#### <u>निविदा / कोटेशन के लिए आमंत्रण</u> INVITATION FOR TENDER / QUOTATION

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मोत्तीलाल नेहरू राष्ट्रीय प्रौद्योगिकी संस्थान इलाहाबाद इलाहाबाद–211004 (भारत) Motilal Nehru National Institute of Technology Allahabad Allahabad-211004 (India) An Institute of National Importance as Declared by NIT Act, GOI, 2007

## INVITATION FOR QUOTATION

## TEQIP-II/2016/MNNIT/Shopping/132

07-Jun-2016

Τo,

# Sub: Invitation for Quotations for supply of Goods

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

Sr.	Brief Description	Quantity	Delivery	Place of Delivery	Installation
			Period(In days)		Requirement (if any)
1	Precision Modular	1	60	MNNIT ALLAHABAD	YES
	Servo System				

- Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme[TEQIP]-Phase II** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.
- 3. Quotation,
  - 3.1 The contract shall be for the full quantity as described above.
  - 3.2 Corrections, if any, shall be made by crossing out, initialing, dating and re writing.
  - 3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit price.
  - 3.4 Applicable taxes shall be quoted separately for all items.
  - 3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.

3.6 The Prices should be quoted in Indian Rupees only.

- 4. Each bidder shall submit only one quotation.
- 5. Quotation shall remain valid for a period not less than **55** days after the last date of quotation submission.
- 6. Evaluation of Quotations,

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

6.1 are properly signed; and

6.2 confirm to the terms and conditions, and specifications.

- 7. The Quotations would be evaluated for all items together.
- 8. Award of contract:

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

- 8.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.
- 8.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.
- 9. Payment shall be made in Indian Rupees as follows:

### Delivery and Installation - 90% of total cost Satisfactory Acceptance - 10% of total cost

- 10. All supplied items are under warranty of **12** months from the date of successful acceptance of items.
- 11. You are requested to provide your offer latest by 13:30 hours on 23-Jun-2016.
- 12. Detailed specifications of the items are at Annexure I.
- 13. Training Clause (if any) YES
- 14. Testing/Installation Clause (if any) YES
- 15. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.
- 16. Sealed quotation to be submitted/ delivered at the address mentioned below,

Office of Faculty In-charge (Purchase), MNNIT Allahabad Teliarganj, Allahabad-211004

17. We look forward to receiving your quotation and thank you for your interest in this project.

#### Faculty In-charge (Purchase)

Sr.	Item Name	Specifications		
1	Precision Modular	The Precision modular servo unit must comprise of modules which would be used for individual study and construction of speed and position control using DC error signals. The modules must be mountable on a base to form an electrical or mechanical system.		
	Servo System	<ol> <li>Operational Amplifier Unit: This unit must be capable of accepting multiple inputs and should provide for feedback arrangements. The unit should be operable as a summing amplifier and as a block to add extra time constant into the system. The adjustable Offset range should be +/-1.5V referred to any input terminal.</li> </ol>		
		<ol> <li>Attenuator Unit: This unit should cater for gain and tacho feedback. It should consist of two calibrated potentiometers mounted in a single case.</li> </ol>		
		<ol> <li>Pre-amplifier Unit: This unit should cater for two input channels and a push. pull output for direct drive of the servo amplifier. The expected gain is around 25. It should also include a switched defined time constant network. The Offset adjustable range should be between +/- 270mv to +/-330mv referred to the normal inputs.</li> </ol>		
		<ol> <li>Servo Amplifier: This unit would drive the motor. There should be provision of a protective circuit to limit the motor current under overload condition. Maximum Load current should not be less than 2A.</li> </ol>		
		5. <b>DC Motor Unit:</b> This should be a Permanent magnet motor fitted with an inertia disk and		

### Annexure I

	hexagonal spacer with hubs. The shaft length should be between 3 cm to 4 cm. The nominal maximum speed should not be less than 3000r/min, maximum load should not be less than0.1Nm. The rotor inertia should be between 3 $x10^{-5}$ Kg m <sup>2</sup> to 4 $x10^{-5}$ Kg m <sup>2</sup> .
	<b>Reduction gear tacho unit:</b> This unit must provide speed reduction of at least 30/1 and should have a display for speed and external DC voltage. Appropriate couplings and £oqrings should also be provided.
	<ul> <li>Input &amp; output potentiometers: These should be servo-type potentiometers, mounted and fitted with calibrated position dials. The Output unit should carry an extension shaft that can be directly coupled to the reduction gear tacho unit.</li> <li>Input potentiometers should be fitted with a switch, which could be used to introduce a min of +1V step disturbance onto the buffer output voltage or alternatively to invert the buffer output voltage about 0V, again providing a step disturbance but this time it could be of variable magnitude.</li> <li>Loading Unit: This unit should comprise of a brake disc to provide adjustable viscous load for the motor. Moment of inertia of the disc should be between 0.001 Kg m<sup>2</sup> to 0.002 Kg m<sup>2</sup></li> </ul>
	<b>Power Supply:</b> The power supply unit is used to power the servo amplifier. It should be operable at 230V, 50Hz power supply. It should be able to deliver 24V, 2A DC at its output when unregulated, stabilized DC at +/- 15V, 150mA should also be available in order to operate units of lower power requirement. An18V rms at 50 Hz should be available to generate reference signals.
	All the above units must be compatible with one another and should be connected with standard connectors, which should also be provided along with the units. Couplings for the base plate along with appropriate tools set should also be provided.
The	it should have compatibility to work with MATLAB.

# FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Date:

To:

	-						
SI.	Description of	Qty.	Unit	Quoted Unit rate in Rs.	Total Price	Sales tax a	nd other
No.	goods (with full			(Including Ex Factory price, excise duty,	(A)	taxes payable	
	Specifications)			packing and forwarding, transportation,		In	In
				insurance, other local costs incidental to		%	figures
				delivery and warranty/ guaranty		-	(B)
				commitments)			(5)
				comments			
Total Cost							

Gross Total Cost (A+B): Rs. \_\_\_\_\_

We confirm that the normal commercial warranty/ guarantee of ————— months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier		
Name:	; Address:	; Contact No: