

## INVITATION FOR QUOTATION

TEQIP-III/2018/duie/Shopping/13

03-May-2018

To,

### 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. No	Brief Description	Quantity	Delivery Period(In days)	Place of Delivery	Installation Requirement (if any)
1	70 MHz Digital Storage Oscilloscope with Built in Function Generator	2	30	Director, Duiet, Dibrugarh University, Dibrugarh, Assam-786004	Yes
2	Benchtop Multimeter 5 ½ Digit	2	30	Director, Duiet, Dibrugarh University, Dibrugarh, Assam-786004	Yes
3	PCB prototype machine	1	30	Director, Duiet, Dibrugarh University, Dibrugarh, Assam-786004	yes
4	Regulated Multi output DC Power	3	30	Director, Duiet, Dibrugarh	yes

	Supply			University, Dibrugarh, Assam- 786004	
5	Soldering station	2	30	Director, Duiet, Dibrugarh University, Dibrugarh, Assam- 786004	yes
6	Spectrum analyzer	1	30	Director, Duiet, Dibrugarh University, Dibrugarh, Assam- 786004	yes

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.

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 **15** 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 - 100% of total cost**

**Satisfactory Acceptance - 0% of total cost**

10. All supplied items are under warranty of **36** months from the date of successful acceptance of items.

11. You are requested to provide your offer latest by **16:00** hours on **18-May-2018** .

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,

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

  
08/05/18  
(Authorized Signatory)

Name **Dipankar**  
Dibrugarh University Institute of  
Engineering & Technology  
Dibrugarh University  
Dibrugarh-786004, Assam (INDIA)

**Annexure I**

Sr. No	Item Name	Specifications
1	70 MHz Digital Storage Oscilloscope with Built in Function Generator	Specification: Bandwidth : 70 MHz (Should be future upgradable to 100MHz) Input Channel : 2 Max Memory Depth : 1Mpts Rise Time : = 5ns Max Sample Rate : 2GSa/s Input impedance/capacitance : 1M $\Omega$ $\pm$ 2%/16 pF $\pm$ 3 pF Vertical Resolution : 8bits Input sensitivity range : 500 $\mu$ V/div to 10V/div Time base range : 5 ns/div to 50 s/div Horizontal Resolution : 2.5ps Waveform math : add, subtract, multiple, divide, FFT & Low Pass Filters Essential Facility : FFT with Span and Centre Frequency control, Bode Plot Test, User Configurable Hot-Key. Cursor : Both X & Y Courser should be available in FFT Mode with dB measuring Unit. Display Mode : Only FFT signal should be available without main signal Waveform rate : 50,000 waveform per second Trigger 65000 type : Edge,
2	Benchtop Multimeter 5 1/2 Digit	<ul style="list-style-type: none"> <li>Instrument Should be 5 1/2 Digit Dual display</li> <li>Fast reading speed of up to 190 readings/sec</li> <li>Multiple connectivity options – USB 2.0, Serial 65000 Interface (RS232) and GPIB</li> <li>11 measurement functions; DC voltage &amp; current, True RMS, AC voltage &amp; current, 2- and 4- wire resistance, frequency, continuity, diode test, capacitance and temperature</li> <li>Ultra- bright OLED with dual display capability</li> <li>Up to 50,000 memory points for data logging</li> <li>Built-in Histogram function</li> </ul>
3	PCB prototype machine	Technical specifications of PCB Prototyping Machine With Compatible Desktop Computer Prototyping Machine required for drilling, milling and routing of Bare PCBs with following System should have USB plug and play connection. ? System should have

	<p>Automatic tools changer. ? System should have facility of automatic milling width adjustment. ? System should have solder paste dispensing facility. ? System should be upgradable to higher spindle speed. ? Machine should be capable to make polyamid stencil, and processes special films, aluminium panel engraving in addition to FR4, FR3, RT/Duroid, Kapton, LTCC (unfired) etc. ? System should have camera system for Fiducial recognition for front-to- back alignment. ? Machine should be capable to process single sided, double sided circuits. ? Machine should be supplied in acoustic cabinet. ? Vacuum table to be quoted, to hold the substrate firmly. ? Dust extraction system to be quoted, to run the machine Machine should be capable of making the PCBs with :</p> <p>Minimum track width : 0.1mm (4 mils) Minimum isolation width : 0.1mm (4 mils) Minimum drill hole diameter : 0.15mm Working area (X/Y/Z) : 229mm X 305mm X 35/22 mm Resolution : 0.02mil Milling motor rpm : atleast 50,000rpm, software controlled Tool change : Automatic tool change, should have min 10 tools position at a time to fed Travel speed : atleast 100mm per second Drilling speed : atleast 100 strokes per minutes Automatic X/Y positioning system and motorized Z drive Power supply : 240V, 50Hz Machine should be supplied with easy to use Software to operate, software should have the following capabilities ? Software should be able to import format: Gerber Standard (RS-274- D), Extended Gerber (RS-274-X), Excellon NC Drill (Version 1 and 2), Sieb &amp; Meier NC Drill, HPGL™, DPF, Auto- CAD™ DXF, ODB ++R. ? The software should be able to support the shapes like Circle, square, rectangle (also rounded or angled), octagon, oval, step, special (arbitrary definable ? The software should be able to export the file formats: Gerber Standard, Gerber Extended (RS- 274-X), Excellon NC Drill, HP-GL™, DXF, Bitmap, JPEG. ? The software should have the Editing functions: Original modification, relocating, duplicating, rotating, mirroring, erasing, extending/severing lines, line/ path extension/shortening, line path/segment parallel shifting, line path/object polygon conversion (Fill), curve linking/closing ? The software should have some Special functions for Routing path generator with breakout tabs, joining/separating objects, step &amp; repeat (multiple PCB), polygon cutout, ground plane generation with defined clearance ? Marker functions for Single</p>
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		<p>element, total layer, all layers, pad groups, ion and limiting to specific layers possible for lines/ polygons/ circles/ rectangles/ pads/ holes (multiple choice and restriction to specific layers possible) should be present in the Software ? The Graphic functions for Lines (open/closed), circle, polygon, rectangle, pad, hole, text (TTF, TTC) should be present in the software ? The measuring function should be for measuring &amp; design rule check ? The software should have an Insulation methods for Single, insulation method, additional multiple insulation of pads, removal of residual copper spikes (spike option),milling out of large insulation areas (rub-out), concentric or in serpentine maintaining minimum insulation spaces, inverse insulation ? Hard-/software requirements Microsoft Windows 2000 or higher, 1.2 GHz Processor or better, min. 512 MB RAM, screen resolution. min. XGA Accessories should be supplied with the prototyping machine:</p> <ul style="list-style-type: none"> <li>- Necessary drilling, milling and cutting tools in various diameter. -</li> <li>Provision for PISM and legend printing should be provided along with its systems and accessories. -Provision of making holes by automatic drilling</li> </ul>
4	Regulated Multi output DC Power Supply	<p>Constant Voltage &amp; Constant Current operation Protection Against over load &amp; short circuit Output DC: A: 30V/2A, B: 0 to <math>\pm 15V/1A</math> Dual Tracking, C: 5V/5A Voltage Setting Resolution:10mV Current Setting Resolution: 5mA Load Regulation: = <math>\pm (0.05\% + 10 \text{ mV})</math> Line Regulation: = <math>\pm (0.05\% + 10 \text{ mV})</math> Ripple &amp; Noise: =1mVrms Internal Resistance: = 10mO Stability: = 2.5 mV at full load Current Limit Adjustment: 100mA to Max Display: Switchable 3 Digit seven segment LED for Voltage &amp; Current Display Accuracy: V : <math>\pm (1\% + 1 \text{ digit})</math>, I : <math>\pm (1\% + 3 \text{ digit})</math> Built-in overheat, over voltage protections Insulation: Between chassis &amp; output terminal &gt; 10 MW at 100 Vdc, chassis &amp; AC plug &gt; 50 MW at 500 Vdc</p>
5	Soldering station	<p>Accurate and advance temperature control with microcontroller technology -power consumption soldering : 60W - power consumption de-soldering : 70W - power consumption for SMD rework:270W -hot air temp:200-550°C -burn proof silicon cable with thermal resistance up to 600°</p>

6	Spectrum analyzer	<p>Instrument Should Have Following Features: a) One button measurement of Occupied Bandwidth, Channel Power, Adjacent Channel Power and Adjacent Channel Power Ratio. b) Optional in-band on-channel (IBOC) measurement capability c) Optional AM / FM, ASK / FSK Measurement facility should be available. d) Spectrum Emission Mask (SEM) should be a standard feature e) Marker measurement. f) Fast Sweep Speed. g) Optional 1 MHz to 3 GHz RF Preamplifier. h) Optional 3 GHz Tracking Generator. i) Optional Power Sensor Connectivity. Detail Technical Specification : 1. Frequency Range : 100 KHz – 3 GHz (Tunable to 9 KHz) 2. Aging Rate : <math>\pm 1</math> ppm/year 3. Marker Frequency Counter Resolution : 1 Hz 4. Frequency Span Range : 0 Hz, 1 KHz – 3 GHz 5. Resolution Bandwidth : 30 Hz to 1MHz in 1-3- 10 sequence 6. Video Bandwidth : 3 Hz – 1 MHz 7. Sweep Time : 10 ms to 1000 s, span 1 kHz &amp; 120 ms at full span 8. SSB Phase Noise : - 87 dBc at 30 KHz offset 9. Amplitude Range : - 124 (DANL) to + 20 dBm {- 144 dBm with Preamp} 10. Max Safe Input Level (Average continuous) : + 33 dBm 11. Input Attenuator Range : 0 – 51 dB in 1 dB Steps 12. Sweep Mode : Continuous, Single 13. Trigger Source : Free Run, Video, External 14. Trigger Delay Range : 6 us – 200 s 15. VSWR : Attenuator setting 0 dB &amp; 1.8 : 1 16. Display : 6.5" TFT screen with bright display for use indoors and outdoors. Resolution : 640 x 480 pixels 17. Battery Life : 4 Hours Minimum 18. Interface : LAN &amp; USB 2.0</p>
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**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.