ANNEXURE-I-A

भारतीय प्रौद्योगिकी संस्थान
काशी हिन्दू विश्वविद्यालय

INDIAN INSTITUTE OF TECHNOLOGY
BANARAS HINDU UNIVERSITY

DEPARTMENT OF ELECTRONICS ENGINEERING, IIT (BHU)

QUOTATION ENQUIRY

Ref: IIT (BHU)/EC/QTN/2015-16/web-2 **Due Date: 07.11.2015** **Date: 13.10.2015**
Opening Date: 10.11.2015

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. You VAT/CST registration number PAN & TIN numbers.
4. Conditions of supply and terms of payment.
5. If you are a manufacture 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/rage 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.	**Coaxial Type Microwave Components** For general purpose testing application in field, especially for passive devices, cables and antenna measurements, having the following minimum specification/facility. • Frequency range: 100 MHz to 12 GHz • Maximum VSWR: ≤ 2 • Connecter: SMA/ 3.5 mm • Input power : Average power 1 Watts • Impedance input and output : 50 ohm	(Tentatively 2 nos. each)

	i. **Variable Phase Shifter** • Full 360 degree of phase shift • Insertion Loss: ≤ 1.5 dB ii. **Coaxial Detector** • Maximum power : 100 mW iii. **Variable Rotary Step Attenuator** • Attenuation Range: (a) 0 to 10 dB or higher (with step 1 dB) iv. **Fixed Attenuator Kit** • Attenuation: 3 dB, 10 dB, and 20 dB v. **Matched Terminator:** (a) Open (b) Short vi. **Calibrated sliding short** Air Line Accuracy : ≥ 40 vii. **Tees / Directional Couplers** (a) 3 dB (b) 10 dB	
2.	**Coaxial Type Microwave Components** (Additional) For general purpose testing application in field, especially for passive devices, cables and antenna measurements, having the following minimum specification/facility. • Frequency range: 1 GHz to 12 GHz or In sub frequency ranges to cover up to 12 GHz • Maximum VSWR: ≤ 2 • Connecter: SMA/ 3.5 mm/ N-type • Input power : Average power 1 Watts • Impedance input and output : 50 ohm i. **Circulator:** Three port ii. **Isolator :** Isolation: ≥ 30 dB Insertion loss: ≥ 0.8 iii. **Switch:** • Configuration: SPDT Coil Voltage DC 12 V and 24 V • Actuator Type: Failsafe or Latching (Latching preferred)	Tentatively 2 nos. each)
3.	**Ultra Wide Band (UWB) Antenna (calibrated):** • Frequency range: 1 to 12 GHz • Polarization: linear • VSWR: ≤ 2 • Gain: ≥ 7 dBi over the entire band • RF Connector: 3.5 mm/ SMA/ N type Mounting system for antenna should be included	(2 - 4 nos.)
4.	**Universal test fixture:** For general purpose testing application in field, especially for coplanar devices. • Frequency range: 100 MHz to 12 GHz • Connecter: SMA/ 3.5 mm • Return Loss: ≤ -15 dB	02 nos.

5.	**Balanced Mixers:** • Frequency range: 1 GHz to 18 GHz • Conversion loss: -6 dB • Connecter: SMA/ 3.5 mm/ N-type	3 Nos.
6.	**PIN diode switches:** • Frequency range: 2 GHz to 6 GHz, and 8 GHz to 20 GHz • Switch Type: SP1T and SP2T • Maximum VSWR: $\leq$ 2 • Isolation: 50 dB min • Connecter: SMA/ 3.5 mm/ N-type	4 Nos.
7.	**PIN diodes:** • Frequency range: up to 3 GHz and 10 GHz • Impedance: $\leq$ 2 ohm • Diode Configuration: Single	40 - 50 Nos.
8.	**X-band Rectangular Waveguide rotary vane phase shifter:** • Full 360 degree of phase shift • Insertion Loss: $\leq$ 1.5 dB	2 Nos.
9.	**X-band Rectangular Waveguide rotary Vane Attenuator:** • Attenuation Range: (a) 0 to 30 dB (b) 0 to 60 dB	2 Nos.

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आचार्य व विभागाध्यक्ष/PROFESSOR & HEAD
इलेक्ट्रानिकी अभियांत्रिकी विभाग/Department of Electronics Engineeri
भारतीय प्रौद्योगिकी संस्थान (का.हि.वि.)/Indian Institute of Technology (BH
वाराणसी/Varanasi-221005 (INDIA)

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