

Department of Civil Engineering
AMU, Aligarh

Notice calling for Quotation/Tender

Ref. No335./CED

Dated: 28.02.2013

The sealed Tenders/Quotations are required under **XII Plan (Equipment)** for the following items/equipment along with price list, literature of the item after necessary concession as it is an educational institution and these items are required for class and research work. The quotations addressed to the “Chairman Department of Civil Engineering” should reach to the office of the Department of Civil Engineering up to 12.03.2013 by 4.00 PM. After passing this time bound period the quotation will not be consider.

Structural Engineering Section			
S. No.	Name of the Equipment	Specifications	No. of Units
1.	ANSYS Academic Software; 5 user perpetual	Version 14.5; 2,56,000 Nodes	For 5 users
2.	Automatic data logger attached with computer	Universal automatic data logger with built-in energizing and signal conditioning for up to 68 channels (48+20), easy to use, mains operated, suitable for temperature, voltage, current and strain etc. having RS 232 port communication cable and software for data transfer over computer	01
3.	Proving Ring of 25t, 50t and 100t capacity	Integral compression proving ring with ball and socket arrangement for calibration, complete in wooden carry case, duly calibrated by NCCBM Ballabgarh	One each
4.	Stain Gauges 5mm, 10mm and 20mm	Strain gauge for pasting over concrete structure, Gauge lengths 5mm, 10mm and 20mm	
5.	Displacement Sensor	Linear displacement sensors, range 50mm, rated upto 4-20 mA, spring return type with 5m lead with suitable connectors for indicators	
6.	Load Cell	Strain gauge load cell range 5t, 10t and 25t rated upto 3mV/V type, full stainless steel construction with 5m lead and suitable connectors for indicator	

7.	Digital -Dial Gauge	Digital indicator 10 channel for LVDT and load cell easy to use with menu driven calibration by push buttons battery cum mains operated suitable for above sensors providing least count as 0.01 mm for LVDT and 1kg for load cell, having RS232 port, communication cable and software for data over computer	
8.	Miniature Compression Force Sensor with Press fitting adapters for mounting the force sensors	Lorenz-Messtechnik make; Type;K-2283, Range:50; Sensitivity:1mV/V; Accuracy:1%; (Lorenz Messtechnik GmbH, Germany)	01
9.	Accelerometer KS80D	Manufacturer IDS Innomic GmbH, Germany	03
10.	PROCEQ Pundit Lab Plus UPV: Rs.4 Lac	PROCEQ, Switzerland	01
11.	PROCEQ Canin and Corrosion Analyser	PROCEQ, Switzerland	01
12.	Deflectometer	Used for deflection of any bridge, ceiling or any suspended structure (Standard make)	03
13.	Resistivity Meter	Standard Make	01
14.	Chloride Tester	Standard Make	01
15.	Half Cell Potential	Standard Make	01

Hydraulic Engineering Section			
S. No.	Name of the Equipment	Specifications	No. of Units
1.	Automatic Bed Level Recorder - Profile Indicator	With full remote control for continuous measurement of bed and surface levels (Make-DELFT Hydraulics, Netherlands)	01
2.	Sediment Concentration meter – Ultrasonic High Concentration Meter	With a acoustic probe with adjustable transmitter and receiver elements (Make-DELFT Hydraulics, Netherlands)	01
3.	Vetrino 3D-Acoustic Doppler Velocity Meter	Accuracy: with $\pm 0.5\%$ of measured value ± 1 mm/s , Range: ± 0.01 to 2.4m/s (User selectable) (Make-Nortek)	01
4.	Digital point gauge/Digital water level recorder THREE IN NUMBERS	Gauge-geotechniques	03
5.	Current Meter	Gauge-geotechniques	02

Environmental Engineering Section			
S. No.	Name of the Equipment	Specifications	No. of Units
1.	Atomic Absorption Spectrometer	<p>Fully automatic Atomic Absorption Spectrometer, incorporating all spectrometer and atomizer components in a single instrument.</p> <p>The instrument should have following features</p> <ol style="list-style-type: none"> 1. Real Time Double Beam optical Spectrometer with Wavelength Range 190 - 900 nm. 2. Diffraction grating used as dual blazed with ruling density of 1800 lines/mm, RLD (Reciprocal Linear Dispersion) 1.6 nm/mm and high monochromator efficiency. 3. Spectral bandwidths of 3 different types programmable through software using auto slit selection mode. 4. System should have at least 8 Lamps position Automatic Turret with computer controlled lamp selection, its alignment and automatic optimization of energy using Coded Lamps. Built-in power supply for EDL super to enhance Lamp enhances capability. Lamps should be as per GCP compliance 5. The Detector used should be Solid-State Detector. 6. Total Gas Flow Control System maintains gas flows (Ratio of fuel/oxidant) at set levels to ensure excellent Flame stability and performance. 7. Automatic Gas Flow adjustment during change over between air C₂H₂ and N₂O. 8. All safety interlocks built-in and additional feature like Burner Head Interlock, Nebulizer/End Cap Interlock, and Drain Interlock to be built-in. 9. Computer controlled motorized burner adjustments with highest precision and reproducibility for adjustment of Flame position in light path as well as fully automatic adjustment of Burner Head. The height of Burner Head to be stored with method file. 10. Optional 10cm and 5 cm burner heads should be quoted for air acetylene and Nitrous oxide operations 	01

		<p>Graphite Furnace Optional</p> <p>a) Graphite Furnace with Integral Furnace Auto sampler with Graphite Furnace for 146 samples, sample delivery upto 50 µL with increment of 0.1 µL, automatic replicate analysis and automatic dilution.</p> <p>b) Should have eight lamp facilities for furnace as well.</p> <p>c). Should have Zeeman Background correction technique in Furnace mode.</p> <p>d) Graphite furnace must have in built camera for real time monitoring</p> <p>e) Pack Graphite tubes should be offered with the system.</p> <p>b) Various Hollow Cathode Lamp should be quoted separately for each element.</p> <p>c) Windows based Software for system function including control of major accessories, both of single element or multi-elements methods for Flame / Graphite Furnace. Auto parameter selection for method development, automatic selection of stored methods, automatic selection of flame conditions, Graphite Furnace and MHS Techniques, Burner Head position is stored with method, auto optimization of flame, on-line sensitive context help, user selectable statistics for SD / RSD, built-in reporting user format, mouse operation, software available in CD form etc.</p> <p>d) Imported Chiller and Air compressor should be quoted separately with their P/N.</p> <p>e) Mercury Hydride System/vapour Generation System should be quoted separately for analysis of all hydride-forming elements as Optional accessory</p> <p>f) All accessories like PC/Printer, UPS, gas cylinders with regulators and standards must be quoted separately for a smooth installation and running of the instrument</p>	
2.	Visible Spectrophotometer	Model DR/2800, Make HACH, USA	01

Geotechnical and Transportation Engineering Section			
S. No.	Name of the Equipment	Specifications	No. of Units
1.	Automatic Soil Compactor (Digital)	Standard Make and Model Confirming the Specifications of IS: 2720 Part 7 & Part 8 with Arrangement for Compacting CBR Mould	01
2.	Bitumen Testing Kit: (i) Automatic Softening Point Test (ii) Apparatus-Ring and Ball Test Digital	Standard Make and Model	01
3.	Battery Operated Electronic Balance	Standard Make and Model(Heavy Duty-Battery Backup 6-8 hrs) with: Minimum Weighing Capacity = 0.001g Maximum Weighing Capacity = 6000g	01
4.	Geotextile Classification Kit with: (i) Thickness Gauge for measuring thickness of geotextile and geofibres woven and non woven (ii) Sieve Test Apparatus used for classifying the geotextiles and geofibres woven and non woven (iii) Modified Direct Shear and Pullout Test Apparatus with Direct Shear Apparatus, device is provided with special cutter to cut the geotextiles to fit into box.	Indian or International Standards	01