



School of Nanoscience and Nanotechnology

MAHATMA GANDHI UNIVERSITY
Priyadarshini Hills, Kottayam-686560, Kerala, India

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No: SNSNT /01/ NIT-2/ 2024

Dated: 03/012024

NOTICE INVITING TENDER (Two bid system)

Sealed competitive quotations are invited for the supply of following equipments. The tenders (both technical and financial bid) are invited as above should reach the undersigned not later than 4:00 p.m. 18th January 2024. The details are given below.

1	Name of the Scientific Equipment	Electronics Lab Materials (Detailed specifications given in Annexure-1)
2	Earnest money deposit (EMD)	1% of the estimated value.
3	Tender submission fee	0.2% of the cost of the equipment rounded to the nearest multiple of 100, subject to a maximum of 25,000/- + GST as applicable
4	Period of supply and Installation	Within 30 days from L/C opening date
	Address	The Director, School of Nanoscience and Nanotechnology Mahatma Gandhi University, Kottayam, Kerala Pin-686560
3	Date and time of technical bid opening	19/01/2024, 11.00 am
4	Date and time of financial bid opening	19/01/2024, 02.00 pm
5	Last date and Time of submission of tender with relevant documents.	18/01/2024, 04.00 pm

Duly filled up and signed tender schedule along with relevant documents should be sent to **The Director, School of Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam** by speed post so as to reach before the date and time specified. The cover containing the

document should be super scribed the **name of the scientific equipment, tender number and last date of submission** of the tender.

ELIGIBILITY CRITERIA

1	Bidder should be a company registered in India or Registered Partnership /proprietary firms	Copy of valid registration certificate/Copy of Certificates of incorporation
2	Should not have been blacklisted by any of the Government entities under state / central government.	Self-Certificate
3	The bidder should have a registered number of (i) GST where his business is located ii) Income Tax / PAN number.	Copies of relevant certificates of registration

Further details can be had from the office of **School of Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam** Email: snsnt@mgu.ac.in on all working days during working hours.

If relevant documents through speed post are not submitted with in time, the tenders will not be considered. The Purchase committee of the School of Nanoscience and Nanotechnology reserves the right to reject any or all the tender without assigning any reason whatsoever.



A handwritten signature in black ink, consisting of several loops and a long horizontal stroke.

Director

Director
School of Nanoscience and Nanotechnology
Mahatma Gandhi University
Kottayam-686 560

Please see the Annexures

ANNEXURE-1

Technical Specifications

SL NO	DESCRIPTIONS	QTY
ICs		
1	IC 7483	10
2	IC 7474	10
3	IC 74154	10
4	IC 74151	10
5	IC 74155	10
6	IC 74150	10
7	IC 7402	10
8	IC 7404	20
9	IC 7400	20
10	IC7408	20
11	IC7486	10
12	IC 7432	20
13	IC 741	20
Resistors ½ W		
14	100 Ω	50
15	220 Ω	50
16	470 Ω	50
17	680 Ω	50
18	1 k Ω	50
19	1.2 k Ω	50
20	1.5 k Ω	50
21	2.2 k Ω	50
22	3.3 k Ω	50

23	4.7 k Ω	50
24	5.6 k Ω	50
25	6.8 k Ω	50
26	10 k Ω	50
27	12 k Ω	50
28	15 k Ω	50
29	22 k Ω	50
30	27 k Ω	50
31	33 k Ω	50
32	56 k Ω	50
33	100 k Ω	20
34	1 M Ω	20
Capacitors		
35	0.01 μ f	50
36	0.1 μ f	50
37	0.22 μ f	20
38	1 μ f	20
39	3 μ f	20
40	10 μ f	20
41	100 μ f	10
42	220 μ f	10
Equipments Required		
43	Mextech make Analog CRO Model with 20MHz Bandwidth Dual Channel	6 Nos
44	<i>FG-3000 (3 MHZ SIN/SQU/TRI/PULSE/TTL- FG with AM/FM/PWM SWEEP MODULATION</i> Model STFG 3000	8 Nos

45	Aplab make Single output Variable Power Supply 0-32V, 0-2A Model TS3202M	6 Nos
46	Breadboard	10 Nos
47	Single strand wire	100 meters
48	Wire stripper	5 Nos
49	IC Organizer box	2 NOS
50	CRO Probes (crocodile)	20
51	4.7k Pot Liner	10
52	10k pot Liner	10
53	100k pot Liner	10
54	Soldering Iron	4
55	Soldering lead	2 roll

Stamp and Signature of the Tenderer

TECHNICAL SPECIFICATIONS: -

1. MEXTECH CRO 20 MHz

- High luminance, internal graticule CRT
- Japanese electronic encoder, light, handy and reliable
- Fully sealed long live vertical mode switch
- ALT Triggering Function. Two independent signals
- simultaneous observation
- Build-in 6 Digit Frequency Counter
- 20MHz Dual Channel
- 10 times sweep magnification
- TV Synchronization-Y mode

Stamp and Signature of the Tenderer

2. STS FUNCTION GENERATOR 3 MHz

- (DDS BASED FG WITH STANDARD FUNCTIONS & MODULATION AM/FM/PWM/SWEEP)
- Output waveforms: Sine, Square, Triangle and Pulse & TTL
- Output: Socket-BNC, Amplitude - 20 V p-p with 50 ohms impedance
- Frequency Range: 0.1 Hz to 3MHz (SINE, SQR and PULSE) ; 0.1 Hz to 1 MHz (TRI,)
- Selected in 7 steps. Variable Control
- Resolution: 0.1Hz
- Display: LCD, micro controlled- menu Keys with freq and amplitude display
- Modulation: AM, FM, PWM and SWEEP (DC TO 20 KHz)-EXTERNAL
- Mod input: 5Vpp(maximum)
- DC Offset: +/- 5V continuously adjustable, attenuated by step Attenuator.
- Attenuation: 0 db, 20 db, 40 db, and variable control
- Impedance: 50 ohms +/- 10%.
- Level Flatness: 0.2dB from 10 Hz to 1MHz
- Stability: +/- 20 ppm

- Accuracy: +/-20 ppm
- Sine Wave Distortion: 0.5% maximum at 20Vp-p 0.1% maximum at 2V p-p (FO= 20 KHz)
- Square/Pulse Rise & Fall Time: Less than 50nS at full rated Output.
- Pulse Duty Cycle Variation: 0% to 100% (10Hz - 1 MHz) 25% to 75% (> 1 MHz)
- Minimum pulse width: 75 ns
- Triangle Linearity Error: 0.25 (FO = KHz, 5% to 95%)
- Output Amplifier Protection: Protected against short circuit and + 15V overload.
- TTL Output: rise and fall= \leq 25ns at maximum output
- Level: \geq 3Vpp
- Power Requirement: 230 V AC + 10%, 50Hz, 10VA

Stamp and Signature of the tenderer

3. Constant Voltage Mode Output Range 0-32V/0-2A

- Regulation Line $<0.01\% \pm 3\text{mV}$ for 10% change in line
- Load $<0.01\% \pm 3\text{mV}$ for load change from zero to full load.
- Ripple & Noise $<1\text{mV rms max.}$
- Indication CV mode LED Green
- Constant Current Mode Output Range 0-2A.
- Regulation Line $<0.1\% \pm 2\text{mA}$ for 10% change in line
- Load $<0.1\% \pm 4\text{mA}$ for load change in output voltage from zero to max. o/p voltage.
- Ripple & Noise $<2\text{mA rms max.}$
- Indication CC mode LED Red
- Protections Automatic overload and short circuit protection.
- Metering Digital Standard Single meter to read V/A of each output with a Selector switch.
- Input Line Voltage 230V AC $\pm 10\%$ 50Hz
- Dimensions 242 (W) x 295 (D) x 177 (H) mm.
- Weight 8.25 Kgs.

Stamp and Signature of the Tenderer

ANNEXURE-2

Terms and Conditions

1. Tenders must accompany a copy of the “Annexure II and Annexure III” section of this document, signed and stamped on each page indicating that they agree to these.
2. Separate tender along with separate tender fee and EMD with all other necessary documents should be submitted for each item. For those bidders submitting tenders for more than one item should include separate tender forms (technical bid and financial bid) placed in individual envelopes and these envelopes must be placed in a bigger envelope.
3. The non-refundable application fee of 0.2% of cost with the chalan of 5% of it as GST must be accompanied with tender for each instrument. The application fee must be as D.D. drawn in favour of The Director, School of Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam
4. The DD/Cheque for EMD or any other must be drawn in of favour of The Director, School of Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam payable at SBI Mahatma Gandhi University Campus Branch.
5. The tenders received late, without tender fee, without EMD, without required documents or incomplete in any respect / misleading will rightly be rejected.
6. Instrument should have a warrantee of at least three year and should have at least one Service engineer and one application scientist based in India with onsite training facility on the same quoted equipment. Training should include operation, handling and maintenance of system.
7. A good record in supply and service to other research institutes will be considered as a positive point for a particular company. User list of similar equipment supplied recently in India should be provided.
8. Laboratory floor space, electrical power requirements, earthing, room temperature/ humidity requirements etc. should be mentioned appropriately.
9. All necessary accessories should be supplied with the instrument, as per standard package offered, including complete set of service and operation manuals for diagnosis, trouble shooting, maintenance and electronic circuitry (hard and soft copies).The prices quoted must be inclusive of all accessories and installation charges etc if any and should be clearly mentioned , otherwise , it will be presumed that the rates quoted are inclusive of all these charges and will not be paid.
10. The Delivery Schedule, Payment Terms & Warranty/Guarantee etc must be clearly indicated in the technical bid. The charges for extended warranty and/or Annual Maintenance Contract after the expiry of offered warranty period should also be specified in the financial bid.

11. The price of the equipment should be quoted in Indian rupee. The total price of the equipment quoted should be inclusive of GST & other taxes / duties if any; material cost; transportation cost; loading and unloading cost; installation cost; labour charges and all other expenses in whatsoever means. Other wise, it will be presumed that the rates quoted are inclusive of all the charges and will not be paid.
12. Payment process will be initiated only after supply of items as per tender specifications and satisfactory installation of the items.
13. It will be the responsibility of the supplier to deliver the ordered materials at School of Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam. All required materials for satisfactory installation are to be provided by the supplier at their own cost.
14. For ensuring the guarantee relating to the quality of the articles supplied, a written agreement must be submitted by the firm.
15. Certificate from the vendor must be attached stating that they have not been blacklisted by any of the Government entities under State/ Central Govt.
16. The validity of the tenders shall be 6 months from the last date of submission of the tenders.
17. A qualified bidder should submit 5% of PAC as Security Deposit
18. If the date of opening of the tender happens to be a Public Holiday, then the tender will be opened, next working day at the same time.
19. The Purchase committee of the School of Nanoscience and Nanotechnology reserves the right to accept/ reject any or all of the tenders at any time without assigning any reason.

Stamp and Signature of the Tenderer

ANNEXURE 3:

TENDER FORM PART-I (TECHNICAL BID)

Date:

From,

M/s.

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To,

**The Director,
School of Nanoscience and Nanotechnology
M.G. University, Kottayam, Pin-686560
Kerala, India.**

Dear Sir,

I/We have gone through the tendering conditions pertaining to the Tender and General Terms and Conditions of Contract and other requirement for delivery and complete Installation and Special Conditions of Contract contained herein with this tender document. I/we hereby agree to supply the stores conforming to the tender specifications incorporated in ANNEXURE 1 of the tender document and also agree to abide by your General Conditions of all Contracts and Special Conditions of Contract contained in the ANNEXURE 2 of the Tender document.

You will be at liberty to accept any or more of the items of stores offered by us and I/we shall be bound to supply you the stores as may be specified in the Purchase Order/Contract.

I/We hereby agree to keep the price valid for your acceptance for a period of 30 days from the date of opening of Part-II (Financial bid) of the tender. Deviations to Technical specifications contained in ANNEXURE 1 of the tender documents are detailed in ANNEXURE-A to the tender form while deviations proposed to the General Special Conditions of Contract contained in ANNEXURE 2 are detailed in Annexure-B to this tender. Price applicable for the stores are indicated separately in a sealed envelope marked as financial bid of the tender.

I/We are also enclosing herewith all the leaflets catalogue etc. pertaining to the stores offered.

Yours faithfully

Stamp and Signature of the Tenderer

ANNEXURE 4:

TENDER FORM PART-II (FINANCIAL BID)

Date:

From,

M/s.

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To,

**The Director,
School of Nanoscience and Nanotechnology
M.G. University, Kottayam, Pin-686560
Kerala, India.**

Dear Sir,

In response to your invitation and as per your tendering and contracting conditions, the prices applicable for the scope of supply contained in ANNEXURE-3 (TECHNICAL BID) of our tender are indicated in the format at annexure "A" to this tender.

We hereby agree to keep the price valid for your acceptance for a period of 30 days from the date of actual opening of Part-II (FINANCIAL BID) of the tender.

Yours faithfully,

Stamp and Signature of the Tenderer