

**INDIAN INSTITUTE OF TECHNOLOGY DELHI**  
**DEPARTMENT OF ELECTRICAL ENGINEERING**

**NOTICE INVITING TENDER:**

**Sealed Quotations are invited for the purchase of “Vector Network Analyzer (2 nos.)” with the following configuration.**

| Sl. | Item   | Description  |
|-----|--|--|
| 01  | Frequency range  | 30kHz to 6.5 GHz, 2 Ports  |
| 02  | RF connector   | N type (Female)  |
| 03  | Aging rate   | (+/-) 1 ppm/yr   |
| 04  | Dynamic range  | 100 dB up to full frequency of VNA   |
| 05  | S-parameter measurement  | S11, S21, S12, S22 (both magnitude and phase)  |
| 06  | IF bandwidth   | 10 Hz to 100 kHz   |
| 07  | Data points or resolution  | 101, 201, 401, 601, 801, 1001, 1601, 4001, 10001<br>(Arbitrary number of points settable through SCPI) |
| 08  | Cable antenna test, distance-to-fault, return loss, cable loss calibrations: CalReady, OSL and response cal  |  |
| 09  | Test port output power (nominal)   | 3 dBm : >625 MHz to 3 GHz<br>0 dBm : >3 to 6.5 GHz   |
| 10  | Minimum output power level   | <= - 45 dBm, nominal power settable in 1dB steps across power range                                    |
| 11  | Trace noise (-10 to 55 degree celcius) at 300Hz IF bandwidth   |  |
| 12  | Magnitude of error   | (+/-) 0.002 dB (rms) : 6.5 GHz   |
| 13  | Phase of error   | (+/-) 0.014 degrees : 6.5 GHz  |
| 14  | Receiver compression at 6.5 GHz  | 10 dBm   |
| 15  | Immunity to interfering signals  | +16 dBm (nominal)  |
| 16  | Inbuilt Spectrum Analyzer  | 5kHz to 6.5 GHz (tunable to DC)  |
| 17  | AM/FM tune and listen, field strength measurements, independent source, group delay measurements, channel power, occupied bandwidth, adjacent channel power, tracking capabilities with independent source, instrument should be supplied with compatible phase-stable T calibration kit |  |
| 18  | Warranty   | 3 yrs NABL accredited calibration facility and up to 30 parameters (as per NABL)                       |
| 19  | Material measurement capability  |  |
| 20  | Future upgradable : QUICK CAL facility, Vector Voltmeter, Built in power meter, Time-Domain option   |  |

**Terms & Conditions:**

1. IIT Delhi is exempted from paying custom duty under notification No.51/96 (partially or fully) and necessary “Custom Duty Exemption Certificate” can be issued after providing following information.
  - a) Shipping details i.e. Master Airway Bill No. and House Airway No. (if exists)
  - b) Forwarder details i.e. Name, Contact No., etc.

Custom Duty Exemption Certificate will be issued to the shipment in the name of the Institute and Bills of Entry should be submitted to IIT Delhi later on.

2. If the bidder is an authorized dealer of any manufacturer, the authorized Indian dealership certificate from the principles should be enclosed.
3. IIT Delhi is exempted from paying Excise Duty and necessary Excise Duty Exemption Certificate will be provided for which following information are required.
  - a) Quotation with details of Basic Price, Rate & Amount on which ED is applicable.
4. Please quote prices of imported items at FOB (Freight on Board) IIT Delhi inclusive of all taxes, freight, delivery, installation and onsite training charges. The quotation should provide the total price of the system including all taxes and transportation charges.
5. In case IIT Delhi is imposed with demurrage charge due to import on CIF, the entire demurrage charge has to be borne by the Indian Agent of foreign supplier.
6. Three years comprehensive warranty be provided and AMC price beyond 3 years should be mentioned separately.
7. Payment against delivery: Payment by wire transfer after receipt of material.
8. Delivery period: Within 6 weeks from the issue of supply order.
9. The quotations must have validity of at least three months.
10. The products will be used for educational purposes. Any applicable academic institution discounts should be offered and stated clearly.
11. Separate Technical and commercial bids are required to be submitted in separate sealed envelopes. Technical Details with commercial information are bound to be rejected.
12. Sealed quotations must be marked "Quotation of Vector Network Analyzer for Dr. Kushal Shah", and should reach latest by **07.11.2013** up to **4:00 PM** at the following address:  
**Dr. Kushal K. Shah, Electrical Engineering Dept, IIT Delhi, Hauz Khas, New Delhi- 110016**
13. The bidder should be ISO 9001 Certified (Copy of ISO Certificate should be enclosed).
14. Authority of IIT Delhi reserves the right to reject any or all quotations without assigning any reasons.
15. No query regarding the tender will be entertained.

(Dr. Kushal K. Shah)