

**Office of the Dean Research and Development**  
**Indian Institute of Engineering Science & Technology (IEST), Shibpur,**  
**Howrah-711 103**

**Project Code No: DRC/DST-INSPIRE/CEGESS/SP/008/16-17**

**Centre of Excellence for Green Energy & Sensor Systems**  
**Indian Institute of Engineering Science & Technology (IEST), Shibpur,**  
**Howrah-711 103**

**Notice Inviting Quotations**

Sealed quotations are invited for the **Item 1. Hot Air Oven**, as per the following specification. The specification can be downloaded from the website. The document can be also obtained from the Centre of Excellence for Green Energy & Sensor Systems (contact: Dr. Snehangshu Patra) between 10.00 a.m. and 4.00 p.m. on all working days. The invitation is valid for 7 working days from the date of publication of this notice.

**Dean (R & D)**

**(A. Code DRC-T045/16-17)**

## **SECTION I: TERMS & CONDITIONS**

1. The last date of receipt of quotation is valid **for 7 Working days** from the date of publication of this notice. Quotations received later will not be entertained under any circumstances.
2. Potential supplier are to submit the quotations in Sealed Cover to the Centre of Excellence for Green Energy & Sensor Systems in the following address:  
  

**Dr. Snehangshu Patra**  
**Assistant Professor ( DST Inspire Faculty)**  
**CEGESS**  
**IEST, Shibpur**  
**Howrah-711103, India**
3. Item name must be mentioned on cover
4. The price quoted should be inclusive of all Taxes in INR, duties and levies. Inclusion of Tax/Levy at a latter stage will not be accepted. Freight, Insurance charges should be clearly indicated upto IEST, Shibpur.

## SECTION-II :

### TECHNICAL SPECIFICATION:

#### HOT AIR OVEN

**Name of Equipment:**

Electrically heated Drying Oven. Max. temperature 250°C, continues working temperature 200°C with accuracy of  $\pm 1^\circ\text{C}$ . Using KANTHAL Nichrome make heating elements (Wire type).

**Oven Inner & Outer Chamber:**

Inner chamber and three shelves made by heavy gauge rust proof Stainless Steel, grade .304, Size of working chamber is 24" X24" X30"

**Oven Door:**

Double-walled door for proper silicon gasket sealing fitted for minimum heat loss with heavy duty hinges and door handle.

**Details of Heating Elements:**

KANTHAL make Nicrom heating wire, Coil type. 18 SWG.

**Temperature Controller:**

Microprocessor based digital On/Off temperature controller cum indicator, touch panel type, with automatic cyclic timer for 99.99 hours run. 'YUDIAN' make, Model no.504-A.

**Thermocouple**

'PT 100' type with high alumina refractory sheet and connecting holder.

**Thermal Insulation:**

For best thermal efficiency shall be used 1 ½" thickness 129 density blanket and finally air insulation.

**Temperature Range & Rate of Rise:**

Temperature range At to 250°C and reach this temperature within 30 minutes.

**Temperature Uniformity:**

$\pm 1^\circ\text{C}$  at set temperature above 50°C and suitable element placement, System to ENSURE better uniform temperature.

**Air Circulation Fan:**

1/8 Hp fan blower fitted on side wall of drying oven for circulating hot air in working chamber for

**Construction :**

Heavy gauge CRC sheet construction of triple walled with powder coating finish.

## **Gas Purging Unit**

Argon gas purging in tube furnace. System contain with Argon gas regulator, (which is Stainless steel made double gauge double stag. Input range 0-250 Kgs and output range 0-7 kgs. Output connection 3 mm SS connector.) Gas Flow meter,(which is acrylic made with needle valve, range 0.2 lt to 2 lts. And gas purging SS tube which fitted in flange of tube furnace.