

## **HALDIA INSTITUTE OF TECHNOLOGY**

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Tender No. : HIT/TEN/MODROB/BT/01

Dated : 14<sup>th</sup> June, 2019

### **NOTICE INVITING QUOTATIONS**

Sealed Quotations are invited from enlisted/ reputed suppliers for supplying of Equipment under **AICTE- MODROB** (No. F. 9-80/ RIFD/ MODROB/ Policy-1/ 2017-18) grant for Biotechnology Department, of Haldia Institute of Technology.

Specification along with required quantity are detailed below.

Rate should be quoted in the following format **including Tax & delivery charges upto Haldia Institute of Technology.**

**Successful bidders have to deposit 5% of order value during acceptance of the Purchase Order.**

You are requested to provide your offer latest by **28 June, 2019 upto 4 PM**. Quotation shall be submitted in a sealed envelope super scribing with **“Quotation for supply of Equipment under AICTE-MODROB grant for BT Department”** to the **Principal, Haldia Institute of Technology, P.O. HIT, Haldia, Dist. Purba Medinipur, West Bengal, Pin – 721657**, within 28.06.2019 upto 4 PM .

**Principal**  
Haldia Institute of Technology

**Tender for Procurement of Fermenter and its accessories under  
MODROB-BT project No. F.9-80/RIFD/MODROB/Policy-1/2017-18**

Item No.	Name of the instrument	Specification	Unit	Rate	GST Amount	Total Ammount including GST
1.	<b>3L Fermenter</b>	<p>Standard controller items:-</p> <ul style="list-style-type: none"> <li>• Table top model</li> <li>• Rotameter; 1 – 10 SLPM</li> <li>• Automatic gas mix module</li> <li>• 3 fixed speed front mounted pumps</li> <li>• <b>Operating software for real time monitoring of Fermenter i.e. Agitation, Temperature, DO, pH and Foam level. Data storage function, trend display, Probe calibration, Alarm.</b></li> <li>• Motor drive</li> <li>• Integrated touchscreen</li> <li>• 2 universal sensor connections for Analog (pH/DO) or Mettler-Toledo ISM (pH, DO, CO2, Redox)</li> <li>• Side panel vessel connections (motor, Heat Blanket, RTD, water)</li> <li>• Rear panel connections for power, USB, Ethernet</li> <li>• Temperature control system via external chiller</li> <li>➤ <b><u>Must include</u></b></li> <li>• Exhaust Condenser</li> <li>• Heater Blanket for vessel</li> <li>• Headplate /Base</li> <li>• Connection Kit</li> <li>• Motor</li> <li>• pH Cable</li> <li>• DO Cable</li> <li>• pH Sensor</li> <li>• DO Sensor</li> <li>• Foam sensor</li> <li>➤ <b><u>Vessel Assembly including</u></b></li> <li>• Tubing Kit,</li> <li>• Foam/Level Sensor, 4 inch (100 mm)</li> <li>• Level/Sample Adapter, 12 mm port</li> </ul>	1 Unit			

		<ul style="list-style-type: none"> <li>• Cable, Foam/Level</li> <li>• Temperature Sensor RTD</li> <li>• Sensor Adapter, 12 mm compression fitting</li> <li>• Septum Kit, 12 mm port</li> <li>• Filter, Absolute (0.2 µm), 50 mm diameter</li> <li>• Silicone Tubing – 1/8 x 1/4 in / 3.2 x 6.4 mm (25 ft/7.6 m)</li> <li>• Silicone Tubing – 3/16 x 5/16 in / 4.8 x 7.9 mm (25 ft/7.6 m)</li> <li>• Polyurethane Tubing, 4.1 x 6.4 mm (7.6 m)</li> <li>• Straight Connector 1/4“ to Hose Barb (Qty. 4)</li> <li>• Sampling Syringe, 30 mL</li> <li>• Needle free Connector (Pack of 10)</li> <li>• Luer Connector, 1/8 in (3.2 mm) Hose Barb</li> <li>• Tubing Clamp, Plastic (1/2 in / 12.7 mm)</li> <li>• Autoclaving Cap for Bearing Housing</li> <li>• Tool Set – Hex Keys – Imperial</li> <li>• Tool Set – Hex Keys - Metric</li> <li>• Immersion Cooling Coil in heated blanket vessel,</li> <li>• Thermo well Ring Sparger, 3-4 Baffle Assembly in fermentation vessel,</li> <li>• Three/six Rushton Impellers in fermentation vessel only,</li> <li>• Sampler Tube , Harvest Tube</li> <li>• Single Addition Tube</li> <li>• Tri-port Adapter (1 nos.)</li> <li>• Addition Bottle Kit (0.5Lml) (3 nos.)</li> <li>• Ethernet 18-port Switch</li> <li>• <b><u>2 Year Warranty</u></b></li> </ul>				
2.	<b>Air Compressor</b>	<ul style="list-style-type: none"> <li>• Type: Reciprocating</li> <li>• Stage: Single</li> <li>• Motor: Co axial , 2 HP</li> <li>• Volt/Ph : 230/1</li> <li>• Air Receiver: 25 LTR</li> <li>• Working Pressure: 116 PSI OR 8 Bar</li> <li>• Piston displacement: 7.6 CFM</li> <li>• <b><u>2 Year Warranty</u></b></li> </ul>	1 Unit			
3.	<b>Autoclave</b>	<ul style="list-style-type: none"> <li>• Type : Vertical</li> </ul>	1 Unit			

		<ul style="list-style-type: none"> <li>• 20" Dia x 36" Height (7.5 KW) Double walled in construction</li> <li>• Inner chamber will be made of SS and outer of MS sheet.</li> <li>• Lid will be made of steel plate.</li> <li>• Heating system should employ immersion heaters.</li> <li>• Working pressure: 20 lbs/psi.</li> <li>• Will be Provided with an adjustable safety valve, pressure gauge,</li> <li>• Steam release cock, drainage cock &amp; a perforated basket.</li> <li>• Operates on 440/460V AC.</li> <li>• Complete with Water failure sensor &amp; pressure control switch.</li> <li>• Complete with Redial Locking</li> <li>• Digital, Auto Cut System &amp; Pressure Switch</li> <li>• <b><u>2 Year warranty</u></b></li> </ul>				
4.	<b>Associated PC to run the software if applicable</b>	<ul style="list-style-type: none"> <li>• 8 GB RAM</li> <li>• 8 GB ROM</li> <li>• Operating system Windows 10</li> <li>• Hard Disk 320 gb</li> <li>• Intel core i5 processor</li> <li>• 17 inch LED monitor</li> <li>• UPS</li> <li>• Numerical Keyboard and Optical mouse</li> <li>• <b><u>2 Year Warranty</u></b></li> </ul>	1 Unit			
5.	<b>Research grade micropipette (a Set of 3)</b>	<ul style="list-style-type: none"> <li>• A set contain, 1000, 100 and 10 <math>\mu</math>l</li> </ul>	1 set			
6.	<b>1.5 ton Air cooling machine</b>	<ul style="list-style-type: none"> <li>• 1.5 Ton, 3 star, Split</li> <li>• 2 Year warranty</li> </ul>	1 Unit			
7	<b>Voltage Stabilizer</b>	<ul style="list-style-type: none"> <li>• 5 KVA</li> <li>• Rated Frequency: 50 Hz</li> <li>• Input voltage: 160-260</li> <li>• Output voltage: 240</li> <li>• Output current: 20.8</li> <li>• Type of cooling: Air</li> </ul>	1 Unit			