

Quotations are invited for the following instrument of Biotechnology department. Unit price and GST amount are to be mentioned separately. Last date of submitting quotation 19/08/2023.

Sl. No.	Name of the Instrument	Specification
1	<p>LCD DIGITAL BIOFOCAL MICROSCOPE</p> <p><i>Research Grade performance with highly advanced features & Infinity Plan optics.</i></p> <p><i>With Next Generation HD 8" LCD Touch Screen with 5MP Microscope Camera for high speed image acquisition, searching & focusing. Simply one-touch on the screen to document your pictures to system memory or to your external storage devices like mini SD Card or USB devices. Power full web functions & thousand of applications with Android.</i></p>	<p>STAND- Ergonomic design microscope light & compact body with stable & sturdy C shaped stand, well-contoured modular base, corrosion resistant paint and heat resistant pads. All gear, housing, body are metallic.</p> <p>VIEWING- Siedentopf Binocular tube, inclined at 30° rotatable through 360° with interpupillary distance adjustment 48-75 HEAD mm and Dioptic adjustment range 378-428 mm on one eyepiece. Anti fungus treated, anti-reflection coated prism.</p> <p>LCD DIGITAL CAMERA- Display 8" High-resolution(1024x768) Color LCD Touch Screen Built-in Camera 5.0 Megapixel Color Camera 15fps 2592X1944. Built-in Software Capture/ Measurement App Mechanical Structure LCD Screen 360° horizontal rotatable, 90° vertical Rotatable Operating System Android. Output Ports 1 HDMI Port. 1 USB 2.0 Port, 1 Mini USB 2.0 Port</p> <p>Power Supply Input- AC 110V-220V Output : DC 5V</p> <p>Features- Apkinstaller, Browser, Calender, Camera, Chrome, Clock, Downloads, Thousand of Applications Capture Image - Frame Rate - Managing and Browsing Images -Measuring Toolbars</p> <p>EYEPIECES- Eyepiece WF 10x FN 18 paired with eye guards, anti-fungus treated secured to body to prevent falling off.</p> <p>NOSEPIECE- Low friction & fully parafoval reversed Quadruple Revolving nosepiece (Ball bearing type).</p> <p>OBJECTIVES- KEOWA BJ series High Definition parafoval DIN Infinity Plan Achromatic lenses, Anti fungus treated objectives: PLAN ACHROMAT 4x/0.10, PLAN ACHROMAT 10x/0.25 PLAN ACHROMAT 40x(SL)/0.65, PLAN ACHROMAT 100x(SL, Oil)/1.25.</p> <p>CONDENSER- Moveable & Lockable par centered ABBE Condenser, NA 1.25, with aspheric Lens & slot slider for phase/dark field.</p> <p>FOCUSING- Ergonomic low position co-axial coarse and fine focusing system on ball bearing guideways. Tension adjustment MODULE ring and upper limit stopper.</p> <p>STAGE- Double layer graduated mechanical rectangular stage size 142 x 133mm cross travel 75 (X) x 50 (Y) mm on ball bearing right side co-axial controls spring clip double specimen holder & fine vernier graduations designed with convenient coaxial adjustment for slide manipulation.</p> <p>IRIS DIAPHRAGM- Special day light blue filter in holder.</p>

		<p>ILLUMINATION-Illumination 3W LED Lamp with variable illumination control with LED life upto 10000-30000 hrs.</p> <p>POWER- Power Input 100-240V 50-60 Hz as per ISO 9001 & CE standards.</p> <p>STANDARD- Vinyl dust cover, power cord, immersion oil, cleaning solution.</p> <p>CERTIFICATIONS-ISO 9001:2008, ISO 13485:2012, CE, BIS approved.</p>
2	BINOCULAR MICROSCOPE (with built-in light arrangement)	<p>Stand- Rigid & Heavy single mould aluminium die-cast stand.</p> <p>Observation Head- Binocular head inclined at 45° and rotatable in 360°.</p> <p>Eyepiece-10x WF (paired) anti-fungal eyepiece. H6x(paired) extra.</p> <p>Nosepiece- Quadruple ball bearing revolving nose piece</p> <p>Objectives- 4x/0.10, 10x/NA 0.25, 40x/NA 0.65(SL) & 100x/NA 1.25(SL) Oil immersion.</p> <p>Stage- Size 120x140mm with co-axial controls for X & Y movement.</p> <p>Focusing- Separate coarse and fine knobs reading up to 0.002mm.</p> <p>Condenser-NA 1.25 fitted with iris diaphragm and blue filter holder.</p> <p>Illumination- Halogen 6V-20W with variable intensity control.</p> <p>Power- AC input 100V-240V, 50/60 Hz ISO 9001, CE approved.</p> <p>Packaging Contents- Styrofoam moulded Nylon Dust cover.</p>
3	SENIOR LABORATORY AND MEDICAL MICROSCOPE (Light Microscope) Wide Field Model) Supplied with LED illumination with battery back up	<p>Brass metal construction, Long life use</p> <p>Brass Mechanical stage</p> <p>TECHNICAL SPECIFICATIONS:</p> <p>Monocular body with horse shoe shaped base hinged type, versatile designed inclinable through 90o</p> <p>Aluminium Die-Cast parts.</p> <p>Mechanical tube length 160 + 1 mm.</p> <p>Triple revolving nosepiece with positive centring and click stop.</p> <p>Coarse motion through rack and pinion. accurate graduated fine motion reading to .002 mm.</p> <p>Fixed square stage120mm x120mm fitted with detachable brass graduated mechanical stage for X and Y movement upto 40mm to 75mm.</p> <p>Two lens Abbe condenser NA 1.25 with iris diaphragm and swing out filter holder with blue filter, moveable through rack and pinion.</p> <p>A standard plano-concave mirror 50mm dia. in fork, replaceable by a sub stage microscope lamp.</p> <p>Safety stopper, prevents damage to slide and objectives.</p> <p>Black stoving finish and hard instrumental chromium finish.</p> <p>Complete with optics, these microscopes are packed in shockproof Styrofoam molded box inside die cut cardboard boxes with top handle having provision for placing eyepieces, objectives and dust cover.</p> <p>All knobs Slides, motics, objectives are made up of brass material for long life</p>

		<p>Certification- ISO, CE OPTICAL COMBINATIONS: Eyepieces : WF 10x & H15x. Achromatic Objectives : antifungus, anti-reflection coated, parfocal objectives 10x, 40x/45x(SL) & 100x Oil Imm.(SL) Magnification Range : 40x - 1500x</p>
4	Microprocessor based pH Meter	<p>16 X2 alpha numeric LCD display having auto temperature compensation, auto buffer recognition along with accessories. Its features include 5 point calibration. Data Storage facility upto 1000 samples, complete with pH electrode, temperature probe, electrode stand, dust cover & Instruction Manual, computer interface with USB (Table Model).</p>
5	MICROPROCESSOR BASED TABLE TOP HIGH SPEED COOLING RESEARCH CENTRIFUGE, With Rotor Heads, Stabilizer & Accessories	<p>High speed Cold Research Centrifuge. Cold with speed controlled, Digital speed meter, timer, without rotor. Max Speed 20,000 rpm, Max Rcf 37,570g, Max. tube Capacity 100 ml, Max. Capacity 400 ml Dimension 775 x 575 x 475 mm, Lowest Temp - 8 deg C, Connected load KVA 1.6, Pre Cooling Facility Available, Acceleration Profiles 9, Deceleration Profiles 9, Fast Spin Facility Available Calibration Window on Lid for Speed, Display LED, Control Communication Digital Parameter setting Switches Bi directional encoder, Brushless motor with frequency drive , Inverter fault detection with auto shut down , CFC free refrigeration system , 99 No of Programs, Temp. display °C/°F, User defined program name for 5 programs Last set parameters recall , Digital countdown timer 0-99 min & Continuous run, Automatic door opening Facility Available, Automatic Rotor Identification, Motor overload protection, Emergency lid lock release, Imbalance detection with centrifugation cut off Complete with_24x 1.5ml, Angle Heads with Polypropylene Tubes, 12 x 15ml, Angle Heads with Polypropylene Tubes, 8 x 50ml, Angle Heads with Polypropylene Tubes and Servo Controlled Voltage Stabilizer Input 170 – 260 Volts, Output 220 Volts to 240 Volts.</p>
6	ADVANCED MODEL UV-TRANSILLUMINATOR	<p>Standard view 20 x 20cm, Basic system with imported UV filter, Mid –range UV source 254/312nm , Eight x 8W tubes, air cooling fan, and UV shield with Gel Developing Tray with transparent base & gel holder , spare UV-Lamp Mid range 312nm.</p>
7	VERTICAL SLAB GEL SYSTEM WITH POWER PACK	<p>Dual Model Regular Two 16 x 14cm Gels Basic Unit with Platinum electrode assembly(2), Glass Plates-notched & rectangular(2sets), Teflon comb, 1.0mm)2 Spacers 1.0mm(6), Clamp & screws (4 sets) Dual gel casting stand (1set), Metal Clips(4), Plastic pouch(1pk), Power cord(1) and water circulation provision is available, Gel casting unit for dual, Recommended power pack Analytical model, Analytical Model Output 0-300VDC;100mA, Overload/short circuit automatic cross over and timer</p>
8	Alcohol Distillation Unit	<p>Made of Borosil Glass</p>
9	<u>BOROSIL</u> - Single Distillation Unit with DAPS	<p>Capacity 1.5 Lit per hour. Distillation Apparatus Power Supply (DAPS) enables the Distillation Unit to function automatically by switching off the heater in case the water level falls</p>

		<p>below the heating coil, thereby safeguarding the heaters.</p> <p>The sensor rods are adjusted above the heater levels, and operate on 12 Volt power supply</p> <p>DAPS emits a buzzer sound alert to indicate low water level</p>
10	Pipette Variable Volume - Tarson	Range 2µl-20µl, 10 µl-100µl & 100µl-1000µl
11	COOLING BOD INCUBATOR SHAKER WITH VARIABLE ORBITAL MOTION, COMBINED HIGH & LOW TEMPERATURE	<p>These orbital shaker Incubators are designed for gentle shaking of shear sensitive Cells and vigorous high speed shaking of bacterial cultures. They combine the efficiency of a controlled temperature chamber with the precision of a variable speed orbital shaker.</p> <p>Ruggedly built for continuous agitation, this heavy-duty shaking machine utilizes electronic controllers for temperature and shaking speed with extreme precision.</p> <p>Temperature range between 5° C to 60° C which will be controlled by means of a PID Digital Temperature Indicator cum controller in conjunction with an electronic relay. Accuracy will be approximately plus-minus 0.5° C to 1° C.</p> <p>Best Quality heaters, working at black heat, are provided for obtaining temperature above ambient.</p> <p>A hermetically sealed refrigeration compressor (ISI MAKE) with CFC Free refrigerant is provided for obtaining temperature below ambient. Copper Cooling (evaporating) coil is vertically mounted at the back of the working chamber and forced air is thrust and recirculated through the same by continuous running blower fan attaining maximum temperature uniformity.</p> <p>Double walled constructions with inner chamber made of Stainless Steel and outer wall of mild steel sheet with Powder coated. Non-Hygroscopic glass fibre insulation is provided in between two walls.</p> <p>Heavily insulated door opens fully with slight pressure on chrome-plated handle.</p> <p>Magnetic strip gaskets are employed to seal the door against any atmospheric infiltration. An inner glass door is fitted for inspection of materials kept under test.</p> <p>A lamp is provided within the working chamber, which operates immediately to opening the outer door.</p> <p>The orbital shaking mechanism is built with precision for continuous service and reproducible agitation. Acting through a triple eccentric drive transmission, a powerful ball bearing motor rotates the shaking platform horizontally in a circular orbit describing a 25 mm circle. The platform rides smoothly on nine ball bearings to achieve reproducible agitation and extremely long life. Speed is adjustable between 10 to 300 RPM by means of a stepless speed regulator. A Digital RPM Meter is provided to indicate the shaking speed. The shaker platforms are easily replaceable type and can accommodate 1000 ml, 500 ml, 250 ml or 100 ml Conical Flasks.</p> <p>All controls are externally mounted and include all necessary switches and Indicating lamps for Main, Cooling, Heating and Shaking Mechanism. The Digital Temperature Controller, Speed regulator & RPM Meter also mounted on the panel.</p> <p>Size of BOD Incubation Chamber-10 Cuft Temperature Range- 5° C to 60° C(Resolution 0.1°C). Temperature Control-By Microprocessor Based PID Digital Temperature Indicator cum Controller Accuracy of control- ± 0.5° C. Shaking Speed-10 to 300 RPM.</p>

		<p>Power Failure Alarm-Audio Visual Alarm Temperature Variation Alarm- Set Temp. 2°C Audio Visual Alarm Illumination- LED Tube Memory-9 programs memory Shaking Motor- PMDC Drive Motor Speed Controlled by- Stepless speed regulator. Shaking Tray Size & Capacity- One No-18" x 18" and can accommodate 25 Nos of 250 ml Conical Flasks. Operating Voltage- 220/230 V. AC. Single Phase, 50 Hz.</p>
12	MICROPROCESSOR COLONY COUNTERS	<p>DISPLAY 4 Digit Seven Segment LED, MAX COUNT-9999, KEYBOARD-6 soft touch membrane keys, CORRECTION- Count correction facility available to cancel The unwanted counts, STORAGE-125 Result-count storage retained even LI the system is switched off, AVERAGE Average mode facility available, DISH SIZE110 mm, MAGNIFICATION -X 1.7 surface magnification Count Correction Facility, Result-Count Storage, Audible Confirmation of Each Count, Auto Marker Pen , Uniform Glare Free Illumination, Wolffhugel Glass Grid with Focussing Facility, LED Based Illumination</p>
13	Haemocytometer	
14	Electrophoresis Power Supply Unit	<p>This unit can be used with Submarine and Mini Vertical electrophoresis unit. It can run two units at constant voltage or constant current with maximum output of 300V, 400mA and 80Watts. Time can be set in 1 minute increment or continuous mode.</p>
15	Specific Gravity Bottles	Capacity10 & 25 ml