontal Gel Apparatus Gel tanks sizes 8x11 inches (midi gel apparatus) and 3x 6 inches (mini gel apparatus) with platinum electrodes and dams. Supply at least 6 Nos. of 1.0 mm thick comb for 8-20 samples, Compatible DC Power supply Compatible microprocessor based power supply to run at least 2 units at constant voltage or current Output range programmable,10-500V, 4-500 mA in 1 mA step, 100 W maximum Easy to read digital display Power Supply Power input to be 220-240VAC, 50Hz fitted with Indian plug</p>	1
17	Densitometer with computer	<p>Densitometer with Computer (Automatic): Light source: halogen lamp 6v-12v, 1watt - 40 watt. Operating wavelength: at least 530nm, 570nm and white light Photocell type: silicon photocell or any other equivalent Photometric linearity: 0.00 to 2.5 o.d.or better Programmable scanning length: 120mm or more Programmable scanning width: 90mm or more should accept all electrophoresis media (including agarose) on plastic or Glass plate. Monitor: display of graphs and other data. Printer: built in graphic thermal printer or better.</p>	1

18	Bottle dispensers	<p><b>Bottle dispenser</b> It should be designed for performance handling of liquids from a large variety of bottles and flasks, the dispensers combine the latest in dosing technology, high tech materials and ergonomic design. As a result, users benefit from universal chemical compatibility, ease of operation, superior safety and low maintenance. Volumes range 0.25 to 100 mL, Superior chemical resistance, Long lasting performance stability</p>	10
19	All glass distillation apparatus	<p><b>ALL GLASS DISTILLATION APPARATUS</b> Technical specifications: The glassware should be made of high quality borosilicate glass to withstand high heat. Apparatus capacity should be of 4 litres/Hr. double stage. metallic stand and other accessories. Standards heating elements of 2.5-3KW to be used. An automatic cut off device should be attached. Apparatus should consist of high quality Borosilicate Boiler with built in water leveller. Output water should be pyrogen-free distillate temp 65-75 degC. Automatic cut off device or safety control module. Power input to be 220-240 VAC, 50 Hz.</p>	1
20	Vortex mixers	<p><b>Vortex mixer</b> Vortex mixer, Designed with a heavy cast aluminum body to provide optimum bench-top stability.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• To be supplied with a fractional workable motor on 220V AC completed with indicator, plug &amp; cord, Speed- 100 - 3000rpm,</li> </ul>	2

21	Incubator 37 o c	<p><b>INCUBATOR, ELECTRIC</b>          Technical specification          Capacity: 120L with 2 compartments having light in each compartment with UV light. Interior chamber: Stainless steel for easy cleaning Minimum turbulence and no cross contamination.          Adjustable safety thermostat for temperature, with inbuilt temperature sensor. Internal glass door for the observation. With minimum two adjustable shelves Peltier heating with continuous air circulation and heating by natural /forced convection for homogenous temperature distribution.          Temperature range: +5 deg. C above ambient to 37 deg C          Power Supply          Power input to be 220-240VAC 50Hz fitted</p>	2
22	Variable and fixed volume micro auto pipettes	<p><b>Variable and fixed volume auto pipettes SINGLE CHANNEL PIPETTES</b>● Spring Loaded Tip Cone for connecting tips very tightly● Adjustment opening for adjusting pipettes to a specific liquid and volume● Control Button with very low operating force, color indication for pipette volume ● Tip ejector with very low operating force, positioned for perfect ergonomics ACCURACY- + 1%  <b>MULTI CHANNEL PIPETTES</b>● Lightweight electronic Pipette for high Professional Standards that provide optimal support in work</p>	10
23	Glass ware & accessories	<p><b>Glass wares:</b>          Glass wares as required by standard lab. All items are made by Heat resistant Borosilicate Glass</p>	10
24	Fume cupboard	<p><b>Fume cupboard</b>          Fume cupboards is a fume cabinets which localised the fume extraction systems fitted in laboratories to protect users rom harmful substances that could be inhaled. It should have a cabinet with a moveable front window made out of safety glass. It should properly functioning the fume hood exhausts hazardous gases, dusts, mists, vapors from a combined location. Cabinet Structure: Material: All steel (1.0mm cold-rolling steel or 1.0mm stainless steel) covered with electrostatic spraying after folding, welding, polishing, acid cleaning, phosphorization and chemical resistance.          It should have all the accessories that is required.</p>	1

25	Digital Analytical Balance	<p><b>BALANCE ELECTRONIC 1.0 mg-Accuracy (BALANCE SEMI MICRO)</b>  Microprocessor based single pan Analytical Balance with High accuracy &amp; precision is required., Reading of the weight by digital display., Electronic top loading balances with transparent case weighing with automatic and manual start and' provision for data interface  Technical Specifications  Weigh accurately up to 3rd decimal place of one gm., Auto zero Setting., Weighing capacity 210 gm ., Readability: 0.001g ., Settling time 1.5 second.,  Power Supply  Power input to be 220-240VAC, 50Hz</p>	1
26	Balance Micro	<p><b>BALANCE ELECTRONIC 0.1 mg-Accuracy (BALANCE MICRO)</b>Microprocessor based single pan Analytical Balance with High accuracy &amp; precision is required., Reading of the weight by digital display., Electronic top loading balances with transparent case weighing with automatic and manual start and' provision for data interface Technical Specifications  Weigh accurately up to 3rd decimal place of one gm., Auto zero Setting., Weighing capacity 210 gm ., Readability: 0.001g ., Settling time 1.5 second., Power Supply  Power input to be 220-240VAC, 50Hz</p>	1
27	Spectrophotometer	<p><b>SPECTROPHOTOMETER (UV VISIBLE RANGE)</b>  Optical system- diffraction gratings., Wavelength range 190-1100 nm., Wavelength accuracy +/-0.3nm.  Light source tungsten and halogen / deuterium/ Xenon lamp  Quartz cuvettes 1.0 ml (two pairs), 2.0 ml (two Pairs) 3 ml (two pairs) &amp; micro cuvettes Glass cuvettes 1 ml (2 pairs), 2ml (2 Pairs)  3ml (2 Pairs) &amp; micro cuvettes  Power supply 220-240 V+/- 10%</p>	1



28	ELISA Reader	<p>A) ELISA READER Higher version  Reading capability of 1 to 96 wells individually.,linear measurement range of 0 to 3.000Abs., wavelength range from 340 to 750nm.  resolution of 0.001Abs.Halogen light source internal thermal printerPower Supply  Power input to be 220-240VAC, 50Hz</p>	1
29	ELISA Washer	<p><b>ELISA Plate Washer: Higher version</b>  Capability to wash flat, U or V bottomed micro plates or 8 or 12 well strip plates.8 or 12 way manifold, programmable washing time, volume and soaking time. minimum 6 wash cycles.continuous operating cycle.residual volume less than 2µl.  removable and autoclavable plate carrier. in-built vacuum and dispensing pumps to ensure accurate and quite washing.  Should have waste bottle with full bottle alarm or sufficient mechanism to avoid spillage and damage to equipment  Power Supply  Power input to be 220-240VAC, 50Hz</p>	1
30	Multimedia Projector withscreen	<p>Multimedia Projector with screenSize:- portable with Remote control USB &amp; HDMI input Type:-Optical Zoom / Focus(Automatic)Focal Length:- 16.9 - 20.28 mmZoom- Up to 5x or moreLamp Life (Normal):- 5,000 hours Screen should be white in colour and good quality with automatic movement with remote control screen size of 5x6 Feet</p>	2