DOCUMENT

Open Competitive Bid (OCB)

For

Supply and Installation of
Soil Mechanics Lab equipments of
Civil Engineering Dept.
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

Proprietary & Confidential

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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

Separate Sealed Tenders are hereby invited from reputed Manufacturers or Authorised dealers for supply and installation of equipments for the following labs of Civil Engineering Departments 1) Transportation Engineering Lab, 2) Soil Mechanics Lab 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 01.08.2012 before 04.00 pm.

Interested parties can collect the Tender document for each laboratory from 20.07.2012 to 31.07.2012 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

Date: 20.07.2012 Sd/ Registrar

Time schedule of various Short tender related events

Bid calling date	20 .07.2012
Last date for sale of	31.07.2012 at 05:00 P.M
document	
Pre bid meeting	26.07.2012 at 03.00PM
Bid closing date/time	1.08.2012 at 04:00 P.M
Technical Bid Opening	1.08.2012 at 04:30 P.M.
date/time	
Price Bid opening	2.08.2012 at 04:00 P.M
date/time	
Bid Document fee	Rs.5,000/-
Contact person	Registrar, RGUKT
Reference No	RGUKT/Proc/Civil/Soil Mechanics/T
	17 /2012

Registrar, RGUKT

TENDER FORM

Not transferable

Reference. No. RGUKT/Proc/Civil Engg./Soil Mechanics/T 17/2012 Dated 20.07.2012

Subject: Invitation of Tenders for Supply, installation and commissioning of Soil Mechanics Lab Equipments to the Civil 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 01.08.2012 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 three RGUKT IIITs located at Basara (Adilabad Dist), Nuzvid (Krishna Dist) and R K Valley (Kadapa Dist) of Andhra Pradesh.
- B. The Tender form consists of 38 pages of which pages from 6 to 17 are instructions and page No.26 to 28 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 superscribed "Tender for Suppl, Installation & Commissioning of Soil Mechanics Lab Equipments to the Civil Engineering Departments at the three campuses of RGUKT. The last date for submission of bid is 01.08.2012 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 01.08.2012.

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	Rs.50,000/- 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.
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	<u>+</u> 40 %
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

Payment terms	
On delivery at user site	Payment for goods and services shall be made in Indian rupees as follows.
	1. 80% of payment will be paid after installation, commissioning
	2. Balance 20% will be paid after 3 months after obtaining the satisfactory certificate from the Director, RGUKT IIITs.
Maximum Liquidated Damages	
for late deliveries	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.,

1. ELIGIBILITY CRITERIA

- 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 prequalification 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.
- 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 incurrence of delay.

	TTI D: 1 1:	c·	1 11	1			C 11
•	The Bidding	firm	should	nave	minimiim	furnover	as follows:

Bid Value offered against	Last financial year's
the tender call	business turnover
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 31st 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.

- 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.
- 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.

- All bidders shall also include the following information and documents with their tenders (in the Technical bid cover)
 - 5..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..2. Machinery/equipment owned by the bidder and number of employees.
 - 5..3. Latest Income Tax returns and VAT/CST Returns filed.
 - 5..4. List of Present Clientele with contact addresses & telephone numbers.
- 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.

Requirements of Soil Mechanics Lab Equipments

SR.	Equipment with main technical testing	Qty for three
No		campus
1(a)	Computer controlled Triaxialshear test apparatus with all accessories.	3
	Conforming to IS: 2720 and BS 1377	
1(b)	Triaxial test apparatus with all accessories.	15
2(a)	Fully automatic Direct or residual shear apparatus with all accessories.	3
	Conforming to IS: 2720 and BS 1377	
2(b)	Direct shear apparatus motorised with all accessories. Conforming to IS: 2720	15
	an IS 11299.	
3(a)	Consolidation apparatus with all accessories	6
	Test is performed as per IS 2720.	
3(b)	Electronic, three gang bench type consolidometer	3
4	Automatic compaction equipment with all required accessories	6
5	Proctor mould with all accessories including compacting rod	18 each
6	Sieve shakers	6
7	Weighing balance	9
8	Hot air oven	6
9	Specific gravity bottle/Density bottle	30 each
10	Vacuum pump	6
11	Thermometer , range 0-100 °C with ISI marks	30
12	Pipette with 25ml	30
13	Conical funnel	30
14	Standard sieves (4.7mm to 75 microns size) with lid and pan	18 each
15	Hydrometer with full set (as per IS: 2720 part - IV)	18 each
16	Sodium hexametaphosphate	6 kg
17	1000ml, 100ml, 50ml glass measuring cylinders	30 each
18	1000ml beaker	30
19	Mechanical stirrer (as per IS: 2720 part - IV)	6
20	Stop watch	45
21	Casagrande's apparatus with accessories	18
22	Moisture cans {i.e. small steel or aluminium cup to place the soil sample in the	600
	oven for drying	

23	3mm dia brass rod	24
24	Smooth glass plate of dimension 200mmx150mmx3mm	24
25	Shrinkage limit apparatus with all accessories (as per IS: 10077 and test	24
	performed as per IS: 2720 part-VI)	
26	Mercury	3kg
27	In situ density of soil – sand jar cone apparatus (as per IS: 2720 part XXVIII).	9 each
28	Rod for digging soil	9
29	Dial gauges (Least count = 0.01mm)	60
30	Soil sample extruder with hydraulic jack system (motorised)	3
31	Desiccators, 150 mm	12
32 (a)	Vane shear apparatus with all accessory (hand operated)	15
32 (b)	Vane shear apparatus with all accessory (motorized)	3
33	Permeability apparatus (as per IS: 2720 part -17, IS 11209)	24
34	Trays for mixing soil (all dimension are in mm)	15 each
35	Porcelain dish or china clay dish of 3 different sizes	24
36	Electronic heaters	6
37	Plastic tubs (size 50cm dia and 20 cm height)	30

Technical Specifications of Soil Mechanics Lab Equipments

SR. No	Equipment with main technical testing	Qty for	Qty for
	• •	each	three
		campus	campus
			_
1(a)	Computer controlled Triaxialshear test apparatus with all accessories.	1	3
	Conforming to IS: 2720 and BS 1377		
	E-11-		
	Fully computer controlled operation		
	Automated strain rate control system for soils Out of the control system for soils Out of the control system for soils Out of the control system for soils		
	• Capable of conducting UC, UU, CU, CU Bar, CD tests		
	 Confining pressure and back pressure setting through computer 		
	Load capacity 50 kN		
	Vertical clearance 800 mm		
	Horizontal clearance 325 mm		
	Platen travel 100 mm		
	Platen diameter 150 mm		
	• Strain rate programmable from 0.00001 mm/min to 10		
	mm/min		
	• Triaxial cell to accommodate specimen size up to 50mm		
	or 100 mm dia		
	• Programmable pressure range 0.05kg/cm ² to 10kg/ cm ²		
	 Pressure controlling accuracy is within +/- 1% 		
	• Online plotting of load vs displacement, stress vs strain		
	curve.		
	Built in safety features for over load, over travel and procesure		
	pressure Advanced analysis software and it should be user		
	 Advanced analysis software and it should be user friendly. 		
1(b)	Triaxial test apparatus with all accessories.	5	15
1(0)	Thana test apparatus with an accessories.	3	13
	• Multi strain rate ranging from 5mm/min down to 0.0005		
	mm/min		
	 Capacity 50 kN 		
	 Universal triaxial cell for testing soil specimens up to 		
	100 mm diameter		
	 Triaxial cell 1) 38 mm diameter and 76 mm high 		
	2) 50 mm diameter and 100 mm high		
	• Triaxial cell suitable for lateral pressure up to 1000 kPa,		
	the cell has four take off positions drilled in the base for		
	cell pressure, pore water pressure and for top and		
	bottom drainage.		
	Pore water pressure apparatus mounted on a steel panel, fitted with pressure gauge moreury management brees.		
	fitted with pressure gauge, mercury manometer, brass		

	scale graduated 50-0-50 cm., drainage burette 50ml, null indicator with copper coil, piston pump and water reservoir. Pressure range 0 – 1000 KPa. • Proving ring 500 Kg. Cap. • Dial gauge 0.01 x 25 mm • Pneumatic control panel with de-airing system. Capacity 10.5 kg/sq. Cm • Air compressors of 10 kg/sq cm and vacuum pump		
2(a)	Fully automatic Direct or residual shear apparatus with all	1	3
	accessories. Conforming to IS: 2720 and BS 1377		
	• Rate of strain 0.0001 to 10 mm/min		
	• Load range capacity +/- 0.5 kN		
	• Displacement range +/- 1 mm		
	 Online plotting of load vs displacement, stress vs strain 		
	curve.		
	 Built in safety features for over load, over travel and pressure 		
	 Advanced analysis software and it should be user 		
	friendly.		
	Displays maximum value of dilation angle along with C		
	and φ values.		
2(b)	Direct shear apparatus motorized with all accessories. Conforming to	5	15
	IS: 2720 an IS 11299.		
	The unit need to provide with a turret type gear box to		
	get 12 different constant rate of strain i.e. 1.25, 0.625,		
	0.25, 0.125, 0.05, 0.025, 0.01, 0.005, 0.002, 0.001,		
	0.00004 and 0.0002 mm/min and arrangements for to carry out residual shear strength tests also.		
3(a)	Consolidation apparatus with all accessories	2	6
	T		
	Test is performed as per IS 2720.		
	• Loading unit 20 kg/cm ²		
	 Consolidation cell 60mm dia and 20mm ht. 		
	• Dial gauge 5 x 0.002mm		
2(1)	• Stress up to 10 kg/cm ²	1	2
3(b)	Electronic, three gang bench type consolidometer	1	3
	• Fixed ring consolidation cell for 60 mm dia and 20 mm		
	thick specimen complete with two porous stones,		
	cutting ring and loading pad.		

		.	
	 The set of weights to give the proper pressure intensity on the test specimen. LVDT type sensors Stroke +/- 10 mm Linearity deviation +/- 1% Repeatability +/- 0.1 % Hysteresis +/- 0.5% Excitation 2 V Rms , 2Khz sinusoidal Temperature range 0 to 50 °C Advanced analysis software and it should be user friendly. 		
4	Automatic compaction equipment with all required accessories	2	6
	 Diameter of the rammer 50mm Weight of the rammer 2.60kg for light compaction and 4.89 kg for heavy compaction. Height of fall of rammer 310 and 450 mm 		
5	Proctor mould with all accessories including compacting rod	6 each	18 each
	 Compaction mould 100 mm internal dia and 127.3 mm height, 1000ml volume complete with collar and base plate. All made of mild steel tie rods of mild steel and wing nuts for clamping. Compaction rammer, light, made of mild steel 2.6 kg weight, 50mm dia compaction face, 310 mm controlled free vertical fall. Compaction mould 150 mm internal dia and 127.3 mm height, 2250 ml volume, complete with collar and base plate. All made of mild steel tie rods of mild steel with wing nuts for clamping. Compaction rammer, heavy, made of mild steel 4.89 kg weigh, 50mm dia compacting face, 450 mm controlled free vertical fall. 		
6	Sieve shakers	2	6
	 Maximum seven sieves of 150 mm /200 mm diameter accommodate. Holding the sieves and adjustable top clamping plate should be there. The operating gear assembly is enclosed in an oil bath fitted with a transparent oil level indicator window. Suitable for operation on 220 V, 50Hz and single phase supply. 		
7	Weighing balance	3	9

	 Capacity of 10kg and least count 1gm and with ISI hall mark. 		
8	Hot air oven	2	6
	Electrically operated thermostatically controlled.		
	 Inside chamber made up with stainless steel 		
	 Air circulating fan and digital temperature controller 		
9	Specific gravity bottle/Density bottle	10 each	30 eacl
	• 50 ml density bottle with capillary vent leak proof		
	stopper and As per IS: 2720 part –I suitable for		
	determination of specific gravity of fine soils.		
	• 100 ml density bottle with capillary vent leak proof		
	stopper and As per IS: 2720 part –I suitable for		
	determination of specific gravity of fine soils.		
10	Vacuum pump	2	6
11	Thermometer, range 0-100 °C with ISI marks	10	30
10		10	20
12	Pipette with 25ml	10	30
13	Conical funnel	10	30
14	Standard sieves (4.7mm to 75 microns size) with lid and pan	6 each	18 eacl
15	Hydrometer with full set (as per IS: 2720 part - IV)	6 each	18 eacl
	 Particle size analysis of soil in suspension when it has 		
	more than 10% of 75 micron IS sieve passing material.		
	The scale on the hydrometer is marked from 0.995 to		
	- In the second of the second		
	1.030 in terms of density of suspension at room		
	temperature.		
	It is single marked 1000ml glass cylinder without pour		
	out, used to prepare the soil suspension for the		
	determination of density by using hydrometer. Supplied		
	complete with the rubber bung.		
16	Sodium hexametaphosphate	2Kg	6 kg
17	1000ml, 100ml, 50ml glass measuring cylinders	10 each	30 each
18	1000ml beaker	10	30
19	Mechanical stirrer (as per IS: 2720 part - IV)	2	6
	 Pedal speed of 8000 to 10,000 rpm 		
	 Dispersion cup made of brass and baffle 		

20	Stop watch	15	45
21	 Casagrande's apparatus with accessories The apparatus consists of a brass cup, a crank and cam mechanism, mounted on a rubber base of specified hardness. A brass pin having a knurled end for easy removal holds the bass cup. The height of fall of the cup can be adjusted by a horizontal lead screw. Device is fitted with a drop counter to automatically record number of drops of the cup. Supplied grooving tool type 'A' and gauging block as per IS: 9259 and IS: 2720 part-V. Moisture cans {i.e. small steel or aluminium cup to place the soil 	200	600
22	sample in the oven for drying	200	000
23	3mm dia brass rod	6	24
24	Smooth glass plate of dimension 200mmx150mmx3mm	6	24
25	 Shrinkage limit apparatus with all accessories (as per IS: 10077 and test performed as per IS: 2720 part-VI) 75 mm square prong plate made of 3 mm thick acrylic sheet with three metal prongs. 75 mm square plain plate made of 3 mm thick acrylic sheet Stainless steel shrinkage dish 45mm in dia, 15 mm deep. Glass cup with ground edge, 50 mm to 55 mm dia, 25 mm deep. Flexible spatula with 80 mm long, 20 mm wide blade. 	6	24
26	Mercury	1kg	3kg
27	In situ density of soil – sand jar cone apparatus (as per IS: 2720 part XXVIII). • Sand pouring cylinder small o 115mm internal dia with conical funnel and shutter. o Calibrating container, 100 mm inner dia and 150 mm deep with flange 50 mm wide. o Metal tray 300 mm square x 40 mm deep with a 100 mm dia hole at the centre. • Sand pouring cylinder large	3 each	9 each

	 215mm internal dia with conical funnel and shutter. Calibrating container, 200 mm inner dia and 250 		
	mm deep with flange 75 mm wide.		
	 Metal tray 450 mm square x 50 mm deep with a 200 mm dia hole at the centre. 		
28	Rod for digging soil	3	9
29	Dial gauges (Least count = 0.01mm)	20	60
30	Soil sample extruder with hydraulic jack system (motorised)	1	3
	Hydraulic jack with stroke of 600mm and thrust force of 9000 kgf. It has a control valve for the control of direction of movement of the piston and a relief valve to		
	limit the load between 9000kgf and 10000kgf		
	 Adopter and adopter plates for 38, 50, 75, 100, 150 mm tubes. 		
31	Desiccators, 150 mm	4	12
32 (a)	Vane shear apparatus with all accessory (hand operated)	5	15
	• Set of four springs, one each of 2kgcm, 4kgcm, 6kgcm and 8kgcm.		
	• A vane of size 12x24 mm long with a vane rod		
	• Specimen container to take a specimen of 50mm dia and 75mm high		
32 (b)	 Wooden carrying case for the complete apparatus Vane shear apparatus with all accessory (motorized) 	1	3
32 (0)	vane snear apparatus with an accessory (motorized)	1	3
	 Set of four springs, one each of 2kgcm, 4kgcm, 6kgcm and 8kgcm. 		
	 A vane of size 12x24 mm long with a vane rod Specimen container to take a specimen of 50mm dia and 		
	75mm high		
	Wooden carrying case for the complete apparatus		
	• Torque head is electrically driven by a small reduction geared motor with a strain rate of 6° per minute.		
33	Permeability apparatus (as per IS: 2720 part -17, IS 11209)	6	24
	Compaction permeameter mould 1000 ml capacity, clamped between top and bottom drainage plates having recess for porous stones. Supplied along with a false		

	and 20mm dia, one meter long, supplied with wooden meter scale and 3 meter rubber tubing.		
34	Trays for mixing soil (all dimension are in mm)	5 each	15 each
	• 600 x 450 x 50		
	• 450 x 300 x 40		
	• 300 x 250 x 40		
35	Porcelain dish or china clay dish of 3 different sizes	8	24
36	Electronic heaters	2	6
37	Plastic tubs (size 50cm dia and 20 cm height)	10	30

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, un 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 favor of "Registrar , Rajiv Gandhi University of Knowledge Technologies" and payable at Hyderabad (India).