



DEPARTMENT OF ELECTRONICS ENGINEERING, IIT (BHU)

QUOTATION ENQUIRY

Ref: IIT (BHU)/EC/QTN/2015-16/ Web-4 Due Date: 07.11.2015
Opening Date: 10.11.2015

Date: 13.10.2015

To

Dear Sir,

Please submit your lowest rate for supplying the under mentioned items. Quotation in duplicate must reach us before the date marked above and should contain the following information:

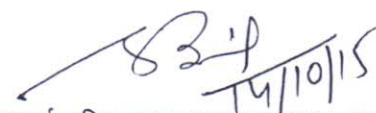
1. Full specification and make of the item offered and its rate F.O.R. Varanasi/CIF New Delhi.
2. Sales tax at concessional rate as applicable to educational institution.
3. Your VAT/CST registration number PAN & TIN numbers.
4. Conditions of supply and terms of payment.
5. If you are a manufacturer of the item or if you have proprietary right over it, please mention it in the quotation and provide a certificate.
6. Please mention your agency commission in Indian Rs., if applicable (in case of imported items).
7. Please give undertaking as per annexure-I-B
8. The rates quoted should include transportation costs upto IIT (BHU) clearly mentioning the percentage/rate of sales tax or all other taxes and duties inclusive and rates should be valid for at least three months from the date of opening of quotation. **The educational discount should be separately mentioned in percent as well as in net amount.**
9. **This purchase being for teaching and research purpose, the IIT (BHU) is eligible for the payment of custom duty at reduced rates. The quote should quote accordingly.**
10. **IIT (BHU) is eligible for "Excise duty exemption". Rate should be quoted accordingly.**

Quotation must be sent in a **sealed envelope** with word "QUOTATION", our reference number, and due date as given above, clearly marked over it.

SL. NO.	Name of Items	Quantity
1.	Handheld (Portable) Vector network analyzer (With built-in spectrum analyzer facility) For general purpose testing application in field, especially for passive devices, cables and antenna measurements, having the following minimum specification/facility. <ul style="list-style-type: none">• Frequency range: 1 MHz to 12 GHz• Frequency accuracy: ± 2 ppm• Frequency Resolution (CW ON): 10Hz• Dynamic range: 90 dB or better over the entire frequency range• Nominal port Power Output: -25 to 0 dBm in 1 dB steps• Flat output power(± 1dB) over the entire range with 1dB steps	(1 no.)

	<p>adjustable</p> <ul style="list-style-type: none"> • Full two port measurement: S11, S12, S21, S22 • Frequency Sweep: Single sweep and continuous, Sweep type: Linear • Sweep Speed: 300μsec/data • Calibration: with Precision Calibration component-open, short, load & through (should be included) • 10 term error correction algorithm facility • No of traces: Four • Trace Format: Single, dual, quad with trace overlay capability • Graph Type: Log magnitude, SWR, phase, real, imaginary, group delay, smith chart, inverted smith chart <p>+ Spectrum analyser facility</p> <ul style="list-style-type: none"> • Frequency range: 1 MHz to 12 GHz • ± 0.5 dB amplitude accuracy over full band, • Dynamic range: ≥ 100 dB • Full-band tracking generator • Detectors: peak, negative, sample, quasi peak, true RMS • Marker: 6, each with a delta marker • Built in pre-selector for eliminating spurious in displays. <p>General:</p> <ul style="list-style-type: none"> • 220 V, 50 Hz single phase AC power supply operation • Built-in DC voltage supply with rechargeable battery backup duration of >2 hours. • Interface: USB for Data transfer and power measurement <p>Optional:</p> <ul style="list-style-type: none"> • Time domain facility • Quick calibration kit • USB power sensor • RF and microwave accessories • Vector voltmeter. <p>Important Note: The above specifications and accessories are indicative and any other accessories required for it to act as a self-sustained stand-alone system for carrying out the standard measurements should also be included in the quote.</p>	
2.	<p>Low Noise Amplifier:</p> <ul style="list-style-type: none"> • Frequency range: 2 to 12 GHz • Noise figure: ≤ 4 dB • Maximum VSWR: ≤ 2.5 • Gain: ≥ 25 dB • 50 ohm input and output matched • Hermetically sealed module • RF Connector type: SMA/3.5mm-Jack (F) 	(1 no.)

3.	Power Amplifier: <ul style="list-style-type: none"> • Frequency range: 2 to 12 GHz • Output power: 30 dBm • Noise figure: ≤ 10 dB • Gain: ≥ 25 dB • Small signal gain flatness: $< \pm 5$ dB • Stability: unconditionally stable • Maximum input/output VSWR: ≤ 2.5 • 50 ohm input and output matched • RF Connector type: SMA/3.5mm-Jack (F) • 220 V, 50 Hz single phase AC power supply operation 	(1 no.)
4.	USB based Microwave Power Sensor: <ul style="list-style-type: none"> • Frequency range: 100 MHz to 12 GHz • Power range: -40 to +20 dBm • VSWR: ≤ 1.25 • Measurement Type: Peak, average • RF Connector: 3.5 mm/ SMA/ N type 	(2 nos.)
5.	Computer controlled Multi Axis Antenna Positioner System for Radiation/ Scattering Measurements: <ul style="list-style-type: none"> • 5 Axis Positioner: Azimuth: 360° Elevation: $\pm 45^\circ$ Boresight: 360° X- axis: 10 - 15 cm Y- axis: 10 - 15 cm • Rotating Speed: $5^\circ/\text{sec}$ • Maximum Load: 20 Kg • Mounting System: Horn/Parabolic /Reflector/Planner Antenna included • Low radar cross section • Measurement system, with the necessary interfaces for the standard desktop computer, stepper motor as well as for the Vector Network Analyzer (VNA) of the reputed makes. • Necessary software for the controlled automated Stepper motor operation, GUI, antenna measurements, etc. • 220 V, 50 Hz single phase AC power supply operation 	(1 no.)


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 14/10/15
 आचार्य व विभागाध्यक्ष/PROFESSOR & HEAD
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