

## TENDER NOTICE

Ref. No: UGC-Start Up/UM/01/18/Tend

Date: 20-03-18

Vendors are requested to submit their quotations to the undersigned within fifteen (15) days of the publication of this notice for the purchase of a) Magnetic Stirrer b) pH meter c) Muffle furnace d) Refrigerator e) PPL lined Autoclave reactor f) Micropipette (Please go through the detailed specifications given below) under the UGC-BSR Research Start-Up Grant for the project entitled “Understanding the Photo Physical Properties of Carbon Quantum Dots in Organized Assemblies” [Ref. No. F.30-383/2017(BSR) dated 15-12-2017].



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**a) Magnetic Stirrer with HOT Plate** Quantity: 01 No, **Make:** Remi

**Detailed Specifications**

Stainless steel top with additional stainless steel hot plate

Heating capacity 500 Watts

Stirring applications up to 5 liters

Stirring Paddle PTFE coated

Permanent Magnet DC (PMDC) motor for higher torque even at low speeds

Better speed regulation even with small volume and low speeds

Accurate stepless speed control to maintain excellent speed stability

Smooth variation of speed up to 1200 rpm

Digital Speed Indicator for displaying of stirring speed

Totally enclosed unit

Suitable for use even in corrosive atmosphere

**b) pH meter** Qty. :01 No, **Make:** Systronics

**Detailed Specifications**

pH range 0-14

Resolution : 0.01 pH

Stability: 0.01 pH per hour

Relative Accuracy:  $\pm 0.02$  pH  $\pm 1$  digit

Slope: 85% to 115%

Voltage range: 0  $\pm$  1999 mV

Voltage Resolution: 1 mV

Voltage Accuracy:  $\pm 1$  mV  $\pm 1$  Digit

**Temperature**

Compensation: Auto/ Manual

Range: 0 to 99.9 °C

Resolution: 0.1 °C

Accuracy:  $\pm 0.5$  °C  $\pm 1$  Digit

Display: 7 digits, 7 segment LED (3digits for temp. And 4 digits for pH)

Annuciation : With auto-polarity and decimal point. Mode annuciation by LED

Accessories: pH Electrode (Combined), Temperature Probe, Electrode Stand and Clamp

**c) Muffle Furnace Qty.:01 No**

**Specifications**

A Muffle furnace is required for obtaining high temperature. This furnace should have following features:

- 1) Internal Dimensions of the furnace (Depth ×Width × Height) in mm: 300×200×200 (Minimum)
- 2) Working Temperature: 1000 °C or better
- 3) Heating Element: Silicon Carbide (SiC)
- 4) Temperature Accuracy: ±1 °C or better
- 5) Temperature Control: Through microprocessor based PID controller with minimum 30 steps
- 6) Furnace Insulation: Ceramic wool
- 7) Temperature settings & Display: Digital and double display
- 8) Power source: 220 V, 50Hz single phase
- 9) Out body and inner body: Stainless Steel
- 10) Accessories required: a) Stainless Steel Tongs (15-20 Inch)- 02 No  
b) Furnace gloves-01 Pair

**d) Refrigerator Qty.: 01 No, Make: Samsung, Godrej, Whirlpool or LG**

**Specifications**

- 1) TYPE-Single door,
- 2) Refrigerator Type-Top Freezer
- 3) Energy Rating – 3 Star
- 4) Capacity- 192 L
- 5) Shelf Material-Toughened Glass
- 6) Freezer door-Transparent
- 7) Compressor type-Digital Inverter Compressor
- 8) Defrost type-Direct Cool
- 9) Stabilizer- Built-in Stabilizer
- 11) Comprehensive Warranty- 1 year and 10 Year Warranty on the Compressor

**e) PPL Lined Autoclave Reactor Qty: 01 No****Specifications**

- 1) Outer high quality stainless steel jacket and inner reaction chamber PPL lined
- 2) Operating temperature 280 degree Celsius or more
- 3) Reactor should be suitable for reaction in acid or alkali medium

**f) Micropipette Qty: 01 No Make: Himedia****Specifications**

100–1000  $\mu$ L adjustable micropipette. It should be highly resistant to heat, acids and alkalies, mildew, bleaches, aging, sunlight and abrasion. 1000 nos suitable tips should be provided with pipettes along with tip box with 96 tips.