



# RAJIV GANDHI UNIVERSITY

## RONO HILL S, DOIMUKH.

No. RGU/PC/DST/FIST-244/2016/886

Dated 1<sup>st</sup> February, 2017.

### Notice Inviting Quotation

Sealed quotations are hereby invited for supply of the following items required for Major Research Project entitled on FIST Programme sponsored by DST under Prof. Sumpam Tangjang, Head, Department of Botany, Rajiv Gandhi University as per details shown below with the following terms and conditions:

SL. No.	Items with specification	Qty
1	<p><b>PCR Thermal Cycler:</b> 96 well x 0.2ml tubes, Thermal Cycler with fast reaction module, Temperature Control Modules: Calculated &amp; block, Temperature Range: 0-100° C, Temperature Accuracy <math>\pm 0.2^\circ</math> C of programmed target at 90° C, Temperature Uniformity: <math>\pm 0.4^\circ</math> C well-to-well within 10 sec of arrival at 90°C, Maximum Ramp Rate: <math>\sim 5^\circ</math> C/sec, Average Ramp Rate: <math>\sim 3^\circ</math> /Sec, Programmable thermal gradient, Fully adjustable lid, Gradient capability with range: 30-100°C, Temperature differential range: 1-24°C, accuracy of <math>\pm 0.2^\circ</math> C of programmed temperature at end rows, Row uniformity: <math>\pm 0.4^\circ</math> C well-to-well within 10 sec of arrival at target temperature. Protocol Autowriter, Security Features: Password-protected folders, optional log-in, and secured mode for highly regulated environments. High resolution Touch Screen, USB flash drive, power cord. 1KVA online UPS.</p>	1.
2	<p><b>Water Purification System (Grade 1):</b> Ultrapure water system for Pyrogen free &amp; Low TOC water using Carbon Filtration, Deionization, Ultra Polishing filtration, Reverse Osmosis, Anti Sequestering Softening, and 0.22 micron final filtration, Sterilization module, photooxidation module technology. Purified water Parameters: resistivity 18.2 M<math>\Omega</math> x cm, conductivity 0.055 <math>\mu</math>S/cm, TOC &lt;5 ppb, RNase &lt;0.01 ng/mL, DNase &lt;4 pg/<math>\mu</math>L, Bacteria &lt; 1 CFU /mL, Endotoxins &lt; 0.01 EU /mL, Particles &gt;0.22 <math>\mu</math>m - &lt;1/mL. Pre-filter set as per on-site feed water quality OR 10 &amp; 5 micron Sediment &amp; Carbon filter, Activated Carbon, Hardness Stabilizing Softening Filter, UV photooxidation bulb, UV sterilization bulb, provision of Grade 2 water dispenser. Performance: Flow Rate: <math>\geq 1.0</math> Litre Per Minute. Voltage: 220-240 VAC. Installable either on a laboratory bench or on a wall. Features: Digital microprocessor control, LCD display, Auto rinsing, Filter change alarm, Self test, % Rejection display, Feed &amp; product Quality display, Easy to change clip type filters, RS232 interface for external data print.</p>	1
3	<p><b>Incubator Shaker:</b> System capable to handle heavy loads, provide uniform agitation and continuous 24-hour operation, even at high speeds. Micro controller based temperature indicator cum controller with digital display and PT 100 sensor. Self check function, Smooth start and stop system preventing liquid spillage, Autocontroller of fan speed to prevent damage to the samples, Safety door switch, auto pause operation when it is opened. Thick CFC free PUF Insulation. Temperature Range 5°C to 60°C, Accuracy <math>\pm 0.5^\circ</math> C and uniformity <math>\pm 0.5^\circ</math> C at 37°C. Heating System S.S. Nichrome wire air heaters. Interior illumination for working area. Visual/audible alarms alert to temperature deviations from the preset temperature. Heat should turn off if temperature deviates <math>\pm 1^\circ</math> C of set point. LED displays for viewing</p>	

	<p>temperature, speed and time simultaneously. Refrigeration System CFC Free Emerson compressor, MCB and Heavy duty latch with lock &amp; key, RPM 30 to 350 RPM, Amplitude 50 mm, Motor Brushless Induction Motor, Variable Frequency Drive, Timer 0-99 hrs, shaking capacity ~36x 100 ml, 24 x 250 ml, 16 Nos for 500 ml, 8 Nos of 1000 ml and 4x2000 ml flasks., Universal tray (one) with matching Flask holder/SS Clamps. Voltage : 220-240 VAC 50-60 Hz. Optional item: Suitable Voltage Stabilizer.</p>	
4	<p><b>Cooling Centrifuge with rotors :</b> High volume high speed centrifuge, temperature 4-40 °C, max. 17000 RPM /30000 RCF. LCD display. It should accommodate microplate, swinging out &amp; fixed angle rotors. Fixed Angle Carbon Rotor, Rotor heads for 15 ml and 50 ml polypropylene tube with minimum 6-8 positions. Optional accessories: Rotor heads for 100 ml and 1.5/2 ml tubes. Compatible Servo controlled voltage stabilizer. The centrifuge should be CE, UL certified and IVD compliant.</p>	
5	<p><b>Vertical Laminar Flow/Biosafety cabinet/Clean Bench - class II type A2:</b> Internal stainless steel construction, Exterior Steel construction with heat cured epoxy coating. Approx. 5 x 2 x 2 providing 6Ft working area. Wheels fitted for movement of equipment. Fitted with Air &amp; Gas connection plus electrical sockets for connection to any external device. LCD microprocessor based control. Equipped with analog magnetohelic gauge. HEPA filters at least 99.97% installed as main filter and exhaust filter, providing Class 100 or better clean air environment. Ventilation System, Exhaust/Inflow Air volume m<sup>3</sup>/h: Approx. 580. Adjustable Blower speed in 9/10 steps, Brushless DC motors. Factory installed high efficiency UV lamp, In-built timer for UV light, safety glass providing users enhanced UV protection, Sound pressure level ~63 dB, Heat emission minimum in the class. Electrical requirements 230V, 50/60Hz, Warranty 3 years. Equipment providing additional features at reasonable pricing for enhanced performance, working comfort, safe working environment and display of real-time information regarding operation safety and service including filter change alarm and digital airflow verification will be preferred.</p>	
6	<p><b>UV-VIS spectrophotometer:</b> Monochromator based UV-visible spectrophotometer with Cuvette and 96 well microplate reading option and able to do 16 samples analysis in 2ul quantity at a time. Light source - Xenon Flash lamp, Detector - PMT. Wavelength range 200- 1000 nm with 1 nm steps. Spectral scanning option. Incubation temperature: from ambient +4 °C to +45 °C. Inbuilt incubation and linear shaking options. Measurement speed should be 6 sec. for 96 well. Option for path length corrections to correlate the microplate data to cuvette. Ability to run in stand-alone mode OR with computer &amp; software. Memory of 100 inbuilt protocols in stand-alone mode. Self-diagnostics option to give a guaranteed high quality data. Analysis software with unlimited user system license should be supplied with the instrument. The instrument should have USB port for the easy data transfer. It should be an open system and able to accommodate any consumables from any manufacturer.</p>	

**Terms and conditions:**

1. **Bid security/Earnest money of Rs.60,000/- (Rupees Sixty thousand)** only should be submitted along with the quotations favoring to Registrar, Rajiv Gandhi University, Payable at SBI Itanagar/Naharlagun or Vijaya Bank, Itanagar/naharlagun.
2. The rate quoted shall be inclusive of all charges/Taxes (i.e. packaging, forwarding, freight, installation and all other incidental charges) F.O.R at Rajiv Gandhi University, Itanagar. The quoted rate should be valid for the current financial year.
3. The last date of receipt of quotation is **on 3/03/2017 at 3.pm.**
4. Sealed quotation should be submitted to "The Registrar, Rajiv Gandhi University, Rono-Hills, Doimukh, Itanagar-791112, Arunachal Pradesh" before due date and time.

