Notice Inviting Tenders

Limited Tender No.: DEI/Engineering/Mech./VSD/2014-15/TDR-21

Dated: 09/01/2015

Limited tenders for the supply of below items:
1. Bacteriological / chemical analyser (Complete Water Quality Laboratory)
2. Instant Kit for measuring pH, Conductivity, Temperature & DO (Pen type Multi parameter)
3. Pre Programmed UV/Visible Spectrophotometer with COD Digester

Sealed tenders are invited from the Manufacturers/Suppliers/Authorized dealers for the supply of the following items:

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>DESCRIPTION OF ITEMS</th>
<th>QUANTITY</th>
<th>REMARKS</th>
</tr>
</thead>
</table>
| 1.    | **Bacteriological / chemical analyser**: (Complete Water Quality Laboratory containing:)
       | (i) Portable spectrophotometer along with reagents and apparatus necessary to run approximately 100 tests on different parameters
       | (ii) Multiparameter System with pH and conductivity Probe
       | (iii) Portable Turbidity Meter
       | (iv) Digital Titrator
       | (v) Instrument and Reagent Case
       | (vi) Glassware
       | (vii) MEL/m-ColiBlue24 Field Filtration Lab
       | 1 | |

   **Portable Spectrophotometer**

   **Specification**: Instrument should be portable with compact design and should be able to work with a rechargeable battery, as well as on AC power supply. Instruments must also have facility for the use to program his own parameter analysis (around 50 program) including: alcohol; aluminum; arsenic; barium; benztiazolate; boron; bromine; cadmium; chloramines; chloride; chloride dioxide; chlorine; chromium; cobalt; color; copper; cyanide; fluoride; formaldehyde; hardness; hydrazine; iodine; iron; lead; manganese; mercury; metolachlor; molybdenum; molybdate; nickel; nitrogen (as ammonia, nitrate, nitrite, total nitrogen); oxygen; chemical oxygen demand; oxygen scavengers; ozone; PCB (polychlorinated biphenyls); phenols; phosphonates; phosphorus; potassium; quaternary ammonium compounds; selenium; silica; silver; sulfate; sulfide; sulfite; surfactants; suspended solids; tannin and lignin; total organic carbon (TOC); tolyl triazole; total petroleum hydrocarbons (TPH); trihalomethanes (THM); toxicity; volatile acids; and zinc and other elemental analysis (in ppm/ppb ranges) etc.

   Wavelength Range: 340 to 800 nm
   Bandwidth: 5nm
   Wavelength Accuracy: ±2 nm
   Wavelength resolution: 1.0nm
   Wavelength Selection: Automatic.
   Optical System: Concentric Spectrophotometer (Polychromatic)
   Wavelength Calibration: Automatic at power up
   Photometric Measuring: ±3.0 Abs(wavelength range 340-800nm)
   Photometric Resolution: 0.001 Abs
   Photometric Linearity: < 0.5% to 2 Abs;
   ≤ 1% at ≥ 2.0Abs with natural glass at 546 nm
Stray Light: <0.5% T at 340 nm with NaNO₂
Repeatability: ±0.1 nm
Readout Modes: Transmittance, Absorbance, and Concentration
Interface Output: USB
Power Supply: Rechargeable batteries + AC power 220V
User’s Selected Programmed: 50
Data storage: 500 data points (date, time, results, sample ID, user ID)
Display: Backlit grayscale LCD Touch Screen
Enclosure: IP67 rated (closed sample cell cover)

### Reagent for spectrophotometer

<table>
<thead>
<tr>
<th>Tests</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acidity</td>
<td>10 - 4000 mg/L</td>
</tr>
<tr>
<td>Alkalinity</td>
<td>10 - 4000 mg/L</td>
</tr>
<tr>
<td>Ammonia</td>
<td>0.01 - 0.50 mg/L</td>
</tr>
<tr>
<td>Bromine</td>
<td>0.05 - 4.50 mg/L</td>
</tr>
<tr>
<td>Calcium</td>
<td>10 - 4000 mg/L</td>
</tr>
<tr>
<td>Chloride</td>
<td>10 - 10,000 mg/L</td>
</tr>
<tr>
<td>Chlorine, Free &amp; Total</td>
<td>0.02 - 2.00 mg/L</td>
</tr>
<tr>
<td>Color</td>
<td>0.010 - 0.700 mg/L</td>
</tr>
<tr>
<td>Copper</td>
<td>0.04 - 5.00 mg/L</td>
</tr>
<tr>
<td>Hardness</td>
<td>10 - 4000 mg/L</td>
</tr>
<tr>
<td>Iodine</td>
<td>0.07 - 7.00 mg/L</td>
</tr>
<tr>
<td>Iron</td>
<td>0.02 - 3.00 mg/L</td>
</tr>
<tr>
<td>Manganese</td>
<td>0.1 - 20.0 mg/L</td>
</tr>
<tr>
<td>Nitrate</td>
<td>0.1 - 30.0 mg/L</td>
</tr>
<tr>
<td>Nitrite LR</td>
<td>0.002 - 0.300 mg/L</td>
</tr>
<tr>
<td>Phosphate Total</td>
<td>0.02 - 2.50 mg/L</td>
</tr>
<tr>
<td>Phosphate, React</td>
<td>0.02 - 2.50 mg/L</td>
</tr>
<tr>
<td>Silica HR</td>
<td>1 - 100 mg/L</td>
</tr>
<tr>
<td>Sulfate</td>
<td>2 - 70 mg/L</td>
</tr>
<tr>
<td>Sulfide</td>
<td>5 - 800 mg/L</td>
</tr>
<tr>
<td>Suspended Solids</td>
<td>5 - 750 mg/L</td>
</tr>
</tbody>
</table>

### (ii) Multiparameter System

**Specification**: Multiparameter System should have facility to measure multiparameter of pH, mV, Temperature, Conductivity, TDS, salinity, resistivity, LDO & ORP, LBOD and ISE with the following features:

- **Dual Input** – 2 parameter’s measurement simultaneously using 2 different probes (any two pH, Conductivity, LDO, ORP, LBOD and ISE at once)
- **Dual Display** – View information of two parameters simultaneously on one screen at once with calibration status.
- **Calibration history stored in intelligical probes**
- **Changing Probe facility without re-calibration**
- **Meter should recognize probes (pH, Conductivity, LDO, ORP, LBOD and ISE) automatically**
- **Data Storage**: GLP/ISO compliant reading data stored & transfer facility to PC or printer with calibration details.
- **Data Memory**: 500 points
Electrode Specification:

- **pH:** Range: 0 to 14 pH
  - Resolution: 0.1/0.01/0.001 selectable
- **Temp:** Range: 10.0 to 110°C
  - Resolution: 0.1°C
- **Conductivity:** Range: 0.01 µS/cm to 200 mS/cm
  - Resolution: 0.01 µS/cm (5 digits, maximum)
- **Resistivity:** Range: 2.5 ohm.cm to 49 Mohm.cm
  - Resolution: 0.1 ohm.cm (5 digits, maximum)
- **Salinity:** Range: 0 to 42 g/kg or %
  - Resolution: 0.01 ppt
- **TDS:** Range: 0.0 to 50.0 g/L
  - Resolution: 0.1 mg/L

Cable length: 1 meter of each probe.

Power Supply: Operation with both batteries and 220V AC line power should be possible.

(iii) **Portable Turbidity Meter**

**Specification:** Turbidity Meter should be microprocessor controlled for accurate, reliable field testing for samples having turbidity up to 1000 NTU without any dilutions. Meter should have two-detector optical system to measure turbidity in colored samples, light fluctuations, and stray light to achieve reliable results under field conditions. Scope of supply of meter should include Primary standards, Secondary standards, nine sample cells, silicon oil, oiling cloth, and rugged carrying case, manual. Meter should have the following features:

- **Function:** RST (Rapid Settling Turbidity)
- **Measurement Method:** Ratio Turbidimetric determination using a primary nephelometric light scatter signal (90°) to the transmitted light scatter signal.
- **Light Source:** Tungsten filament lamp / Light-emitting diode (LED) @ 860 nm
- **Range:** 0 to 1000 NTU (FNU)
- **Accuracy:** ±2% of reading plus stray light from 0 to 1000 NTU
- **Repeatability:** ±1% of reading, or 0.01 NTU (FNU), whichever is greater
- **Resolution:** 0.01 NTU on lowest range
- **Stray Light:** <0.02 NTU (FNU)
- **Signal Averaging:** Selectable on/off
- **Detector:** Silicon photovoltaic
- **Reading Modes (user selectable):** Normal (Push to Read); Signal Averaging; Rapidly Settling Turbidity
- **Data Logger:** 500 records

(iv) **Digital Titrator**

**Specification:** Portable Titrator should have following specifications:

- **Volume:** 13 ml
- **Delivery:** 800 digits /ml
- **Accuracy:** +/- 1%

(v) **Instrument and Reagent Case**

Cases for conveniently carrying the Instruments and associated Reagents, chemicals and glassware should be provided.

(vi) **Glassware:** All glassware (beakers, bottles, brushes, cylinders, etc. of appropriate capacities) required for sample collection, sample preparation and analysis should be provided.
### MEL/m-ColiBlue24 Field Filtration Lab

**Specification:**
- Number of tests: Varies
- Parameter: Total Coli forms & E. coli
- Sensitivity: 1CFU/ml


(A) **Specification Of Conductivity, Temperature, Salinity**

- **Accuracy:** pH: ±0.02 pH
- **Battery Requirements:** Alkaline / Rechargeable Batteries
- **IP Rating:** IP67
- **Operating Temperature Range:** 0 to 50°C

**Parameter:** pH, Conductivity, TDS, Salinity, Temperature

- **Range:**
  - Cond: Auto-ranging (0.0 to 199.9 µS/cm; 200 to 1999 µS/cm; 2.00 to 19.99 mS/cm)
  - pH: 0.00 to 14.00
  - Sal: Auto-ranging (0.00 to 10.00 ppt; 0.00 to 1.00%)
  - TDS: Auto-ranging (0.0 to 99.9 ppm; 100 to 999 ppm; 1.00 to 10.00 ppt)
  - Temp: 0.0 to 50°C

- **Resolution:**
  - Cond: 0.1 µS/cm from 0.0 to 199.9 µS/cm; 1 µS/cm from 200 to 1999 µS/cm; 0.1 mS/cm from 2.00 to 19.99 mS/cm
  - pH: 0.01 pH
  - Sal: 0.01 ppt from 0.00 to 10.00 ppt; 0.01% from 0.00 to 1%
  - TDS: 0.1 ppm from 0.0 to 99.9 ppm; 1 ppm from 100 to 999 ppm; 0.01 ppt from 0.00 to 10.00 ppt
  - Temp: 0.1°C

(B) **Dissolved Oxygen (DO) Meter**

- **Accuracy:** ± 0.4 mg/L DO
- **Operating Temperature Range:** 0 to 50°C
- **Power:** Alkaline / Rechargeable Batteries
- **Range:** 0 to 20.0 mg/L DO
- **Resolution:** 1 mV

#### 3. UV/vis Spectrophotometer, Turbidity meter with Accessories: (Pre-Programmed UV/Visible Spectrophotometer with COD Digester)

(A) **UV-Visible Spectrophotometer:**

UV-Visible spectrophotometer with pre-installed programs & user generated program for different water/waste water parameter inclusive of: TOC, COD, arsenic; barium; cadmium; chloride; chlorine dioxide; chlorine; chromium; cobalt; color; copper; cyanide; fluoride; formaldehyde; hardness; hydrazine; iodine; iron; lead; manganese; mercury; metolachlor; molybdenum; molybdate; nickel; nitrogen (as ammonia, nitrate, nitrite, total nitrogen); phosphorus; potassium; selenium; silica; silver; sulfate; sulfide; sulfite; total petroleum hydrocarbons (TPH); trihalomethanes (THM); toxicity; volatile acids; and zinc in ppb & ppm level.

- **Wavelength Range:** 190 to 1100 nm; **Accuracy:** +/-1nm; **Resolution:** +/-0.1nm
- **Spectral bandwidth:** 2 nm
- **Operating Mode:** Transmittance (%), Absorbance & Concentration.
- **Lamp/light source:** Deuterium (UV), tungsten (VIS)
Photometric range: +/-3.00 ABS
Display: Backlit LCD, Touch-screen graphical.
Data Storage: 5000 data points (date, time, results, sample & user ID), 200 user calibrations, 20 scans etc
Self-test at power up including wavelength calibration and automatic Lamp alignment
Should be capable of working as a stand-alone and as well as possess a USB 1.1 Interface facility for printer attachment & should be able to read Bar Coded cells etc.
Scope of supply multi-cell holder, instrument manual, power cord (230V), 1-inch matched glass sample cells, 1 cm matched quartz sample cells. Quote with cadmium regent, Fluoride regent and Arsenic high range test kit.

(B) COD Digester:
Pre-programmed with one touch for all standard digestion temperature (100°C/105°C/150°C) and all COD, TOC, UniCell, TNT tests which require digestion. There should be temp safeguard to prevent overheating & provision of storage up to 3 user specific digestion/reaction applications.
Programmable Temperature Range: 37°C to 165°C in 1°C steps
Programmable Timer Range: 0 to 480 minutes (8 hours)
Fast heat up time: 150°C in less than 10 Minutes with Temp Stability of +/- 1°C.
Single Block: 9 wells of 16mm Vials and 2 wells 20mm Vials
Digital countdown timer with automatic shut off and alarm signal.
Fully insulated heater block (no skin contact) with locking and transparent protective lids.
With regent of COD Bulk test range 0-15000ppm

The tenderer shall be required to submit the Earnest Money Deposit (EMD) for an amount of Rs. 36,000/- by way of demand drafts/banker’s cheque/FDRs which is refundable and a non-refundable tender fee for an amount of Rs. 200/- (Rupees two hundred only) by Cash or Demand draft. The demand drafts shall be drawn in favour of “Registrar, Dayalbagh Educational Institute, Agra” payable at Agra. The demand drafts (validity 45 days beyond final bid) for earnest money deposit & tender fee must be enclosed in the envelope containing the bid documents.

“The Registrar
Dayalbagh Educational Institute,
Dayalbagh, Agra – 282005,
Uttar Pradesh”

Note: Central Purchase Organization, Small Scale Industries/ National Small Scale Industries Corporation shall be exempted from payment of Earnest Money Deposit. Tenderers seeking exemption should enclose a self attested photocopy of valid registration certificate with NSIC.
(The Earnest Money will be liable to be forfeited if quotation is not honored or if contract is not signed with the Institute, after the award is made to the Tenderer)

1. Time and last date of submission of the Bid: 1.30 pm on 03.02.2015
2. Time of Bid Opening: 2.00 pm on 03.02.2015
3. Venue of Bid Opening: Conference Hall, CAO, Dayalbagh Educational Institute.

Interested Suppliers/Authorized dealers may put the tender document complete in all respect and other requisite documents in the tender box kept in the General Section, CAO, Dayalbagh Educational Institute, Dayalbagh, Agra-282005. The tenders shall not be entertained after this deadline under any circumstances whatsoever.

Registrar
Dayalbagh Educational Institute
Terms & Conditions

Note: Bidders must submit the following primary information/documents with the quotation. Bidders will have to indicate these particulars in their quote failing which the offer may be rejected. Please do produce the related documents whenever required by the Institute.

1. Trade License/Company Registration No.
2. VAT / Service Tax Regn. No.
3. Income Tax PAN No.
4. Firm’s Bank A/c details
5. Bidders are requested to quote rate(s) per unit(s) only in the recognized Accounting units otherwise your quotation will not be accepted.
6. Cost of items shall include installation, support and troubleshooting.
7. Warranty and Support: for Equipment/Hardware and Software should be explicitly mentioned.
8. Bidders should be OEM/Authorized partner/Authorized dealer of OEM.
9. Bidders should quote rates as per details/specifications mentioned in notice inviting Tender. The Institute reserves the right to place order for each job to single/separate vendor(s) if necessary.
10. Bidders should quote rates on FOR/Free Delivery at the sites specified in the Notice inviting Tender, inclusive of all charges else should mention estimated cost of packing, forwarding, insurance and freight by Rail/Road/Post etc. as the case may be.
11. Bidders must indicate if their rate is inclusive of VAT/Sales Tax and/or Excise Duty.
12. Quotation received after the closing date will not be entertained and revision in the price will render the bid invalid. Quotation should indicate clearly the period of Validity, preferably not less than 45 days.
13. In case of an offer for items having multiple options, you should clearly indicate item-specific price(s). Please quote separate item-wise rate(s), when quotation has been asked for so. For every offer, packing and forwarding charges, Sales/VAT/Service Tax etc. should be shown separately.
14. Bids will be evaluated after equated comparison of offers upon calculating all tax/duty/cess/surcharge/discount/packing/transportation costs, other charges with price and non-compliance of technical and commercial terms will render a bid liable for rejection.
15. Bidders will have to submit Bills/Invoices on dispatch of stores, if ordered, to this office in triplicate duly pre-receipted (and stamped for amount over Rs. 5000/-) and supported by the relevant delivery documents for audit and payment direct to you or to your bankers. Generally, payments can be expected within one month and are made against acceptance of supplies/ jobs completed and in deserving cases, against shipment documents.
16. No insurance charges are allowed unless otherwise specified and agreed to by us. In the absence of any specific instructions, it will be the responsibility of the supplier to ensure a consignment against transit risk at his own expense if he so desires.
17. The Institute is not bound to accept the lowest rate or any other offer and the acceptance of the offer is entirely at the discretion of the Committee.
18. All purchases are subject to the approval of the Governing Body of the Institute.
19. The Institute reserves the right to select certain items in single or multiple units and reject the others or all as mentioned in the schedule and to revise or alter the specifications before acceptance of any tender and accept or reject any or all tenders, wholly or partly or close the tender without assigning any reason whatsoever.
20. The Bidder shall be required to submit the amount of Earnest Money Deposit (EMD) Rs.36,000/- as mentioned in the Notice Inviting Tender which is refundable and a non-refundable tender fee for an amount of Rs 200/- (Rupees two hundred only) by way of demand drafts/banker's cheque / FDRs. The
demand drafts shall be drawn in favour of “Registrar, Dayalbagh Educational Institute, Agra” payable at Agra. The demand drafts (validity 45 days beyond final bid) for earnest money deposit & tender fee must be enclosed in the envelope containing the bid.

a.) The firm(s) that are registered with the National Small Industries Corporation (NSIC) / or Small Scale Industries (SSI) are exempted from furnishing the EMD. Self-attested photocopy of the valid registration certificate must be enclosed with their bid.

b.) The demand drafts for EMD & tender fee must be enclosed in the envelope containing the technical bid. Any technical bid is found without the demand drafts of EMD and tender fee will be rejected. The Institute will not be liable to pay any interest on such an amount. The EMD shall be forfeited, if the Bidder withdraws its bid during the period of validity of Tender.

21. Arbitration and Laws: In case of any dispute or difference arising out of or in connection with the tender conditions / order and Contract, the Institute and the Supplier will address the dispute / difference for a mutual resolution and failing which, the matter shall be referred for arbitration to a sole Arbitrator to be appointed by the Institute. The Arbitration shall be held in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and the venue of arbitration shall be at Agra only. The resolution of the Arbitrator shall be final and binding on both the parties.

22. Jurisdiction: The courts at Agra alone will have the jurisdiction to try any matter, dispute or reference between parties arising out of this tender /contract. It is specifically agreed that no court outside and other than Agra court shall have jurisdiction in the matter.