To,

Address (Firm)

Sub: Invitation for Quotations for supply of Ground Penetrating Radar.

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Brief Description</th>
<th>Quantity</th>
<th>Delivery Period (In days)</th>
<th>Place of Delivery</th>
<th>Installation Requirement (if any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ground Penetrating Radar</td>
<td>1</td>
<td>60</td>
<td>Department of Civil Engineering, National Institute of Technology, Tiruchirappalli</td>
<td>Installation to be done in the Department of Civil Engineering, National Institute of Technology, Tiruchirappalli, Tamil Nadu</td>
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</tbody>
</table>

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the Technical Education Quality Improvement Programme[TEQIP]-Phase III Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.

3. Quotation,

3.1 The contract shall be for the full quantity as described above.
3.2 Corrections, if any, shall be made by crossing out, initialing, dating and rewriting.
3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit price.
3.4 Applicable taxes shall be quoted separately for all items.
3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
3.6 The prices should be quoted in **Indian Rupees only**.

4. Each bidder shall submit only one quotation.

5. Quotation shall remain valid for a period not less than **45** days after the last date of quotation submission.

6. Evaluation of Quotations,
   The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which
   6.1 are **properly signed**; and
   6.2 confirm to the terms and conditions, and specifications.

7. The Quotations would be evaluated for all items together.

8. Award of contract:
   The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.
   8.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.
   8.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.

9. Payment shall be made in Indian Rupees as follows:
   **Delivery, Installation & Satisfactory Acceptance - 100% of total cost**

10. All supplied items are under warranty of **24** months from the date of successful acceptance of items.

11. You are requested to provide your offer latest by **15:00** hours on **01-December-2017**.

12. **Opening time : 01-December-2017  16:00 hours at TEQIP Office, Administrative Building, NIT Trichy**

13. Detailed specifications of the items are at Annexure I.

14. Training Clause (if any) **One day training & Demo.**
15. Testing/Installation Clause (if any) 100% payment after delivery and successful installation at Department of Civil Engineering, NIT, Tiruchirappalli - 620 015, Tamil Nadu

16. Information brochures/Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.

17. Sealed Quotations to be submitted at the following address:

The Head of Department
Dept. of Civil Engineering
National Institute of Technology
Tiruchirappalli – 620 015.

18. We look forward to receiving your quotation and thank you for your interest in this project.

Note: The cover should be duly superscribed with the following details.

(1) Quotation Reference Number
(2) Quotation for the supply of ..................
(3) Date of opening ..................

(Dr. K. Baskar)
HoD/Civil Engg.
Annexure I

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Item Name</th>
<th>Specifications</th>
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<tbody>
<tr>
<td>1</td>
<td>Ground Penetrating Radar</td>
<td><strong>A. Control System:</strong></td>
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<td>1. GPR Control System with <strong>in-built rugged color LCD display</strong> (no Laptop should require in the field for data acquisition) having Antenna input, DC power input, Accessory connector, USB port.</td>
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<td>2. The System should run through <strong>internal rechargeable battery</strong> or, in its internal casing, with low power consumption so that it can run more than 3 hours. One spare battery is desired.</td>
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<td>3. This same system should have antenna <strong>compatibility for lower &amp; higher frequency antennas</strong> ranging from 16MHz to 2.6GHz for future application.</td>
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<td>4. Data collection should be <strong>point mode, distance mode and time mode</strong> with facility of start &amp; stop anytime in the field during data acquisition and <strong>back-cursor real time display</strong> with <strong>user marker</strong> facility.</td>
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<td>5. Data collection should be in direct 2D &amp; 3D mode, with 2D and 3D data display in the field, without transferring to PC/Laptop.</td>
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<td>6. Internal Data Storage 2GB or more.</td>
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<td>7. Data Transfer through USB port.</td>
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<td><strong>8. Advance real-time filters like, Surface Position, Gain, IIR Filter, Stacking; Range Gain should be applied at the time of data collection.</strong></td>
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<td>9. System Performance:</td>
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<td>- PRF :− 100 KHz or more</td>
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<td></td>
<td></td>
<td>- Scan/Sec :− 220 Samples/scan or more</td>
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<td></td>
<td></td>
<td>- Samples/Scan :− 8,192 or more</td>
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<td></td>
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<td>- Time Range :− 8,000ns or more</td>
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<td></td>
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<td>- Data Format :− 16 bit or better</td>
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<td></td>
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<td>- Gain:− from-20 dB to 100 dB or better</td>
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B. Antennas:
* 400MHz Antenna (central frequency), Shielded type, with facility of distance mode data collection with survey wheel. The depth of investigation should be 4mtrs soil condition.
* Antenna should have:
  – Integrated support Fiducial Markers.
  – Direct 2-D & 3-D data collection

C. Cable and other Accessories:
* Antenna Control Cable to connect with the control system to antenna, 2m length - 1 no.
* 3-Wheel Survey Cart for Distance mode data collection– 1 no.

Processing & Interpretation Software:
* At least5 or more activations (means to run in5 systems and should work same time)

2-Dimensional Software:
* Line scans display, with zooming in/out facility.
* Should show raw and applied user gain data simultaneously and dynamically with mouse movement.
* Mouse cursor can be used for display position, depth, time range, GPS information, and signal amplitude of the point in the data image.
* Topography correction can be applied using the elevation from users.
* Facility to measure the velocity from hyperbolas and CMP data files.
* Multi-layer variable velocity migration facility should be available.
* It should have image optimization of gain, color palette, contrast and sensitivity, as well as wiggle trace viewing for better interpretation.
3-Dimensional Software:-

* It should crate 3D volume data with 3-D Interactive facility to
design the Utility data and able to transfer utilities with all
attributes directly to AutoCAD Format for GIS preparation.
* 3D presentation, plan views, time slice maps, and linear
functions. Super 3D capability allows the combining of survey
files. 3D Map Mode permits 2D files to be viewed in 3D, or
combined with GPS data, for viewing survey data in 4 screens
simultaneously. Allows automatic pipe identification, user
defined pipe sizes and colors, movie view of slice information,
stretch and compress data in any axis.
* Images can be saved in graphic image files, such as BMP etc.

Supply should complete with:

- 1 No. Complete GPR System fulfilling the above basic needs.
- 2 Nos. Rechargeable Battery with Charger.
- 1 No. Antenna- 400MHz, fulfilling the above requirement.
- 1 No. Survey Cart 3-wheel with compatibility to antenna with
desired accessories.
- 1 No. license Software for 2-Dimensional and 3-Dimensional
fulfilling the abovementioned facilities. (5 or more activations)
- 1 No. 2m antenna control cable
- 1 No. Sunshade for working in day light
- 1 No. Hard PVC (Pelican case is preferable) Carrying Case to
carry Control Unit.
- 1 No. User manual (soft or hard format)
**FORMAT FOR QUOTATION SUBMISSION**

(In letterhead of the supplier with seal)

Date: _______________

To: 

_____________________________________________

_____________________________________________


<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of goods (with full Specifications)</th>
<th>Qty.</th>
<th>Unit</th>
<th>Quoted Unit rate in Rs. (Including Ex Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)</th>
<th>Total Price (A)</th>
<th>Sales tax and other taxes payable</th>
<th>Total Cost</th>
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Gross Total Cost (A+B): Rs. ________________

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. ________________ (Amount in figures) (Rupees ________________amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of ________________ months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier
Name: ________________
Address: ________________
Contact No: ________________