



**GOVT. COLLEGE OF ENGINEERING,
AMRAVATI – 444 604**

*(An Autonomous Institute of Govt. of Maharashtra)
Towards Global Technological Excellence*

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INVITATION FOR QUOTATION

TEQIP-II/2015/MH2G06/Shopping/101

10-Sept 2015

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	COMPUTERIZED MULTI-FUEL VARIABLE COMPRESSION RATIO RESEARCH ENGINE	1	60	Mechanical Engineering Department Govt. College of Engineering Near Kathora Naka Amravati 444604	Installation required

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 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 **45**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 **17:00**hours on **09-October2015**.
12. Detailed specifications of the items are at Annexure I.

13. Training Clause (if any) **Training required**
14. Testing/Installation Clause (if any) **Testing & Installation required**
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,
The Principal, Govt. College of Engineering, Near Kathora Naka Amravati Maharashtra
444604
17. We look forward to receiving your quotation and thank you for your interest in this project.

Note: Quotation must be supplied with the relevant information brochures and photographs of the equipment mentioning the Make, Model etc.

Principal
Govt. College of Engineering, Amravati

Annexure I

Sr. No	Item Name	Specifications
1	COMPUTERIZED MULTI-FUEL VARIABLE COMPRESSION RATIO RESEARCH ENGINE	<p>Computerized Variable Compression Ratio Engine Test Rig Engine type: Single cylinder, 4-stroke, water-cooled Swept volume capacity: Approximately between 500 to 750 cc Compression ratio variation range: 5:1 to 20:1 Spark timing Variation range: Able to vary spark timing 0 to 70 degree Speed: 1000-4000 rpm Fuel: petrol/diesel/LPG/CNG with Petrol injection, diesel injection, LPG &CNG kit, carburetor Power: 5 HP Starting: Auto start as well as manual Cranking Lubrication: Forced Dynamometer: Eddy Current, air cooled, Load measurement: Load cell(Strain Gauge), Max speed: Compatible to engine speed, Coupling: Direct Exhaust gas calorimeter: Shell and Tube (Pipe in pipe style) with Drain cock, All wetted parts in SS, Outer insulation: Asbestos Cloth, Water flow control valve : Gate Valve No of Temp measuring points in test rig: 6+1 Water Flow: Rota meter, Range: 40-400 LPH for Engine cooling, Range 10-100LPH for calorimeter Cooling Air Flow: Differential pressure, Air box: Square (Size: 500mm X 500mm) Fuel flow: Burette with 3-way cock, Gas flow meter (Fuel consumption is measured by using optical sensors), Range: 0-150 kg/m Speed measurement:non contact type, Range 0-10000 rpm (measured by using optical sensors) Cylinder pressure sensor: Piezoelectric (Make kistler), Range: 0 250 bar, water cooled Crank Angle Sensor: Pulse count Data Acquisition Card:</p> <p>Technical Specifications</p> <ul style="list-style-type: none"> • 14 Analog Inputs (12-16 Bits Depending on Speed) • UE9-Pro Adds 24-bit Low-Speed ADC for 20-Bit Effective Resolution • ±5 or 0-5 Volt Maximum Analog Input Range • 2 Analog Outputs (12-Bit, 0-5 Volts) • 23 Digital I/O • Up to 2 Counters (32-Bits Each) • Supports Software or Hardware Timed Acquisition and CD of software • Maximum Input Stream Rate of 50+ kHz (Depending on Resolution) • Capable of Command/Response Times As Low As 1.2 Milliseconds • Built-In Screw Terminals for Some

		<p>Signals</p> <ul style="list-style-type: none"> • USB 2.0/1.1 Full Speed Interface • Ethernet 10Base-T Interface • Dual-Processor Design with 168 MHz of Total Processing Power • Electrical Isolation Possible with Ethernet Interface • No Power Supply Needed for USB Operation • Includes USB and Ethernet Cable, Power Supply, and Screwdriver • Enclosure Size Approximately 3" x 7" x 1" (75mm x 185mm x 30mm) • Rated for Industrial Temperature Range (-40 to +85 Degrees C) <p>Acquisition Software:- Acquisition software should have following functionalities</p> <ol style="list-style-type: none"> 1. Provision to enter the data like Temperature, Water flow rate, Air consumption, Fuel consumption manually 2. Acquire and display of online p-theta, and p-V, theta diagram 3. Display of percentage of mass fraction burnt, Heat release rate and cumulative heat release rate 4. Display of the heat balance sheet in the form of Pie-diagram 5. Display of the performance graphs for Mechanical Efficiency, Volumetric Efficiency, Brake thermal Efficiency, SFC, Frictional power Vs Brake Power etc <p>Facilities to export data to Microsoft excel</p> <p>Along with Comprehensive teaching manual & Instruction Manual</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)
Total Cost							

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: _____