NOTICE INVITING QUOTATION (NIQ)

Date: 05/03/2014

Sealed quotations on company letterhead are invited from reputed manufactures in India, abroad or their authorized suppliers/ dealers and service agents in India for the supply of the *Data logger*. The quotation must provide detailed information of the configuration and specifications of the items as well as price (**in Indian Rupees only**) and terms and conditions of the payment. The quotation should mention the total cost of equipment, delivery, installation, commissioning, and demonstration at IIT Delhi site.

The quotation should be submitted on or before 19th March, 2014 by 5:00 PM in the office of the **Head, Department of Civil Engineering, Room No. 221, Block No. IV, Indian Institute of Technology Delhi, Hauz Khas, New Delhi - 110 016 (INDIA)**. The validity of the submitted quotation must extend up to at least three months. **Interested parties are required to submit their technical and financial bids in separately sealed envelopes and marked respectively as "Technical Bid" and "Financial Bid" on the outside**. The two envelopes should be enclosed inside a single large envelope and marked, **"ATTN: Dr. Supratic Gupta, Sealed Quotation for** Data logger [8 x 2-Channel Computerized Data Acquisition System with data acquisition software and sample Load cell (Capacity-100kN) & LVDT (Range-+2mm)] t**o be opened by Purchase Committee"**.

Sr. No.	Item Name and Specifications	Quantity
	8 x 2-Channel Computerized Data Acquisition System with data acquisition software and sample Load cell (Capacity-100kN) & LVDT (Range-$\pm$2mm)	
1	**The Data acquisition system should be capable of the following:** **a)** 8 Channel Signal Conditioning & Amplifier Unit 2 dedicated Load cell channels (Full bridge configuration) 4 dedicated Strain Gauge channels in Quarter bridge configuration 2 dedicated LVDT channels **b)** 8 Channel Signal Conditioning & Amplifier Unit 1 dedicated Load cell channels (Full bridge configuration) 1 dedicated Strain Gauge channels in Quarter bridge configuration 2 dedicated LVDT channels 2 dedicated Temperature measurement channels from temperature sensors 2 dedicated sound measurement channels from acoustic sensors The system should have power supply, signal conditioning cards and processing card that provides necessary excitation voltage and conditioning (i.e. amplification, filtering, attenuation etc.) of signals received from sensors (Load Cells, L.V.D.T.'s & Strain Gauge). The signal-conditioning card amplifies &	1 No. 1 No

	processes the signal of each channel and transfers it to data acquisition card installed in computer directly in terms of mV through cables and can be online monitored in the software. The unit is supplied with the necessary cables, connectors and other accessories. **Specifications of Data acquisition card** The PCI Bus advanced data acquisition card provides the following advanced features • 32 bit PCI- bus • 16-bit Analog Input resolution • Auto Scanning Channel selection up to 16 channels • Up to 100 KHz A/D Sampling Rates • 16 Single ended Analog Input channels • Bipolar Input signals • Programmable gain of x1, x2, x4, x8, x16 • Input range: +/-10V, +/-5V, +/-2.5 V, +/-1.25V, +/-0.625V • One 12-bit Monolithic multiplying Analog Output channel • 16 Digital Output and 16 Digital Input channels • 4 extended Digital Input and Digital Output channels on the 37 - pin connector • 3 Independent programmable 16-bit down counters. • Three A/D Trigger modes: Software Trigger, Programmable Pacer Trigger and External Pulse Trigger • Pre-trigger control • Internal DC-to-DC converter for stable Analog power source. Any other specification that can do equivalent	
2	**Application Software with 3 years free update:-** • Windows based user friendly software • Data transfer interval is programmable (between 1 second to 1 hour) • Independent Taring/Offset zeroing of each channel • Independent calibration of each channels • Start & Stop operation for acquiring data from the Electronic unit • Online monitoring of the data of all channels simultaneously • Online plotting of data of selected channels • Storing of data of each channel in user defined file/directory • Offline Graphical plotting of data from each channels both X-T as well as X-Y basis • Facility to print selected the graphs • Saving of the data and results in the file • Availability of Output data in Excel format.	1 No

3	**Preinstalled Computer & UPS with Data Acquisition System** A standard Computer with Data acquisition card would also be provided along with the system having following specifications- • Make- HP/DELL • Intel i7 3rd generation Processor, • 1TB HDD, 8GB RAM, DVD R/W drive, • Key Board, Optical Mouse, 6USB Ports • 19" TFT Screen, • UPS 1000VA	1 No
4.	**Load Cell (Capacity-100kN)** • Capacity : +/-100 kN • Type : Compression • Full Scale Output : 2.0 mV/V • Non-Linearity : < + 0.1% FSO • Hysteresis : < + 0.15% FSO • Non-Repeatability : < + 0.1% FSO • Creep (30 minutes) : < + 0.04% FSO • Excitation Voltage : 10 Volts DC • Safe overload : 150% • Operating Temperature : 0°C to +60$^{°}$C • Preferably with circular cross-section with 100 mm dia • Thickness : as small as possible	1 No
5	**LVDT (Range - ± 2mm) with fixing bracket** • Stroke : ± 2mm • Non Linearity : ± 0.3% of FSR • Excitation sinusoidal : 1-10Volt RMS @ 2 KHz • Sensitivity : 50mV/V/mm • Safe Temperature Range : Up to 60$^{°}$C • Core Fixture : Spring-loaded plunger	1 No
6	**Trolley** to place Computer & Amplifier units Trolley is ergonomically designed place the computer and amplifier units and can be moved from one place to other on wheels.	1 No

*Terms of Conditions***:**
- Power supply: 230V + 10%, 50Hz, Single phase.
- Demonstration with load cell, LVDT and strain gauge (TML brand, supplied by IITD) is necessary.
- A complete set of Manuals for operation, maintenance and safety should be provided. All Documents and Manuals should be in English language.
- Documentation related to guarantee/warranty of equipment to be provided in the name of IIT Delhi.
- 3 years free software update.
- Each of the essential specification needs to be responded. Bidder should also provide the timeframe of the delivery. <u>Failure to respond to any essential specification can lead to disqualification.</u>
- Vendor should provide reference of supply of equipment within India or outside of similar equipment. Any negative comments from any one referred would disqualify the bid. IIT Delhi reserves the right to interact/ visit with the referred customer as per its convenience.
- The quoted cost should be in Indian Rupees including taxes and freight to IIT Delhi. The cost should include installation, deputation of competent engineers for installation and systems required for smooth running of the equipment.
- Pre-installation requirements, if any, should be mentioned along with their detailed technical specifications. All these items should be provided within 2 weeks of Supply Order placement so that IIT Delhi can prepare the installation requirements well in time.
- Vendor is required to supply, install and ensure proper commissioning of the equipment within 30 days of the Supply Order.
- The supplier should demonstrate the performance of the equipment to the specifications by conducting trial tests at the Structures Laboratory.
- The cost should be CIF New Delhi.
- Comprehensive warranty of three years is required.
- The Institute reserves the right to accept/reject any/all the offers without assigning any reason whatsoever.