



भारतीय
प्रौद्योगिकी
संस्थान
काशी हिन्दू विश्वविद्यालय



INDIAN
INSTITUTE OF
TECHNOLOGY
BANARAS HINDU UNIVERSITY

SCHOOL OF MATERIALS SCIENCE AND TECHNOLOGY

QUOTATION ENQUIRY

Ref: IIT (BHU)/SMST/2019-20/ENQ/Multimeter, Source meter/359 to 363

Date: November 22, 2019

(Date of tender enquiry)

Due Date: 09th December, 2019 upto 4:00 PM

(Last date of quotation receiving)

To,

For addresses, please see the enclosure-I

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 & TAN 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 an undertaking as per annexure-I-B.

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.	ITEM	Approx. Qty.
---------	------	--------------

We would like to have **Current source, nanovoltmeter and digital multimeter to use with thermopower measurement system. Specifications are provided below for all components.**

Specification Digital DC Source Meter		
S.N	Parameter	Specification
1	No. of channels:	1
2	Output power:	40 W
3	Current Sourcing capabilities:	
	Range	100 nA to ≥ 3 Amp sourcing capability
	Resolution	Better than 5 pA for less than 100 nA range, 20 nA for less than 1 mA range and 2 μ A for less than 100 mA.
	Noise (peak to peak 100 mHz to 10 Hz):	less than 10pA for less than 100 nA, less than 10 nA for 1 mA, less than 100 μ A for 1 Amp range and less than 200 μ A for 3 Amp range.
	Settling time:	less than 50 ms up to 100 nA, less than 0.1 ms for current ≥ 1 mA, less than 100 μ s for 3 A current range.

4	Current measurement capabilities:	
	Voltage burden	less than 1 mV
	Range	from 0.1 nA to 10 A
	Accuracy	For less than 100 nA better than 0.1%, for current upto 1 Amp better than 0.05% and for current more than 1 Amp better than 0.5%.
	Measurement time:	less than 1 ms
5	Voltage sourcing capabilities:	
	Range	$\leq 500 \mu\text{V}$ to $\geq 40 \text{ V}$
	Resolution	better than 10 μV for less than 100 mV, better than 1 mV for upto 40 V and less than 10 mV for higher range.
	Noise (peak to peak 100 mHz to 10 Hz):	better than 30 μV for less than 100 mV, better than 1mV for less than 40V and better than 2 mV for higher range.
	Settling time	less than 0.1 ms for less than 1 V and less than 1 ms for higher voltages
6	Voltage measurement capability:	
	Input impedance:	$>10 \text{ G}\Omega$
	Range	$\leq 1\text{mV}$ to $\geq 35 \text{ V}$
	Accuracy	Better than 0.02%
	Measurement time:	less than 1 ms
	Programmable using	GPIB, RS232
7	Pulse mode operation for both current and voltage sourcing	Typical minimum programmable width 1 ms or lower with programming resolution $\sim 10\mu\text{s}$ and programming accuracy $\sim \pm 10\mu\text{s}$, jitter $\sim 5\mu\text{s}$

Specification for Nano Voltmeter

1	No. of channel	2
2	Voltage Range and resolution at channel 1	10mV to 100V and 1nV to 10 μV
3	Voltage Range and resolution at Channel 2	100mV to 10V and 10nV to 1 μV
4	Display resolution	7.5 Digit
5	Input resistance	$>10\text{G}\Omega$
6	Noise	15nV p-p at 1s response time 40-50nV p-p at 60ms
7	Input protection	150V peak to any terminal. 70V peak Channel 1 LO to Channel 2 LO.
8	Common Mode Current :	$<50\text{nA}$ p-p at 50Hz
9	A/D Linearity:	$\pm(0.8\text{ppm}$ of reading + 0.5ppm of range).

10	Warranty	1 Year
----	----------	--------

Specification for 6.5 Digit Multi Meter

S.N.	Parameter	Specification
1	DC Voltage Measurement Range & Resolution	Range: 100mV to 1000V Accuracy: 100nV to 1mV
2	Input Impedance	>10 G Ω or 10 M Ω \pm 1%
3	Resistance Range & Resolution	Range: 1 Ω to 100M Ω Resolution: 1 $\mu\Omega$ to 100 Ω
4	DC Current	Range: 10 μ A to 3Amp Resolution: 10pA to 1 μ Amp
5	AC Voltage	Range: 100mV to 750V Resolution: 100nV to 100 μ V
6	AC Current	Range: 100 μ Amp to 3 Amp Resolution: 100pAmp to 1 μ Amp
7	Frequency & Period	3 Hz to 300KHz with resolution of 0.0001% of reading
8	Continuity	Range: 1K Ω Resolution: 100m Ω
9	Capacitance	Range: 1nF to 100 μ F Resolution: 0.1pF to 10nF
10	Diode	Measurement range of 10V with resolution of 10 μ V
11	Digitize	Range: 100mV to 1000V Resolution: 10 μ V to 100mV
12	DMM resolution and accuracy	6.5 Digit with 0.0025% DCV
13	Internal Memory	store up to 7 million readings
14	Display	5-inch (12.7 cm) multi-touch capacitive touchscreen with graphical display
15	Communication Interface	Standard LAN/LXI and USB-TMC communication Interfaces, GPIB and/or RS232
16	Temperature range	\leq -100 degree C to \geq 1000 degree C
17	Warranty	3 Years
18	Digitizer	Capture voltage or current transients with 1 MS/sec digitizer

COORDINATOR
School of Materials Science and Technology
Indian Institute of Technology (BHU) Varanasi
Varanasi – 221005, U.P., INDIA

INDIAN INSTITUTE OF TECHNOLOGY (BHU) VARANASI, INDIA

TO BE RETURNED

Following proforma should be filled in and duly signed by the firm and sent alongwith the quotation. (Please refer to the detailed instructions/notes before filling this proforma).

1. Validity of the offer :
2. Approximate Delivery Period :
3. (a) Whether rates have been quoted F.O.R. site and covers packing forwarding and insurance charges. : YES / NO
- (b) If not, please mention the same :
4. (a) Whether the prices are inclusive of Sales Tax and other taxes. : YES / NO
- (b) If not, kindly specify the amount / rate :
5. If the Sales Tax is charged extra, declaration for charging Sales Tax correctly attached. : YES / NO
6. (a) Whether supply will be made directly or through any Local / Regional / Authorized Dealer / Stockist : Directly/Stockist/Authorized Dealer
- (b) If through a Stockist / Dealer: -
 - (i) Name and full address of the Party :
.....
 - (ii) Whether the order to be placed with the : Principal / Stockist / Dealer
 - (iii) Who will raise the bill : Principal / Stockist / Dealer
 - (iv) Cheques will be drawn in favour of : Principal / Stockist / Dealer
 - (v) Whether any Delivery, Packing and Forwarding : YES / NO
- Charges will be payable to local Stockist/Dealer : (Please specify the amount/percentage etc, if any)
7. Our terms of payment (Please indicate your preference by a (✓) mark). Please note that no other payment terms are likely to be accepted.
 - (a) **For Local Firms or if the bills are raised by the Local Dealers.**
 - (i) 100% Payment on bill basis :

OR

 - (ii) 100% payment against Proforma Invoice after receipt of materials in good condition, installation and satisfactory report.
(Only under exceptional cases)
 - (b) **If the bills are raised by outstation Firms**
 - (i) 100% Payment on bill basis :

OR

 - (ii) 100% payment against Proforma Invoice after receipt of materials in good condition, installation and satisfactory report :

OR

(iii) D.G.S. & D. Terms of Payment for D.G.S. & D
Rate Contract items :

OR

(iv) 75% against Proforma Invoice (at site) or
documents through Bank and 25% after receipt
of materials in good condition, installation and
satisfactory report. :

OR

(v) 90% payment against Proforma Invoice (at site)
or documents through bank and 10% after receipt
of materials in good condition, installation and
satisfactory report (Only under special
Circumstances). :

8. Whether any Excise Duty is payable on the items. : YES / NO
If yes, indicate the amount / percentage. :%

9. Whether any installation charges are payable extra. : YES / NO
If yes, amount to be specified. :
.....

10. Whether any discount for educational institution :
offered on the printed price list of the manufacturer. : YES / NO
Please mention the amount / percentage. :

11. Whether the product is on DGS &D/D.I. Rate contract.
If yes, please enclose a photocopy of the same. : YES / NO

12. Whether the product bears I.S.I. Mark. YES / NO
If yes, please mention the I.S.I. License no. :
.....

13. (a) Whether the firm is Sales Tax payer. : YES / NO
If yes, please mention the Sales Tax Numbers. :
.....

(b) Whether the Local Dealer(s) is / are Sales Tax
payer(s) : YES / NO
If yes, please mention the Sales Tax numbers of each :
.....

14. Whether printed / authenticated price list of the Firm's
Products and Catalogue etc. enclosed. : YES / NO

Signature of the Authorised Official with Seal

TO BE RETURNED WITH QUOTATION

UNDERTAKING

WE HEREBY UNDERTAKE THE FOLLOWING:

1. We will not sell the product (s) to other institutions, bodies and also in the market on the rates less than those quoted by us to the Institute.
2. The goods on which Sales Tax has been charged are not exempted for payment of Sales Tax under C.S.T. Act or U.P.S.T. Act or the rules made there under and the amount mentioned on account of Sales Tax on goods is not more than what is payable under the provisions of the relevant Act or Rules made there under.
3. The rate of Excise Duty mentioned in the quotation is in accordance with the provisions of the rules and the same is payable to the Excise Authorities in respect of the stores.
4. The goods / Stores / articles offered shall be of the best quality and workmanship and their supply will be strictly in accordance with the technical specifications and particulars as detailed in the quotation.
5. The information furnished by us in the quotation is true and correct to the best of our knowledge and belief.
6. We have read and understood the rules, regulations, terms and conditions and agree to abide by them.

Authorised Signatory
(Seal)