Department of Civil Engineering wishes to purchase **PM$_{2.5}$ Personal Sampler with compatible pump (3 Units)** as per the specifications given below.

Technical & Financial bids (in two separate sealed envelopes) clearly labeled with note as “**Quotation for Purchasing of 3 units of both PM$_{2.5}$ Personal Samplers and Compatible Pumps**” should reach the following address on or before **February 12th, 2015 by 5:00 PM**.

**Technical Specifications:**

Three units of Portable battery operated system for Personal Sampling of PM$_{2.5}$ Aerosol with following specifications and features:

1. **Specifications of PM$_{2.5}$ Sampler (No of unit =3):**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Specifications</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Type</td>
<td>Single stage impactor</td>
</tr>
<tr>
<td>2</td>
<td>Collection of Particle of Cutoff Diameter ($d_{50}$)</td>
<td>Particle Diameter less than $2.5$ μm (PM$_{2.5}$) at flow rate of $5$ LPM or lower should be collected on filter paper.</td>
</tr>
<tr>
<td>3</td>
<td>Essential features</td>
<td>• Sharp PM$_{2.5}$ Cutoff at flow rate $\geq 9$ LPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Compact and light weight ($\leq 80$ gm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Should have collar clip</td>
</tr>
<tr>
<td>4</td>
<td>Compatible filter paper size</td>
<td>$47$mm or $37$mm, PTFE and Quartz filter media</td>
</tr>
<tr>
<td>5</td>
<td>Necessary Tool-kit</td>
<td>Necessary tools is required to change filter papers in personal sampler</td>
</tr>
<tr>
<td>6</td>
<td>Bidder Credibility</td>
<td>The Bidder should be a reputed manufacturer with minimum 10 years of experience and they have Authorized Agent in India since last 2 years or more.</td>
</tr>
</tbody>
</table>

2. **Specification of Suction Pump compatible with above mentioned PM$_{2.5}$ Sampler (No of unit =3):**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Specifications</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Flow rate</td>
<td>$5$ to $15$ L/min.</td>
</tr>
<tr>
<td>2</td>
<td>Typical run time</td>
<td>Li-Ion battery Rechargeable with $24$-hours run time or more with impactors and other sampling devices.</td>
</tr>
<tr>
<td>3</td>
<td>Noise level</td>
<td>Should be of low noise not exceeding $65$dBA or housed in noise-reducing case</td>
</tr>
<tr>
<td>4</td>
<td>Standard Flow control and calibration system</td>
<td>For Maintaining flow calibration automatically</td>
</tr>
<tr>
<td></td>
<td>Flow rate accuracy</td>
<td>$\pm 5%$ of set-point after calibration to desired flow</td>
</tr>
<tr>
<td>5</td>
<td>Keypad function</td>
<td>Simple keys to operate the device manually</td>
</tr>
<tr>
<td>6</td>
<td>PC Programmability</td>
<td>Compatible to be used with DataTrac software for easy generation of data should be included.</td>
</tr>
<tr>
<td>7</td>
<td>Accurate automatic Calibration System</td>
<td>Auto calibration system should be present</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>8</td>
<td>Adjustable values option</td>
<td>Sample run time, Calibration, Clock Display, flow rate, delayed start and Temperature and atmospheric pressure display</td>
</tr>
<tr>
<td>9</td>
<td>Recorded values</td>
<td>Start date and Time, Stop date &amp; Time, Total sample time, flow rate, sample volume, temperature &amp; atmospheric pressure, Pump mode transitions</td>
</tr>
<tr>
<td>10</td>
<td>Adjustable Logging Interval</td>
<td>Recording Pumps history upto 6-8 hrs (over more than 100days)</td>
</tr>
<tr>
<td>11</td>
<td>Monitoring time</td>
<td>Ideal for 24-hr indoor monitoring and attended ambient monitoring</td>
</tr>
<tr>
<td>12</td>
<td>Tubing</td>
<td>Requires 3/8-inch ID tubing</td>
</tr>
<tr>
<td>13</td>
<td>Timer Display Range</td>
<td>1 to 99999 minutes (approximately 69days).</td>
</tr>
<tr>
<td>14</td>
<td>Operating Temperature Range</td>
<td>0 to 45° C</td>
</tr>
<tr>
<td>15</td>
<td>Power</td>
<td>Removable, Rechargeable Li – ion battery, input voltage-100-240 V AC along with one extra pair.</td>
</tr>
<tr>
<td>16</td>
<td>Weight</td>
<td>1-2 Kg</td>
</tr>
<tr>
<td>17</td>
<td>Size</td>
<td>Length less than 25cm, Breadth less than 10cm, Height less than 10cm</td>
</tr>
<tr>
<td>18</td>
<td>Display</td>
<td>Touch screen Display for pump related and ambient parameters and with Volume Display</td>
</tr>
<tr>
<td>19</td>
<td>Connection case, Charger and Tool Kits</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Any Additional Accessories</td>
<td></td>
</tr>
</tbody>
</table>

For any queries, please do not hesitate to contact undersigned.
Terms & Conditions:

- The technical and financial bids should be sealed in separate envelopes with proper labeling before putting them together in the sealed cover.
- Detailed specifications, catalogue/literature and authorization certificate of all items quoted should be supplied with quotation.
- Bidder must specify Customs Tariff Code and Custom Duty applicable for IIT Delhi in their quotation.
- If the items quoted are proprietary in nature, please enclose proprietary certificate from the principals stating “Certified that ------------ is a proprietary item of M/s -------------- and no other manufacture make these items”.
- Please quote price at FOB basis in case of price in foreign currency.
- Price in Indian rupees shall be quoted on FOR IIT Delhi Basis.
- Quotation should clearly mention installation & delivery charges. Clearly indicate whether the prices are inclusive of all taxes. Otherwise indicate all taxes separately.
- Special discounts/rebate wherever admissible keeping in the view that supplies are being made for an Educational institute may be indicated in the offer.
- Supplier shall fully warrant that all the materials supplied under the order shall be new and first quality.
- Quotation should be valid for three months from due date.
- A minimum of 1 year’s comprehensive warranty of the equipment is required.
- Payment in Foreign currency will be made by Letter of credit as per Institute’s rules.
- Payment in Indian currency will be released after installation as per Institute’s rules.
- Delivery period should be clearly indicated in the quotation.
- Order must be delivered and installed within 6 weeks of receipt of order.
- Incomplete and conditional submitted tenders would be summarily rejected.
- Institute Reserves the right to accept/Reject any or all quotation without assigning any reason.

Name and Address for quotations:

Dr. Gazala Habib
Assistant Professor,
Civil Engineering (Block IV, Room 303)
Indian Institute of Technology Delhi,
New Delhi 110016, India

Email: gazala@civil.iitd.ac.in
Phone: +91-11-2659-1192; Fax: +91-11-2658-1117

Deadline: February 12th, 2015 (5:00PM)