



# NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR

(An Autonomous Institute of National Importance Established by the Act of Parliament)

## OFFICE OF THE COORDINATOR TEQIP III

Tel: +91-194-2422032 Extn: 2818, 2814, 2806

Email: teqip3@nitsri.net Website: <http://new.nitsri.ac.in>

### INVITATION LETTER

Package Code: TEQIP-III/nits/23

Current Date: 01-Aug-2019

Package Name: Microprocessor Trainer

Method: Shopping Goods

### Sub: INVITATION LETTER FOR MICROPROCESSOR TRAINER

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. No	Item Name	Quantity	Place of Delivery	Installation Requirement (if any)
1	8085, Microprocessor Trainer Kit with LCD display	20	NIT Srinagar	Yes
2	Elevator Interface Module	10		
3	Logic Controller Interface Module	10		
4	Traffic Light Study Interface Module	10		
5	Stepper Motor Interface Module	10		
6	Seven Segment Display Interface Module	10		
7	Relay Buzzer Interface Module	4		
8	8255, Study Car Relay Buzzer Interface Module	4		
9	Speed Control for DC Motor Interface	4		

2. 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 III** 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.





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### 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, initialling, 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 **180** 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:

Payment Description	Expected Delivery Period (in Days)	Payment Percentage
Satisfactory Delivery & Installation	30	100





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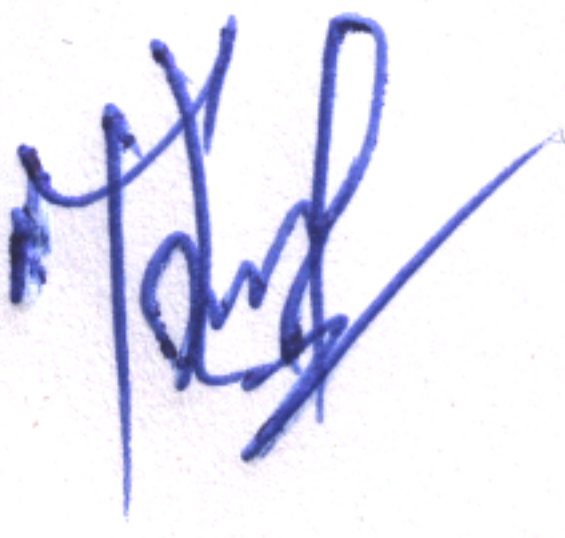

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10. Liquidated Damages will be applied as per the below:  
Liquidated Damages Per Day Min %: 0.01  
Liquidated Damages Max %: 10
11. All supplied items are under warranty of **12** months from the date of successful acceptance of items
12. You are requested to provide your offer latest by **17:00** hours on **16-Aug-2019**.
13. Detailed specifications of the items are at Annexure I.
14. Training Clause (if any)
15. Testing/Installation Clause (if any)
16. Performance Security shall be applicable: **5%**
17. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.
18. Sealed quotation to be submitted/ delivered at the address mentioned below,  
**Office of Coordinator TEQIP III, National Institute of Technology, Srinagar, ,  
Hazratbal, Srinagar, J&K - 190006**
19. We look forward to receiving your quotation and thank you for your interest in this project.

  
  
01/08/19  
Nodal Officer Procurement  
TEQIP III





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### Annexure I

#### **I. 8085 Microprocessor Trainer Kit with LCD Display**

Based on 8085 CPU operating at 6.144 MHz

16K bytes of powerful Monitor program using 27512 EPROM

8K bytes of Ram using 6264 with battery backup using NICD Battery

On-board one memory expansion up to 56KB

Three Channel Timer/Counter using 8253 brought out at 10 pins FRC Connector

48 I/O lines provided through two no.s of 8255 brought out at 26 pins FRC Connector to interface with IC-XX series.

RS-232C interface through SID/SOD lines

Two mode of commands:

- ASCII Keypad Mode
- Serial Mode

20x2/20x4/40x2 Alphanumeric LCD Display with Backlite

101 ASCII Keyboard interface using 89C2051 operating @12MHz

Powerful commands like Examine/Edit Memory, Examine/Edit Register, Single stepping, Execution, Block

Move, Insert Data, Delete Data can be used through ASCII Keyboard or PC Serial mode.

Onboard single Line Assembler/Disassembler

Facility for Downloading/Uploading files from/to PC

All address, data & Control lines are available on KXT Bus 50 pin FRC connector to interface with SC-XX series.

All ICS are mounted on IC Sockets

Bare board Tested Glass Epoxy SMOBC PCB is used

In- Built Power Supply of +5V/1.5A, 12V/250mA

Attractive ABS plastic enclosures.

#### **II. Elevator Interface Module**

Technical Specifications:-

- Interface for simulating the control of an elevator, four floors are assumed.
- For each floor a key and a corresponding LED indicator, Delays for
- LED can simulate the speed of Elevators, user can read request status
- Reset request indicators
- Expansion I/O connecting header to interface processor.





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### III. Logic Controller Interface Module

- 8 Digital inputs provided using 8 way DIP switch
- 8 input LED indicators are provided
- 8 output LED indicators are provided
- Connect to 8255 using 26 pin FRC connector
- User's Manual with Sample Programs.

### IV. Traffic Light Study Interface Module

#### Technical Specifications:-

- This interface simulates the control of Traffic Lights
- In each of four direction ( East, West, North, South), 5mm LED indicators Amber Red, yellow, green LED are provided
- 16 LED's are controlled through not gate

### V. Stepper Motor Interface Module

#### Technical Specifications:-

- Easy to interface with microcontroller/Microprocessor
- Step angle control without supporting mechanism
- On board motor driver support +5v to +24v motor

### VI. Seven Segment Display Interface Module

#### Technical Specifications:-

- A seven segment display module is an electronic device used to display digital numbers and it is made up of seven LED segments
- Seven segment LED Displays are very popular for displaying numeric information because they are very attractive and readable from a far distance and wider viewing angle

### VII. Relay Buzzer Interface Module

#### Technical Specifications:-

- Easy to interface with Microcontroller/Microprocessor
- 5v/12v relay buzzer facility
- Isolated circuit to protection to drive ac, dc device





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### **VIII. 8255 Study Card interface**

- 8255: it consists of buffers, switches, debounceckts for software single stepping, one 8255with tags for all I/O ports, VCC & GND tags, LEDs to display status .

### **IX. Speed Control for DC Motor Interface**

#### **Technical specifications:-**

- On board dc motor with input power requirement
- PWM based speed control
- Isolated circuit facility from back EMF
- Facility to observe pulses on CRO.

*Sh*



## FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Date: \_\_\_\_\_

To: \_\_\_\_\_

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

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

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. \_\_\_\_\_ (Amount in figures) (Rupees \_\_\_\_\_ amount in words) within the period specified in the Invitation for Quotations.

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. \_\_\_\_\_