

## Annexure -2

## DEPARTMENT OF BOTANY

S. No.	Name of Equipment	Qty.	Specifications
1.	Student Microscope (Olympus GB)	20	High resolution optical system microscope Eyepieces WF10x and H5x ( 2 Nos.) Parfocal Achro-Objectives 10x, 40x, 100x Oil Brass block & slides rack & Pinion focus system with safety stopper Fine focus by slow motion mechanism Plain square stage with attachable mechanical stage Efficient NA 1.25 up & down moveable condenser with iris diaphragm Plano-concave mirror provides transmitted light source
2.	Remi Centrifuge, Model no.R- 24	1	Stepless speed regulator with zero start interlock Digital speed indicator Dynamic brake 0-99 minutes digital countdown timer Imbalance detector with cutoff Safety lid interlock to prevent cover opening during centrifugation Rotor heads: 6x15ml; 8x15ml
3.	Centrifuge (5000RPM)	1	Bench Top Lab. Centrifuge 5000 R.P.M. :- General Purpose Laboratory Centrifuge Machine Microprocessor based Heavy Duty C.R.C. Construction finished with powder coating Fitted with brushless automatic balanced motor Digital timer 0-99 minutes Digital speed indicator Digital r.c.f Indicator Programmable speed regulator. Wavelength range 190 nm – 1100 nm Spectral Bandwidth 1 nm Resolution 0.1 nm Wavelength accuracy UV/VIS region: + 0.3 nm Wavelength repeatability UV/VIS region: less than +0.3 nm Stray light < 0.02% (220 nm, NaI) < 0.02% (340 nm, NaNO <sub>2</sub> ) < 1.0% (198 nm, KCl) Noise level < 0.00005 Abs
4.	Spectrophotometer UV-VIS	1	

		<p>Photometric System Double beam  Photometric accuracy <math>\pm 0.002</math> Abs at 0.5 Abs; <math>\pm 0.004</math> Abs at 1.0 Abs; <math>\pm 0.006</math> Abs at 2.0 Abs  Photometric range -3 to 3 Abs  Photometric repeatability <math>&lt; \pm 0.002</math> Abs at 0.5 Abs <math>&lt; \pm 0.001</math> Abs at 1 Abs <math>&lt; \pm 0.003</math> Abs at 2 Abs  Baseline stability <math>&lt; \pm 0.003</math> Abs/Hr  Baseline flatness <math>&lt; \pm 0.0006</math> Abs(190 nm – 1100 nm, one hour after light source turned on)  Detector Silicon photodiode  Light source 20 W halogen/D2 lamp</p>
5.	Chemical Balance	<p>2  Self calibration  Capacity: 0.01mg-220gm  Pan size: 80 mm  Linearity : <math>\pm 0.2</math> mg  Repeatability standard deviation: <math>\geq 0.1</math> mg  Response time : 1/2/3 sec  Sensitivity against temperature change  Specific gravity measurement software  % display function Unit conversion  Calibration report ISO/GLP Compliance for printing the value (weights, calibration with date &amp; time).</p>
6.	Horizontal, Laminar air flow	<p>1  Equipment shall be made of stainless steel 304 grade; of size 6x2x2 feet approximately with heavy duty lockable castor wheels.  Filters shall be Mini pleat HHPA filter to block 0.3 <math>\mu</math> &amp; larger particles at an efficiency of up to 99.99% and washable pre filter to block coarse particles in the range of 10-15 <math>\mu</math> M.  Work Table shall be made of SS 304 grade.  Lighting shall be diffused white light.  Pressure gauge shall be Magnehelic gauge Dwyer.  Should have Germicidal Ultra-violet Lamps.  Should have cocks for LPG / Vacuum.  Front door shall be vertically sliding Toughened Glass door with continuous variable height adjustment provided by imported Drylin Guide Rail to prevent shakes.  Motor-blower shall be designed for continuous operation.  Should have Air-flow 110 to 130 feet per min.  Cleanliness level shall be better than Class 100.  Should conduct onsite Testing &amp; certification post-installation.</p>

7.	Autoclave ,Vertical Bench top (small size clinical)	1	<p>Should operate on mains 220-240Vac, 50 Hz single phase</p> <p>20 liters or above, 304 Grade Stainless Steel, Working temperature : 121°C – 140°C, - CE Marked Pressure Valves, Buzzer, Lid Locks- Low water sensor, Steam &amp; vacuum release, valve/Digital temperature indicator</p> <ul style="list-style-type: none"> <li>- Sterilization indicator</li> <li>- Low water cut-off device</li> <li>- Containers and baskets</li> <li>- Aluminium basket with handle</li> <li>- Stainless Steel Wire Basket</li> <li>- Plastic Disinfectant Tray</li> </ul> <p>Power supply: AC 220V / 50Hz</p>
8.	Lux Meter	1	<ul style="list-style-type: none"> <li>* Precise and easy readout.</li> <li>* High accuracy and wide measurement range.</li> <li>* LS-circuit use provides high reliability and durability.</li> <li>* In built LOW BATTERY indicator.</li> <li>* LCD display allows clear read out even at bright places.</li> <li>* LCD display provides low power consumption.</li> <li>* Compact, lightweight, and excellent operation.</li> <li>* Separate PHOTO DETECTOR allows user take measurements at an optimum position.</li> <li>* Data Hold function for holding measuring values</li> </ul>
9.	Incubator 355X355X355	4	<ul style="list-style-type: none"> <li>• Temperature range: Ambient +5.0°C to 60.0°C</li> <li>• Temperature control accuracy <math>\pm 0.5^\circ\text{C}</math> of set point</li> <li>• Temperature uniformity <math>\pm 0.5^\circ\text{C}</math></li> <li>• Control type: Time proportionate digital / Microprocessor PID, Auto tune</li> <li>• Temperature display: 3½ digit LED</li> <li>• With motorized fan blower for air circulation</li> <li>• Inner full length acrylic door</li> <li>• Input voltage: 230Volts AC, 50 Hz.</li> </ul>
10.	Oven, 455X455X455	2	<ul style="list-style-type: none"> <li>• Temperature range: Ambient to at least 250°C</li> <li>• Temperature stability: <math>\pm 2^\circ\text{C}</math></li> <li>• Housing materials: Steel sheet duly powder coated</li> <li>• Duty cycles: Continuous</li> <li>• Interiors: Stainless steel 304 grade heavy gauze to with stand temperature up to 350°C</li> <li>• Insulations: High temperature, ceramic blanket</li> <li>• Power consumption: 220/230V AC &amp; 177; 109% 50 HZ</li> <li>• Capacity: 50 ltr</li> </ul>

			LED display of temperature
11.	Soil Thermometer	4	Pocket-sized soil thermometers built of tough, corrosive-resistant stainless steel
12.	Hot Plate JSGW	2	Heavy duty Iron Top. Fitted with 3 heat control rotary switch/ Energy regulator. To work on 220/230V AC supply. 10 × 12 × 6 "Rectangular"
13.	Herbarium Press Board	4	24"x18" size with clamps
14.	Vasculam	2	<ul style="list-style-type: none"> <li>Oval cross section aluminium metal body</li> <li>Hinged door</li> <li>Outside enamel painted</li> <li>Hooks and shoulder strap for specimen collection</li> <li>Size 600x200x300 mm</li> </ul>
15.	BOD Incubator	2	<p>Double walled cabinet mounted on castor wheels</p> <p>Inner chamber made of S.S.304 &amp; Outer chamber made of M. S. Powder coated</p> <p>Full length inner acrylic door permit inspection of specimens with out disturbing the Temp</p> <p>Temp. Controlled by solid State Digital controllers housing all the control with PT-100 sensor illumination light are provided for viewing with door limit switch</p> <p>CFC Free hermetically sealed compressor provide temp. For below ambient condition</p> <p>Air circulation fan for maintain Temp. Uniformity through out the chamber</p> <p>Flush fitting insulated double walled door</p> <p>The Chamber is provided with modular removable shelves made of S. S. For complete flexibility in use</p> <p>To work on 230 volts 50 HZ</p>
16.	Blender cum mixer	2	Speed Blender, (Extra Heavy- Duty Motor) Stainless Steel Container
17.	Fumigation Chamber	1	Size: 02.75 x 50 x 65 cm. (30" x 20" x 26") Versatile fumigation chamber for fumigating for sterilization with insecticide for preservation plants, Made of sturdy board, mica covered, Epoxy coated from inside with fume circulator of electric motor. Top cover tightened with clamps. One drawer is provided for keeping petri-dish for fumigants chemical. Castor wheel provided for easy movement.
18.	Refrigerator Godrej	2	240 lit, double door
19.	Aspirator bottle	4	20 lit, Autoclavable, * Much lighter than glass, * Leak proof nature
20.	Digital Electrophoresis power supply	1	<p>Power Supply suitable for vertical (mini and standard) and horizontal gel electrophoresis, semi-dry and mini tank blotting.</p> <p>Constant voltage and constant current modes</p> <p>Output Voltage: Adjustable from 0/5/10V to 500V/600V with an increment of 1 V or less</p> <p>Output Current: up to 800/1000 mA with increment of 1 mA</p>

