**ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH, BHUBANESWAR**

**(Formerly College of Engineering & Technology, Bhubaneswar)**

**DEPARTMENT OF PHYSICS**

**Techno Campus, Ghatikia, P.O. - MahalaxmiVihar,**

**BHUBANESWAR-751029, ODISHA, INDIA**

Letter No. 07 /Phy/OUTR Dated: 09/01/2023

**QUOTATION CALL NOTICE**

Sealed quotations are invited from registered Original Equipment Manufacturer/ Suppliers/Agencies/Authorized dealers having GSTIN, PAN for supply of Laboratory Instruments at Department of Physics, Odisha University of Technology and Research (Formerly College of Engineering and Technology, Bhubaneswar), Techno Campus, Ghatikia, Mahalaxmivihar, Bhubaneswar- 751029.

| **Sl.No.** | **Name of Instrument with Specifications** | **Quantity** | **Unit Price**  **without GST** | **Total Price without GST** | **GST% & Cost** | **Total Amount with GST** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | **Characteristics of an LVDT & measure displacement using LVDT Technical Specification-**DCV : 0.1mV to 1000V, ACV : 0.1mV to 1000V ,   DC Current : 0.1µA to 20A, AC Current : 0.1µA to 20A Built in AC source 3.5 KHz sine approx.Onbaord LVDT, non metalic structure, Micrometer for displacement, 3.5 Digit Digital Display, phase Detection : Balanced Modulator, Short Circuit & Overload protection. | 1 |  |  |  |  |
| 2 | **Measurement of Strain using Strain Gauge Technical Specification-** 3.5 Digital Display for strain -Weight, Precision Instrumentation Aplifoer, Stable DC voltage for strain Gauge , Signal Conditioner, PCB mounted Starin Gauge Cantlilever size 140X4x4mm Gauge Resistance: 300 Ohms (Nominal).  Gauge Length: 6mm.  Gauge Width : 2.4 mm.  Gauge Base : 12.5 mm x 4.3 mm.  Gauge Factor : 2:1 (approx.) | 1 |  |  |  |  |
| 3 | **Measurement of the level using the capacitive transducer Technical Specification-** Study of Water Level Transducer Trainer. \* Range:0-250mm \* Jar with Scale \* Capacitive Transducer \* Sockets at different places for observing / measuring he signals \* 3.5 digit DPM for indication \* 220V Built in IC regulated power supply | 1 |  |  |  |  |
| 4 | **To study the characteristics of a Thermostart and determine its parameters Technical Specification-** Digital Display Temperature, Thermostart with Heater , output voltage characteristics of the following transducers in the temperature range of room temperature to 90o C and determination of thei parameters Copper - Constantan thermocouple  Thermistors - Positive Temperature Coefficient - Negative Temperature Coefficient  Semiconductor sensor upto 90oC only | 1 |  |  |  |  |
| 5 | **Calibrate Semiconductor type temperature sensor (AD590, LM35, or LM75) To measure the change in temperature of ambient using Resistance Temperature Device (RTD). Technical Specification:** Study of RTD as temperature measuring transducer, AD590 as Temperature Transducer, LM35 as Temperature TransducerRTD ( PT - 100 ) probe with protection cover Power Supplies: DC Supply IC Regulated +12V DC, 150mA. 3.5 digit DPM as temperature indicator O/P provided on test points for monitoring & controlling. DCV : 0.1mV to 1000V, ACV : 0.1mV to 750V | 1 |  |  |  |  |
| 6 | **To design and study the Sample and Hold Circuit. Technical Specification:** Power Supplies: Dual DC Power Supply IC Regulated +15V DC, 150mA. DC Power Supply IC Regulated 0-12V DC, 150mA. Onboard Sine and Square Wave Generator: 1 KHz Sine Wave Generator (Amplitude Control). 8 KHz and 16 KHz Square Wave Generators. Components are mounted on the panels are: · 741 IC (Op-amp) · Resistors · Variable Resistor · MOSFET IRF540 · Capacitors | 1 |  |  |  |  |
| 7 | **Design & analyze the Clippers and Clampers circuits using junction diode Technical Specification:** DC Supply 0-5V DC, 150mA. Sine wave generator : 1 KHz, 15 Vpp  Operated on Mains power 230V, 50Hz +10% Voltage Control through Potentiometer. Series Resistor 470E, POSITIVE CLIPPER, NEGATIVE CLIPPER POSITIVE CLAMPER, NEGATIVE CLAMPER | 1 |  |  |  |  |
| 8 | **To plot the frequency response of a microphone. Technical Specification:** In built IC based Fixed DC Regulated Power Supply +12VDC/100mA., On board 200KHz sine wave oscillator provided.  Input amplifier stage using TL074.  Optical transmitter Optical Receiver Low Pass filter given on board. AC amplifier given on board. Power Amplifier given on board with volume control. | 1 |  |  |  |  |

The intenders are required to submit the offer enclosing GSTIN, PAN in their quotations. The registered original equipment manufacturer/suppliers/Agencies/Authorized dealers should write quotations for **"Supply of Laboratory Instruments to the Department of Physics, OUTR”**in bold letters with Quotation Call Notice No. and Date on covered envelope. The intenders should quote as per the above format in their letter head.

The last date submission of quotations is **25.01.2023 up to 4.00 PM** addressing to the **Officer On Special Duty, Odisha University of Technology and Research, Bhubaneswar (Formerly College of Engineering and Technology, Bhubaneswar), Techno Campus, Ghatikia, Mahalaxmivihar, Bhubaneswar- 751029** by Speed post/Registered post only. Through Hand and Courier service delivery are not accepted. The authority will not responsible for any postal delay. The quotations will not be received after scheduled date and time. Suitable penalty amount will be imposed if the supply, installation, commissioning and testing is not fully completed within the stipulated date.

The authority reserves the right to reject any or all quotations without assigning any reason thereof.

**Terms and Conditions.**

1. The cost of the above-mentioned items should be quoted mentioning make, model number and detailed technical specification.

2. The rate quoted should be inclusive of all packing, delivery and installation at Department of Physics, OUTR, Bhubaneswar.

3. Delivery of Instruments and installation of the same at Department of Physics, OUTR, Bhubaneswar should be made within the stipulated period from the date of issue of the Purchase order.

4. It will be responsibility of intenders to provide necessary spares consumable which may be required during the installation at his own cost.

5. The intenders are required to submit the offer along with PAN card and GSTIN registration certificate.

6. The firm should not be black listed during last three financial years.

7. One percent penalty amount will be imposed per week if the supply, installation, commissioning and testing is not fully completed within the stipulated date.

Sd/-

**HEAD OF THE DEPARTMENT**