SAMBALPUR UNIVERSITY
JYOTI VIHAR, BURLA
SAMBALPUR (ODISHA), PIN – 768 019

(NAAC ACCREDIATED WITH 'A' GRADE), Website: suniv.ac.in

WORLD BANK FUNDED, OHEPEE
CENTRAL INSTRUMENTATION FACILITY

Ref. No: 4494 /CIF **Date:** 27/08/2021

QUOTATION CALL NOTICE FOR EQUIPMENT

1. Quotations are invited from suppliers/firms with valid GST certificates and PAN card for the supply of Equipment for the ***Central Instrumentation Facility*** on or before 30.09.2021. EMD-2% of the quoted price. The sealed quotations by speed/registered post only may be sentto "Deputy Coordinator, IDP, Development Section – I, New Administrative Building, Sambalpur University, Jyoti Vihar-768 019, Sambalpur, Odisha".

   The details about the equipment and its specifications, and the terms and conditions may be obtained from the **information booklet of CIF** on the University web site: www.suniv.ac.in.

Registrar 27/8/21

Memo No. 4495 /CIF **Dated:** 27/08/2021

Copy forwarded for information and necessary action to:-

The Advertisement Manager, **The Samaj, Sambalpur(Odisha Edition), and The Times of India, Bhubaneswar (National Edition).**They are requested to publish the quotation call notice once in their respective Dailies in all Odisha edition for The Samaj and National Edition for The Times of India on or before Dt: 03.09.2021 by using minimum space and submit the bill-in-duplicate,in favor of The Registrar, Sambalpur University, Jyoti Vihar, Burla, Odisha 768 019, at Govt. concessional rate along with foolscap of published newspaper for payment.

Registrar 27/8/21

Memo No. 4496 /CIF

Dated: 27/08/2021

Copy forwarded for information and necessary action:-

1. Deputy Coordinator, IDP, Development Section – I, SU
2. Director, e- Governance Nodal Centre for uploading in the University website the detailed advertisement along with the information booklet of CIF.
3. Development Officer, Development Section – I, SU
4. Diary section, SU.
5. 02 spare copies to Store Section.
6. 02 spare copies to Development Section – I.
7. Notice Board.

Registrar 27/8/21

INFORMATION BOOKLET

ON

QUOTATION CALL NOTICE

WORLD BANK FUNDED (OHEPEE)

(CENTRAL INSTRUMENTATION FACILITY)

(Ref: 4494/CIF, Dated: 27/08/2021)

SAMBALPUR UNIVERSITY

JYOTI VIHAR, BURLA-768 019, ODISHA

Ref. No. 4494 */CIF*

Dated: 27/08/2021

QUOTATION CALL NOTICE

Sealed quotations in duplicate are invited from the interested Manufacturers/Authorized dealers/Registered firms to supply the following items for the World Bank funded (OHEPEE) CIF to the Sambalpur University, on 'FOR' destination basis. The last date of submission of quotation is 30.09.2021.Valid copy of VAT/PAN/GST No. and a bank draft of 2.0% of the quoted price as EMD, drawn **in favor of COF SU OHEPEE**of any nationalized bank**payable at State Bank of India, Jyoti Vihar Branch, Burla, code No.6672.** The EMD should be enclosed along with the quotation; otherwise the quotations will be rejected. The Registrar reserves all right to reject any or all quotations without assigning any reason thereof. **The Technical and Financial bids have to be submitted separately.**

Terms & conditions:

1. The quotation shall be submitted with technical specifications and quoted price in separate sealed covers. On the top of the envelope mention **"OHEPEE- CIF- instrument name"**, for which quotation is being submitted in bold.
2. The sealed quotations will be received up to 4.00 P.M. on all working days upto 30.09.2021by speed post/registered post only at theDevelopment Section – I, New Administrative Building, Sambalpur University, Jyoti Vihar-768 019, Sambalpur, Odisha.
3. The suppliers must be either the manufacturer of the instruments/equipment or the authorized agent/representative of the manufacturer. In the case of agent/representative, certified valid copy of the agency/authorization issued by the manufacturer should be enclosed with the quotation.
4. In the event of any item being available on Rate Contract, the quotation for that item shall not exceed the Rate Contract approved by DGS & D (GoI). The existence, price and terms and conditions of all Rate Contract items shall be disclosed by the tenderers.
5. The quotation should include apart from the price of the instruments/equipment –
   a) Warranty period details (extended warranty period separately).
   b) The cost of recommended essential spares.
   c) List and cost of consumables/standards etc., required from time to time with all necessary details.
   d) AMC after warranty period (to be shown separately).
6. **The rates/price should be quoted in the currency of the country where the instruments/equipment is manufactured or equivalent Indian currency.**
7. **ALL INFORMATION REGARDING EACH AND EVERY SPECIFICATION/ MEASUREMENTS /CALCULATIONS SHOULD BE MENTIONED IN THE COMPANY WEBSITE. DATA IN TYPED FORMAT ON COMPANY LETTERHEAD IS ALSO UNACCEPTABLE (DATA HAS TO BE SUPPORTED WITH EVIDENCE/ RESEARCH PAPERS ONLY ON WEBSITE ONLY) Quoted DATA/SPECIFICATIONS THAT DONT**

MATCH ON THE COMPANY WEBSITE WILL RESULT IN TECHNICAL DISQUALIFICATION OF THE SUBMITTED BIDS.

8. Delivery of the instrument shall be at the "Central Instruments Facility Centre", P.G. Department of Biotechnology & Bioinformatics, Sambalpur University, Jyoti Vihar-768 019 unless otherwise specified. **The price shall be inclusive of all taxes, shipment cost, cost of installation/commissioning, trial operation, and comprehensive training.** Necessary documents for Custom clearing will be provided by the University. **Sambalpur University is granted with DSIR certificate for customs and central excise duty exemption**.

9. The successful tenderer should supply the instruments/equipment within a period of 4-6 weeks from the issuing date of purchase order by the COF, Sambalpur University.

10. The EMD of the successful tenderer will be refunded after completion of the supply and installation of the equipment to the satisfaction of the Deputy Coordinator, IDP, Sambalpur University.

11. Documents such as instrument operation, calibration, maintenance, drawing, descriptive literature etc., if any, along with original instruction and data analysis manual should be supplied by the successful tenderer along with the equipment.

12. Instruments/equipment should be unpacked in the presence of the Deputy Coordinator, IDP, Sambalpur University. The consignment will be accepted only after inspection.

13. **A warranty certificate covering a period of minimum one year** from the date of supply and installation shall be provided. Any additional period towards warranty will be given weightage in evaluation of the quotations.

14. Inspection certificates of the instruments / equipment inspected by the qualified engineer of the manufacturer and packed in accordance with the terms and conditions of this order must be enclosed.

15. During the warranty period or later whenever the firm is called upon to attend to the rectification of the defects/faults in the consignments, the firm shall attend to the repair work within 48-96 hours. They should render timely back up service whenever called upon. **A certificate to the effect should be attached to the tender**.

16. **A certificate to the effect that instruments/equipment supplied is fully operational and no additional accessory or spare is required to make the instruments/equipment run should be issued along with the delivery challans/invoice**. The Deputy Coordinator, IDP, Sambalpur University reserves the right to refuse payment in the event of not furnishing this certificate at the time of supply.

17. Mode of Payment: Advance payment would be made through Bank against a Bank Guarantee equivalent to 20% of the quoted price (in INR); or else payment would be through Letter of Credit.

18. The Registrar, Sambalpur University reserves all the right to accept/reject any tender without assigning any reason thereof.

19. **Once the rate is approved by purchase committee, supply order is placed on the successful tenderer for supply of the equipment/instrument.** The decision of the Purchase Committee shall be final and binding.

20. All disputes subject to Court of Law in the jurisdiction of Sambalpur.

Equipment and its general specifications

Precision Ferroelectric Test System (250kHz@10V) along with High Voltage Interface Unit, High Voltage Amplifier to 10KV and High Voltage Test Fixture

Detailed Specifications:

About the equipment:

The P-E Hysteresis measurement setup should be capable for measurement of piezoelectric displacement, strain, polarization measurements (hysteresis loop, remnant polarization, saturation polarization) fatigue, and voltage breakdown as a function of applied electric field and temperature in thin and bulk piezo ceramic materials.

Detailed specification of the equipment:

- Operating voltage in the range: ±0-10 KV with ±100V using built-in amplifiers and ±10KV (with external amplifier).
- The system should have High Voltage Interface Unit as a critical safety feature for high voltage built-in amplifier.
- 16-bit arbitrary Wave form generator output.
- 100 points in 10 micro seconds for characterizing thin samples.
- 32000 data points from 16 milliseconds to 30 seconds for measurement of large area bulk piezo ceramic materials.
- Pulse width measurements should be as narrow as 0.5 micro second and up to 1 second or better.
- The minimum required leakage current resolution is 1pA for measuring DC leakage.
- The system should measure 200 fC of charge in a single, 1 second pass.
- Software Controlled output ramp for maximum accuracy.
- Should have 2-4 proper communication channels such as GPIB, RS232, I2C, USB, for controlling high voltage amplifiers and other with accessories.
- The system should have 2 external high-impedance voltage inputs for interfacing with external displacement, temperature sensors.
- The system should have attachment / provision for piezoelectric displacement / strain measurement for bulk ceramic samples.

Polarization Measurement:

- 18-bit resolution with a 2 MHz single pass capture rate and can execute a 10 MHz capture rate using interlace technique.
- 18 bit analog to digital converters 76 μV sensitivity on 10 pF sense.
- 0.5μs capture rate with 100ns interlace facility
- Polarization, output voltage, and sensor inputs captured simultaneously with no more than 10ns skew between channels.
- Minimum charge sensitivity: 1.0 fC or better

- Maximum charge measurement: 5.0 mC or higher. Should capture the charge generated by a 500 micro farad capacitor.
- Minimum area resolution: 0.1 m^2 or better
- Maximum area resolution: 50 cm^2 or higher
- Maximum hysteresis loop frequency: 250 KHz @+/-10V Built-in
- Minimum hysteresis loop frequency - 1/30th Hz (30 second period)
- Hysteresis Waveforms should be Sine/Tri/Double/Mono/Arb/Pulse/Zero/Custom type.

Instrument must have minimum 01year standard warranty. Special extended warranty of another 02 years may be included in the offer.

Software:

- The software operating the tester must be programmable and capable of executing all measurement types such as piezoelectric displacement, strain, polarization measurements (hysteresis loop, remnant polarization, saturation polarization), small signal CV, IV, fatigue, and voltage break down from one hardware configuration.
- Software should allow user to create any custom test profile, execute that profile, store the results in a permanent but unalterable database assigned to the experiment, and recall that data at any time in the future to plot or export it as commanded by the user.
- Captured data must be automatically stored and easily transferred to other testers using network protocols.
- The tester software must be adaptable to future changes in the host computer / laptop operating system.

Sample Holder:

- System should work with a dedicated sample holder. The sample holder should accommodate samples of diameter: 10-20 mm, thickness: 0.1-2.0 mm.
- The sample holder should provide a safe operating environment for testing of bulk piezo ceramics at high voltages (10 kV) and high temperatures (230 deg C). The entire voltage system and sample holder should be completely enclosed for safe operation at high voltage.
- The system should provide a completely insulated high voltage path from the high voltage amplifier to the test sample and back. Protection should be there for the tester, the sample and the high voltage amplifier in case of a sample short / break down.

Supported computer:

Branded desktop PC (DELL/Compaq/IBM, HP/equivalent) with following configurations: Intel generation core processor (core i3 or above), 4 GB RAM , 500 GB hard disk, original Intel motherboard, Optical mouse with pad and keyboard,, 21" LED monitor, Microsoft Windows 8 or above operating system. Preloaded standard 3-year anti-virus.
UPS: Suitable capacity UPS to protect the instrument during power failure (from local Bidder).

- Training should offer to 02 scientists for 03 days at site after successful installation.
- **Pre-installation requirement**- Complete technical details of pre-installation requirements should be furnished.

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