

# **DOCUMENT**

## **Open Competitive Bid (OCB)**

**For**

**Supply and Installation of Equipments  
to the Instrumentation Control & Measurements  
Lab of Mechanical Engg. Departments.  
at the three campuses of  
Rajiv Gandhi University of Knowledge  
Technologies**

**Proprietary & Confidential**



**RAJIV GANDHI UNIVERSITY OF KNOWLEDGE  
TECHNOLOGIES**

**Ground Floor, Vindhya C4 Building,**

**IIIT-H Campus, Gachibowli**

**HYDERABAD- 500 032**

**Phone: 040-23001830**

**Tender Ref: RGUKT/Proc/ME/ ICM/T 26/2012**

**Description: Supply of Equipments to the Instrumentation Control & Measurements Lab of Mechanical Engineering Departments at the three campuses of RGUKT.**

**Bidder Details:**

Name : \_\_\_\_\_

Place : \_\_\_\_\_

**Tender Processing Fee Details:**

Amount : Rs.5000/-

DD No : \_\_\_\_\_, Date: \_\_\_\_\_

Name of the Issuing Bank: \_\_\_\_\_

Date of Issue:

Signature of Issuing Authority

**Proprietary & Confidential**

**No part of this document can be reproduced in any form or by any means, disclosed or distributed to any person without the prior consent of RGUKT except to the extent required for submitting bid and no more.**

**Contents**

Description	Page No.
Newspaper advertisement	5
Time Schedule	6
Tender Form	7
Statement of important limits and values of bid	8-9
Eligibility Criteria	10-11
Requirement & Technical Specifications	12-17
Note	18

## News paper advertisement

### Short Tender Notice



RAJIV GANDHI UNIVERSITY OF KNOWLEDGE  
TECHNOLOGIES

Ground Floor, Vindhya C4 Building, IIIT-H campus,  
Gachibowli, HYDERABAD- 500 032  
Phone: 040-23001830

Sealed Tenders are hereby invited from reputed Manufacturers or Authorised dealers for supply and installation of equipments at the Instrumentation Control & Measurements Lab of Mechanical Engineering Departments at the three campuses of RGUKT located at Basar (Adilabad District), Nuzvid(Krishna District) and RK Vally (YSR Kadapa District) of Andhra Pradesh:

**Last date of submission of tender along with EMD as specified in the bid document is on 31.08.2012 before 04 .00 pm.**

Interested parties can collect the Tender document from **17.08.2012 to 30.08.2012** against payment of Rs. 5,000/- towards the cost of Tender document fee (non-refundable) through D.D. from any Nationalized Bank payable to REGISTRAR, RGUKT at Hyderabad from the office of the RGUKT. For further details visit our website [www.rgukt.in](http://www.rgukt.in)

**Date: 17.08.2012**

**-Sd-  
Registrar**

## Time schedule of various Short tender related events

Bid calling date	17.08.2012
Last date for sale of document	30.08.2012 at 05:00 P.M
Pre bid meeting	24.08.2012 at 04.00PM
Bid closing date/time	31.08.2012 at 04:00 P.M.
Technical Bid Opening date/time	31 .08.2012 at 04:30 P.M.
Price Bid opening date/time	01.09.2012 at 04:30 P.M.
Bid Document fee	Rs.5,000/-
Contact person	Registrar, RGUKT
Reference No	RGUKT/Proc/ME/ICM/T 26/2012

Registrar,  
RGUKT

## TENDER FORM

### Not transferable

Reference. No. RGUKT/Proc/ME/ICM/T 26/2012

Dated 17.08.2012

**Subject:** Invitation of Tenders for Supply, installation and commissioning of Instrumentation Control & Measurements Lab Equipments to the Mechanical Engineering Departments at three campuses of RGUKT located at Basara (Adilabad Dist), Nuzvid (Krishna Dist) and RK Valley (YSR Kadapa Dist) of Andhra Pradesh.

Last date and time for submission of the TENDER AT RGUKT, Vindhya-C4, IIIT Campus, Gachibowli, HYDERABAD is **31.08.2012 up to 4:00PM**

Dear Sir/Madam,

- A. RGUKT invites sealed tenders comprising technical bid and price bid separately from reputed manufacturers (or) authorized dealers for its three campuses located at Basara (Adilabad Dist), Nuzvid (Krishna Dist) and R K Valley (Kadapa Dist) of Andhra Pradesh.
- B. The Tender form consists of **34 pages of which pages from 7 to 24** are instructions and **page No.25** contains the format for financial bid. The duly completed Technical Bid together with a copy of the bid document (this tender) signed on all pages by the Bidders authorized signatory and the Price Bid should be kept in separate sealed covers. These sealed covers must be submitted in a sealed master envelope super scribed "Tender for Supply , Installation & Commissioning of Instrumentation control & Measurements Lab Equipments to the Mechanical Engineering Departments at the three campuses of RGUKT. The last date for submission of bid is **31.08.2012 and closing time is 04:00 PM.**
- C. The Sealed Tenders should be deposited in the Tender box kept in the office of Registrar, RGUKT, Hyderabad up to **04:00 P.M. on 31.08.2012.**

For any clarification and further details on the above tender please contact by Telephone No: 040-23001830 or Contact in Person during office hours.

Thanking you

Yours faithfully,

Registrar,  
RGUKT.

## STATEMENT OF IMPORTANT LIMITS/VALUES RELATED TO BID

Item	Description
EMD	<b>Rs.1,00,000/- by way of Demand Draft from any Nationalised Bank or by way of irrevocable bank guarantee from any Nationalised Bank only. DD/BG from other than Nationalised Banks will not be accepted.</b>
Bid Validity Period	365 days from the date of opening of Financial bid
EMD Validity Period	90 days from the date of opening of Financial bid
Warranty Period	3 years
Variation in quantities/number of residents	<b><u>± 40 %</u></b>
Period for furnishing performance Security Deposit	Within 10 days from date of receipt of award
Delivery Schedule	Bidder shall deliver the goods in one single lot within 30days from the date of award of the contract.
Performance security value	5% of contract value by way of irrevocable Bank Guarantee from any Nationalised Bank
Performance security validity period	38 months from award of contract ( including 30 days of installation period)
Period for signing the order Acceptance	Within 7 days from date of receipt of notification of award



<b>Payment terms</b>	
On delivery at user site	<p>Payment for goods and services shall be made in Indian rupees as follows.</p> <ol style="list-style-type: none"> <li>1. 80% of payment will be paid after installation, commissioning</li> <li>2. Balance 20% will be paid after 3 months after obtaining the satisfactory certificate from the Director, RGUKT IIITs.</li> </ol>
Maximum Liquidated Damages for late deliveries	<p>For delays:- If the supplier fails to deliver any (or) all of the goods or perform the services within the time period specified in the contract the purchaser shall without prejudice to its other remedies under the contract deduct from the contract price as liquidated damages a sum equivalent to 0.25% of the contract value per day until actual delivery or performance up to a maximum deduction of 10% of the delayed goods or services contract price. Once the maximum deduction is reached, the purchaser may consider the termination of the contract duly forfeiting the performance security etc.,</p>

### ELIGIBILITY CRITERIA

- 5.1. This bid is open to all firms within India who are eligible to do business under relevant Indian laws as in force at the time of bidding, subject to meeting the pre-qualification criterion. They should provide list of customers of previous supply of similar/ same items to IITs, NIT's or Central Universities or any Academic Institute of National repute with contact details. Copies of orders received from the reputed firms on bidding firm need to be submitted.
- 5.2. The bidder should have servicing facility or work shop with in India so the provision of service is possible at a short notice and without incurrance of delay.
- 5.3. The Bidding firm should have minimum turnover as follows:

<b>Bid Value offered against the tender call</b>	<b>Last financial year's business turnover</b>
25 lakhs	50 lakhs
50 lakhs	1 crore
50-100 lakhs	2 corers
Greater than 100 lakhs	3 crores

The bidder should have adequate experience in supply of such materials as required in the tender. Bidder should furnish proof of having supplied such materials as required in the tender in the previous financial year ending 31<sup>st</sup> March 2012 as mentioned above . A certificate indicating the Turn Over value details (in Rupees) of subject material, during the financial year 2011-12 (for the year ending 31.03.2012) from a Firm of Chartered Accountants must be enclosed (in original) as a proof for Turnover. The Turn Over of the subject Material must be separately indicated in the certificate.

- 5.4. The bidder should furnish satisfactory performance certificate from the parties concerned to whom bulk supplies were effected, in case such supplies were made. RGUKT may contact any such parties to elicit details.
- 5.5. Bidder should be registered under VAT Act/CST Act with the relevant State Sales Tax Authorities. He should furnish along with the bid document, the relevant VAT/CST Registration Document and PAN / TAN Card copies.
- 5.6. All bidders shall also include the following information and documents with their tenders ( in the Technical bid cover)

## Web Document

- 5.6.1. Copies of original documents defining the constitution or legal status, place of registration, and principal place of business of the bidding firm/entity; written power of attorney of the signatory of the Bid to commit the Bidder.
  - 5.6.2. Machinery/equipment owned by the bidder and number of employees.
  - 5.6.3. Latest Income Tax returns and VAT/CST Returns filed.
  - 5.6.4. List of Present Clientele with contact addresses & telephone numbers.
- 5.7. All the certificates furnished along with technical bids should be attested by a Gazetted Officer, counter signed by bidder along with their seal.

The bidders must submit all relevant documentary evidence to support their claim for eligibility in placing bid. **The tenders received without the above documents will be rejected.**

## Requirement of Instrumentation Control & Measurements Lab equipments

S.No	Description	Qty Required for three campuses
1	Strain Measurement Module	3 No's
2	Displacement Measurement Module	3 No's
3	Load Measurement Module	3 No's
4	Torque Measurement Trainer	3 No's
5	Piezoelectric Trainer	3 No's
6	Inductance Trainer	3 No's
7	Pressure to Current Trainer	3 No's
8	Vibration Measurement Trainer	3 No's
9	Dead Weight Pressure Gauge Tester	3 No's
10	PLC Trainer	3 No's
11	Optical Radiation Pyrometer	3 No's
12	Speed Measurement Setup	3 No's
13	Mechanical Proving Ring	3 No's

## Instrumentation Control & Measurements Lab Equipments specifications

S No	Equipment	Each Campus	Total
1	<p><b>Strain Measurement Module</b></p> <p>This module should comprise of Cantilever Beam bounded with four strain gauges, pan and should weigh upto 1Kg. Digital 3½ digit indicator module is to be supplied to read the micro strain.</p>	01	03

	<p><b>Specification:</b>  Cantilever Beam Capacity: 1kg  Beam Dimension: 225 x 30 x 4 (LxBxT in mm)  Bridge Selection: Half &amp; Full  Strain Gauge Resistance: 350 Ohms +2  Gauge Factor: 2 to 2.1  Dead Weights: 100 Grams x 10 Nos.  Indicator: 3½ digit to read upto ± 1999 µ strain.</p>		
2	<p><b>Displacement Measurement Module</b></p> <p>This should comprise of LVDT with micrometer jig fitted on the base plate to give displacement to the core of LVDT, digital 3½ digit indicator be provided to read the displacement in mm.</p> <p><b>Specification:</b>  LVDT Range: ± 10mm  Micrometer: 0 - 25mm, 0-50mm  Indicator: 3½ digit to read upto ±10mm</p>	01	03
3	<p><b>Load Measurement Trainer</b></p> <p>It should comprise of strain gauge based load cell loading arrangement to load in compression, weights and digital load indicator to read the load in Kg.</p> <p><b>Specification:</b>  Load cell: 1Kg capacity  Weight: 100 gms. x 10 nos.  Indicator: 3½ digit display to read upto 1 Kg.  Resolution: 0.01 Kg.</p>	01	03
4	<p><b>Torque Measurement Trainer</b></p> <p>This trainer should comprise of a strain gauge based reaction type torque transducer, fulcrum arm, with L angle to mount the sensor, pan &amp; weights with digital torque indicator to read the torque in Kg-m.</p> <p><b>Specification:</b>  Torque Cell: 1Kg-m capacity  Sensor: Optical twist detector transducer / Electro dynamo meter type  Motor: ½ H P motor  Motor shaft diameter : Suitable to develop the required torque at the periphery of shaft.  Loading: L angle and 1 m length fulcrum arm</p>	01	03

	<p>Weights: 100gms x 10 nos  Accessory: Spring balance-pulley loading system mounted with motor on common platform.  Display: 3 ½ digit Digital indicator meter to read up to 1 Kg / Cm<sup>2</sup>.  Resolution: 0.01 Kg / Cm<sup>2</sup>  Power Supply: Built-in IC regulated.  Standard Accessories: Necessary patch chords and Instruction manual having practical.</p>		
5	<p><b>Piezoelectric Trainer</b></p> <p><b>Specification:</b>  Piezoelectric Transducer: 1000 Pf Piezo-crystal  Indicator: 3½ digit display to read impact force.</p>	01	03
6	<p><b>Inductance Trainer</b></p> <p><b>Specification:</b>  Inductance sensor: Copper wire wound on hallow bobbin inside which an MS core moves.  Displacement: 20mm  Indicator: 3½ digit display to read upto 20mm  User's manual and patch cards.</p>	01	03
7	<p><b>Pressure to Current Trainer</b></p> <p>This setup comprises of pressure chamber fitted on a base board, a pressure transducer, bourdon pressure gauge, a digital pressure indicator with transmitter output of 4 to 20 mA and a foot air pump to build the pressure.</p> <p><b>Specification:</b>  Pressure sensor: Strain gauge based pressure transducer  Capacity: 30 PSI  Pressure Source: Foot air pump  Indicator: 3½ digit LED display  Output: 4 - 20 mA  Power: 230 V 50 Hz  User's manual and patch cards.</p>	01	03
8	<p><b>Vibration Measurement Trainer</b></p> <p>This equipment should comprise of a vibration generator, Piezoelectric accelerometer and display setup for showing displacement, Velocity and acceleration sensed by the sensor.</p> <p><b>Specification:</b></p>	01	03

	Capacity of Vibration Generator: 5 Newton Excitation Frequency: 50 Hz to 1 K Hz Excitation Voltage: 0 to 10 V P to P Vibration Sensor: Quartz/Piezoelectric type accelerator Vibration Indicator: 3½ digit LCD display by selection through selector switch Range: Acceleration - 0.1 to 199.9 m/s <sup>2</sup> Velocity - 0.001 to 19.99 cm/s rms) Displacement - 0.003 to 1.999 mm (p-p) Power: 230 V 50 Hz		
9	<b>Dead Weight Pressure Gauge Tester</b>  This is for testing and calibration of pressure gauges, pressure transducers, recorders, digital calibrators etc. The equipment shall comprise of a precision lapped piston and cylinder assembly with accurately calibrated mass for loading the piston and the whole system is to be housed inside a stainless steel case with elegant look. A see through oil tank to use it as oil reservoir is desirable.  <b>Specification:</b> Capacity: 1 to 25 kg/cm <sup>2</sup> Pressure port: 3/8 BSP thread Accuracy: 0.1% of FSD Starting Pressure: 0.5 Kg/cm <sup>2</sup>	01	03
10	<b>PLC Trainer</b>  <b>Main Unit Specification:</b> Micro Processor based PLC system with built in 12 Digital Input, 8 Digital Output line, 4 Analog Input and 1 Analog Output and RS 232/USB serial interface to up load and down load facility to / from PC system with required software compactable with IBM PC to facilitate to use Ladder Editor Programs.	01	03
11	<b>Optical Radiation Pyrometer</b>  To measure the Temperature of an unknown source of heat on a meter. Analog Range: 0 - 1800 C Digital Range: 0 - 400 C Battery operated gun type with direct read out of temperature.	01	03
12	<b>Speed Measurement setup</b>  The setup should consist of source, snesors and measuring equipments (including digital non-contact type and digital contact type	01	03

	<p>Tachometers).</p> <p>a. Source: This consists of a variable speed attachments and a motor mounted with wheel and magnetic pickup. 12V DC motor with maximum speed of 3000 rpm apporx.</p> <p>b. Sensors: Non-contact magnetic type Non-contact photo reflective pickup</p> <p>c. Digital Tachometer Non-contact type:- Display: 4 Digits LED RPM Range: 10 to 9999 RPM Resolution: 1 RPM</p> <p>d. Digital Tachometer Hand Held Contact Type: Range: 10 to 9999 RPM, resolution of 1 rpm Display: LED 4 digits.</p> <p>e. Stroboscope to measure the RPM Display: LED 5 digits Range: 250 to 18,000 RPM</p>		
13	<p><b>Mechanical Proving Ring</b></p> <p>Proving ring/dynamometer to measure the force made out of special steel with close tolerances with dial gauge base plate and Top Pan to load with weight and test the deflection rate.</p> <p><b>Proving ring:</b> <b>Type : Tension and compression</b> Range: 1000 Kgf Ring diameter: as required Deflection range 0.84 to 4.24mm Measurement uncertainty 0.075% of rated force Diameter measurement system consisting of micrometer screw and reed. Calibration setup : Per ASTM E74-1995</p>	01	03



## **7. General Requirements & Qualification Criteria**

- Bidding Firm offering the product should have ISO 9001 Accreditation certification.
- Bidding Firm, offering the product, should have supplied similar type of test systems for a several years to government establishments, defense organizations & National higher learning institutions like IITs, IISc etc., in India
- Bidding Firm offering the product should submit list of supplies made by it, during last two years with complete contact details of the end users such as phone number, fax number, e-mail ID etc. It should submit copies of order placed by such organizations and user certificates for goods of same/similar nature.
- Bidding Firm offering the Product should have a Local Service Support Facility, preferably in Hyderabad, and should submit address and contact details
- Bidding Firm should give an Undertaking that, an interrupted service support will be given for a minimum period of 10 years with unbroken availability of spares supply.
- Bidding Firm should give an undertaking that, the Software upgrades if any, during the warranty period of three year, should be supplied free of charge
- Bidding Firm should offer pre-dispatch inspection free of charge at their factory premises for 2 users for 3 days and post installation training at our three laboratories in different campuses to 2 users for 5 days.

**NOTE**

**A complete set of bidding documents may be purchased by interested bidders from the RGUKT contact person upon payment of the bid document price which is non-refundable. Payment of bid document price should be by demand draft/ cashier's cheque or certified cheque drawn in favour of "Registrar, Rajiv Gandhi University of Knowledge Technologies" and payable at Hyderabad (India).**