Dear Sirs,

Please submit your sealed quotation, in the Tender Form enclosed here along with the descriptive catalogues/pamphlets/literature, superscribed with Our Ref.No. and Due Date for the supply of the following items as per the terms & conditions mentioned in Annexure (Form No: 2017-000242-01).

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Description of Items with Specifications</th>
<th>Unit</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Supply and installation of Vector Network Analyzers. Warranty: Minimum three years. Details as per Annexure</td>
<td>NOS</td>
<td>1</td>
</tr>
</tbody>
</table>

DELIVERY AT: IIRS, DEHARDUN
MODE OF DESPATCH: DOOR DLVRY
DUTY EXEMPTIONS: Nil
SPECIAL INSTRUCTIONS: Nil
SPECIFIC TERMS

PURS. & STORES OFFICER
For and on behalf of the President of India
The Purchaser
Equipment Name: Vector Network Analyzer

Specifications:

A) For Spectrum Analysis
- Frequency Range: 9 kHz to 3 GHz
- Frequency Counter
  (a) Resolution: 1 Hz Min.
  (b) Frequency Span: 0 Hz (Zero span), 1 kHz to 3 GHz
- Spectral Purity
  (a) SSB Phase Noise @ 10 KHz offset: <-90 dBc/Hz at 1 GHz
  (b) Harmonics, @ -40 dBm level: -60 dBc
- Sweep time
  (a) Span>/= 1kHz: 300 ms to 900 s
  (b) Span =0 Hz: 200 micro s to 20 s
- Bandwidth
  (a) Resolution Bandwidth (-3dB): 100 Hz to 3 MHz in steps
  (b) Video Bandwidth: 30 Hz to 1 MHz in steps
- Display: TFT color display
- Interface: USB
- Software: For transfer of screen shot / measurement data / to PC

B) For Vector Network Analysis
- Frequency Range: 2 MHz to 3 GHz
- Frequency Resolution (CW ON): 10 Hz
- Return Loss: 0.00 to 60.00 dB
- VSWR: 1.01 to 10.00 dB
- Cable Loss: 0.00 to 30.00 dB
- Calibration: Calibration with Precision Calibration components-open, short, load should be included to achieve directivity > 35 dB
- Distance-To-Fault: It should be possible to locate faults in Co-axial cables.
- Phase Range: -180 to + 180 deg.
- Dynamic Range: 40 dB to 100 dB
- Measurement: Measurement of S11 & S21, Smith Chart measurement shall be possible
- Vector Voltmeter: For Comparison and Verification of the phase of the phase-matched cables.
- Group Delay: Group delay measurement shall be possible. Tenderers to furnish details.
Characteristics

- Compatible for the measurement of a variety of parts such as filters, frequency sensitive network, mixers, transistors, and other RF-oriented devices.
- Capable of measuring reflection coefficients, transmission coefficient, insertion loss, return loss, S parameters etc.
- Network analyzer software tools for investigating, characterizing & troubleshooting designs
- The software should have capabilities to analyze amplifier, filter, mixer, material, high-speed serial interconnect analysis.
Specific terms and conditions to the tender

1. Please submit the Technical Details / Catalogue / Make/ Model/Data Sheets.
2. The offer should be valid for a period of 90 days from the date of opening of Tender.
3. **Please send the quotations ONLY in 'SEALED COVER' indicating our tender enquiry No. and due date by speed post so as to reach us on or before the due date & time. IIRS will not be responsible for any postal delays.**
4. **E-mail/ fax quotations 'WILL NOT BE ACCEPTED'**.
5. Tender form can be purchased from Purchase & Stores Section, IIRS, Dehradun on all working days on payment of Rs. 573/- drawn in the form of Demand Draft in favour of Pay & Accounts Officer, IIRS payable at Dehradun through a request or Tenderer can download the tender documents from the website (www.iirs.gov.in). When tender form is downloaded, DD for Rs 573/- drawn in favour of Pay & Accounts Officer, IIRS payable at Dehradun shall be attached along with the technical bid.
6. **EMD of Rs. 15,000/-** to be submitted along with the Technical Bid in the form of Crossed Demand Draft drawn on any Nationalized / scheduled bank in favour of Pay & Accounts Officer, IIRS, payable at Dehradun. Quotation received without EMD will not be considered. The EMD of unsuccessful bidder will be returned after finalization of order.
7. The bidders are allowed to attend the tender opening on the date & time of bid opening.
8. Please quote the percentage of GST applicable.
9. Our standard delivery term is FOR, IIRS. In case any vendor offers delivery term of Ex-works, Packing and Forwarding charges if any should be indicated separately either as a percentage of the quoted rate or as a Lump sum amount.
10. We are exempted from the payment of Customs Duty and necessary exemption certificate shall be issued upon request.
11. **Payment Term**: Payment will be made within 30 days from the date of receipt and acceptance of the item at our site for order value up to 2.00Lakhs. For order value above 2.0 Lakh, 90% payment will be made within 30 days and 10% against submission of Performance Bank Guarantee for the warranty period (wherever warranty is applicable). The Performance Bank Guarantee should be valid for a period of 2 months beyond the completion of the warranty period.
12. For foreign orders our Standard Payment Term is Sight Draft.
13. **Liquidated Damages** – The delivery period quoted should be realistic. The delivery period so quoted and mentioned in the order is the essence of the order/contract. In case of delay in delivery of material as per the delivery schedule, Liquidated Damage @ 0.5% per week or part thereof on the undelivered portion subject to a maximum of 10% of the contract value shall be levied. Wherever, installation and commissioning is also involved, the supply will be deemed to have been completed only when the entire Stores is supplied, installed and accepted.
14. **Security Deposit**: - Wherever the offer value is Rs. 5.00 Lakhs or above, the successful tenderer should submit Security Deposit @ 10% of the order value by way of Bank Guarantee / FD Receipt. The Bank Guarantee shall be obtained from any Scheduled Bank on Rs.200/- Non Judicial Stamp Paper and should be valid beyond 2 months from the completion of all contractual obligations.
15. In order to avail of the benefits extended to by Govt. of India to the Micro and Small Sectors, please submit attested copy of the valid Entrepreneur Memorandum Part-II signed by the General Manager, District Industries Centre / Udyog Adhar / NSIC Registration Certification along with your offer.
16. If any bidder submits forged / false document along with the tender, offer of such vendors will be summarily rejected and such bidders will be blacklisted for all future tenders.
17. Wherever samples are required to be submitted along with the quotation, offer without sample will not be considered.

[Signature]

[Purchase & Stores Officer]