

INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD  
(Purchase & Stores Section)

No. 17/11/2015/P&S- 4543

January 29, 2016

Subject:

**NOTICE FOR INVITING BIDS**

The enclosed notice for inviting bids for procurement of Equipment for Establishing new Labs in Department of Civil Engineering (DCE), FET (Male) is to be placed on PPRA and IIUI websites as well as in two National Dailies, one in Urdu & the other in English having wide circulation. The notice may preferably be published on **31-01-2016**.

2. *Copies of the News clipping may also be sent to the undersigned for record upon publication of the Notice.*

  
(Asif Munir Babar)  
Addl. Director (P&S)

- i) Addl. Director (P&PR) Section, IIUI With the request to publish the notice on the PPRA website as well as in print media.
- ii) Webmaster, IIUI With the request to post the enclosed Notice at IIUI website.
- iii) Relevant file



## TENDER NOTICE

Sealed Bids are invited from Active Registered Tax Payer (with FBR) Suppliers/authorized Dealers/manufacturers for supply of Lab Equipments for following Labs of Department of Civil Engineering (DCE), FE, International Islamic University, Islamabad:

Sr .#	Name of Labs/Department/Faculty	Document Fee
1.	Fluid Mechanics Lab	Rs.1000/-(non-refundable) (Detail of items/ Specifications are mentioned in the tender documents)
2.	Geotechnical Engineering Lab	
3.	Engineering Mechanics Lab	
4.	Mechanics of Solid-I Lab	
5.	Advance Engineering Surveying Lab	

2. Tender documents can be downloaded from [www.ppra.org.pk](http://www.ppra.org.pk) and [www.iiu.edu.pk](http://www.iiu.edu.pk).
3. Tender fee i. e. Rs.1000/- (Non-refundable) will be deposited along-with bid/tender in shape of Call Deposit/Bank Draft in favor of IIUI.
4. Tenders valid for a period of 04 months on F.O.R basis along-with earnest money @ 02% (refundable) of total bid in the shape of Call Deposit/Bank Draft in the name of International Islamic University, Islamabad, must reach in the Office of Mr. Javaid Fabbani, Assistant Director (P&S), Room # 213, (2<sup>nd</sup> Floor) Administration Block, Sector H-10 International Islamic University, Islamabad, Phone # 9019255 on or before **Tender Closing Date i. e. 18-02-2016 up-till 10:30 A. M. which will be opened on the same date at 11:00 A. M.** in presence of the bidders/their representatives who may like to attend the opening ceremony.
5. Only registered Suppliers /authorized Dealers/manufacturers who are active taxpayers in FBR Active Taxpayer List (ATL) are eligible for participation.
6. The University reserves the right to accept or reject any/all bid(s)/tender(s) in terms of Section-33 of Public Procurement Rules, 2004.

Asif Munir Babar, Additional Director (P&S), Room # 109, (1<sup>st</sup> Floor) Administration Block, Sector H-10 International Islamic University, Islamabad, Phone # 9019261



INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD  
(Purchase & Stores Section)

No. 17/11/2015/P&S

Dated: \_\_\_\_\_

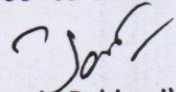
M/s \_\_\_\_\_

**SUBJECT: Tender Documents of Equipment for Establishing New Labs in  
Department of Civil Engineering (DCE), FET (Male)**

Dear M/s,

You are invited to submit tender for supply of subject items in accordance with the specifications enclosed at **Annex-I, II, III, IV & V.**

2. Sealed tenders valid for a period of 04 months along with Earnest Money @ 02% of the total value of tender in shape of Call Deposit/Bank Draft in the name of "International Islamic University, Islamabad" **must reach the undersigned on or before 18-02-2016 at 10:30 A. M.** The **tenders will be opened on the same day at 11:00 A. M.** in the presence of the bidders/their representatives who may like to attend the opening.
3. Tenders received after the due date and time will not be entertained.
4. Amendments/alteration/cutting and overwriting etc. in the tender must be signed in full by the person who has signed the tender. Changes or revisions in rates after the opening of tender will not be allowed.
5. Tenders must be in a sealed cover and on the envelope, it must be written in bold letters **"Tender for Supply of Lab Equipment for New Labs of Department of Civil Engineering (DCE), FET (Male)"** to be opened on **18-02-2016** & should be sent in the name of Assistant Director-II (P&S), Room # 213, 2<sup>nd</sup> Floor Administration Block, Sector H-10 International Islamic University, Islamabad.
6. The General Sales Tax Registration No. issued by the Sales Tax Department must be quoted in the bid, otherwise, tender shall not be considered.
7. Bid (s) without required earnest money or for lesser amount will be rejected as non-responsive.
8. The successful bidder shall have to supply the required items on F.O.R basis strictly within the stipulated period mentioned in the Supply Order otherwise Earnest Money will be forfeited.
9. For successful bidder(s), 05% of total value of Purchase/Supply Order will be held by IIU till the completion of Warranty Period of the items.
10. Please give all the available technical details of the items offered by you, supported with the technical literature, brochure, drawings and pictures, client list details, warranty, authorization certificates, etc.
11. The University reserves the right to reject all bids in terms of Section-33 of Public Procurement Rules, 2004.

  
(Javed Rabbani)  
Assistant Director-II (P&S)  
051-9019255



Specification of Equipment for Fluid Mechanics-I & II Lab, DCE, FET

Serial No	Item	Specification	Quantity	Unit Price Inclusive of GST (Rs.)
01	<b>Hydraulic Bench</b>	Hydraulic Bench equipped with <ul style="list-style-type: none"><li>• centrifugal Pump having power range 0.35-0.40 KW</li><li>• Maximum flow rate with range 75-90 liter / sec</li><li>• Storage tank of capacity range of 150-275 liters</li><li>• High flow Volumetric tank with range 40-50 liters</li><li>• Low flow volumetric tank with range 5-10 liters</li><li>• Open Channel of adequate size can be used for Notches &amp; Weirs</li><li>• Outlet Hose for connectivity to other accessories, Stop Watch or any other accessory for functioning of equipment and Instruction Manual.</li></ul>	01	
02	<b>Hydrostatic Panel Bench</b>	Hydrostatic Panel Bench equipped with accessories <ul style="list-style-type: none"><li>• Density Measurement- Specific Gravity Bottle</li><li>• Relative density measurement by Universal Hydrometer (Specific Gravity 0.7 – 2.0) with 2 Hydrometer Jars having Diameter range 40-60 mm &amp; Height range 400-500 mm</li><li>• Viscosity measurement by Falling Sphere Viscometer tubes of Diameter range 35-45mm including metallic Balls of Size range 1.5 mm to 3.5 mm Diameter</li><li>• Capillary Viscometer</li><li>• Capillary attraction plates: 1 pair.</li><li>• Capillary tubes (4-6)</li></ul>	01	



		<ul style="list-style-type: none"> <li>• Demonstration of Pascal's Law</li> <li>• Measurement of Surface Tension</li> <li>• Manometer &amp; Hare Tube Apparatus</li> <li>• Inclined Manometers</li> <li>• Barometer</li> <li>• Variation of Pressure with Head</li> <li>• Hygrometer</li> <li>• Spirit filled Glass Thermometer with range 0° C - 60° C</li> <li>• Hydraulic Press</li> <li>• Beaker (Glass), Graduated Cylinder (Glass) &amp; Pipette.</li> </ul>		
03	<b>Metacentric height test Apparatus</b>	<p>Pontoon Dimensions should range between</p> <ul style="list-style-type: none"> <li>• Length range 300 mm – 450mm</li> <li>• Width range 150 mm – 250 mm</li> <li>• Overall Height range 400 mm – 500 mm</li> </ul> <p>Max. angle of tilt : +/- 13o Jockey &amp; Vertical Sliding Weights Instruction Manual</p>	01	
04	<b>Hydrostatic pressure tester / Centre of Pressure test Apparatus</b>	<p>Quadrant Dimensions should range between</p> <ul style="list-style-type: none"> <li>• Inner Radius 75 mm – 125 mm</li> <li>• Outer Radius 175 mm – 225 mm</li> <li>• Width 50 mm – 100 mm</li> </ul> <p>Tank Capacity 5-7 liters Weights of Different Sizes Instruction Manual</p>	01	
05	<b>Bernoulli Theorem Apparatus</b>	<p>8 no of Manometer tubes with proper Upstream &amp; Throat diameter, Proper upstream &amp; Downstream Taper angles, Connectivity Hose pipe for Hydraulic Bench. Instruction Manual</p>	01	
06	<b>Flow through Orifice &amp; Jet Flow</b>	<p>8 no of Jet Trajectory Probes With head range 350 mm - 450 mm. Orifices of Two different Interchangeable sizes with set of Mouth Pieces, Connectivity Hose pipe for Hydraulic Bench. Instruction Manual</p>	01	



07	<b>Osborne Reynold's Apparatus</b>	Cylinder Diameter range 125 mm -175 mm, Test Pipe (either Glass or Acrylic) diameter range 8 -20 mm diameter, Test Pipe Length range 650 mm – 750 mm, Connectivity Hose pipe for Hydraulic Bench, Dye Reservoir of capacity range 0.40 -0.50 liters. Instruction Manual	01	
08	<b>Dead Weight Pressure Tester</b>	Bourdon tube pressure gauge from range 0 – 300 KPa, Piston Area Range 225mm <sup>2</sup> to 275 mm <sup>2</sup> , Calibration Weights. Instruction Manual	01	
09	<b>Cavitations Phenomenon Demonstration</b>	Adequate Upstream pressure gauge & pipe Diameter, Adequate Throat vacuum gauge & Diameter, Adequate Downstream pressure gauge & Pipe Diameter. Apparatus Should have potential to be used with Hydraulic Bench and Water main supply both. Instruction Manual	01	
10	<b>Impact of Jet Apparatus</b>	Nozzle Diameter range 5 mm – 10 mm, Target Plate Diameter 35 mm – 40 mm. 4 Different type of Target plates including <ul style="list-style-type: none"> <li>• Flat Target plate</li> <li>• 180° Hemisphere plate</li> <li>• 120° Cone Target Plate</li> <li>• 30° Target Plate.</li> </ul> Connectivity Hose pipe for Hydraulic Bench, Weights of Different Sizes. Instruction Manual	01	
11	<b>Energy loss in pipe flow due to Bends &amp; Fittings Apparatus</b>	Apparatus should be equipped with <ul style="list-style-type: none"> <li>• Manometer tubes</li> <li>• Sudden Expansion</li> <li>• Sudden Contraction</li> <li>• Valves</li> <li>• Gradual Enlargement &amp; Gradual Contraction</li> <li>• Bends</li> <li>• Elbows at Different angles</li> </ul> Connectivity Hose pipe for Hydraulic Bench. Instruction Manual	01	



12	<b>Energy losses in pipe flow due to Friction</b>	Adequate test pipe Diameter & Adequate test pipe length to investigate the variation in friction head along circular pipe. Connectivity Hose pipe for Hydraulic Bench. Instruction Manual	01	
13	<b>Notches</b>	4 types of Notches including <ul style="list-style-type: none"> <li>• Rectangular Notch</li> <li>• 60° V Notch</li> <li>• 90° V Notch</li> <li>• Cipolletti or (Trapezoidal) Notch</li> </ul> Notches should be attached to Open Channel of Hydraulic Bench Should be provided with Hook Gauge & Scale	01 Set	
14	<b>Current Velocity Meter</b>	Velocity Probe and Analogue meter complete with Mounting attachment to Channel	01	
15	<b>Vernier Caliper</b>	Digital Caliper with 0.01 mm Least Count	03	
16	<b>Water Flow Measurement: By Venturimeter</b>	Venturimeter with adequate Convergent- Divergent angles Accessories like Constant Head Inlet Tank, Variable Head Outlet Tank and Manometer Board	01	



Specifications of Equipment for Engineering Mechanics Lab, DCE, FET

	Item	Specifications	Qty.	Unit Price inclusive of GST (Rs.)	Total Amount
1	Parallelogram forces apparatus	Parallelogram forces apparatus with drawing board, fixing brackets, pulleys, cords & weights	1		
2	Law of moments Apparatus with all accessories	Lever & Fulcrum with wts. Bench mounted unit for experiments on simple moments. Graduated test beam, four load hangers and stirrups. Supplied with an instruction manual.	1		
3	Maxwell reciprocal theorem Apparatus	Maxwell reciprocal theorem verification Apparatus with all accessories	1		
4	Centre of gravity Apparatus with all accessories	Centre of Gravity App. Bench mounted unit with baseboard and smooth pin, set of six laminae and plumb bob. Supplied with an instruction manual.	1		
5	Friction Inclined plane Apparatus	Friction Plane with wts 4 slider. Friction on a Horizontal and Inclined Plane. Bench mounted unit to investigate coefficient of friction. Aluminum frame with inclinable top with double sided ground steel gauge plate facing. Plane angle indicated by scale and pointer. Nylon, brass, aluminum, brake lining sliders, ball, bearing trolley, cord, load hanger and ball bearing pulley. Supply should be with an instruction manual	1		
6	Support Condition of Columns Apparatus.	Support Condition of Columns. Demonstration of all bucking cases of Euler Buckling	1		
7	Accessories including Digital vernier caliper, Digital screw gauge, Digital stop watch	Digital vernier calipers 0-150mm, Digital 0-25mm micrometer, Digital stop watch - 3off each	3		



### Annex-III

#### Specification of Equipment for Advance Engineering Surveying Lab, DCE, FE

S.NO	Items	Specification	Qty.	Unit Price Inclusive of GST (Rs.)	Total Cost
1	Total Station	Total Station with complete Set (Aluminum Tripod, Battery, Battery charger, Lens cap , Tool kit with case , Plastic rain cover ,Silicon cloth, Carrying Case) with Prism Rods	2		
2	Line Ranger	Line Ranger Complete Set	5		



Specification of Equipment for Mechanics of Solid Lab, DCE, FET

S.NO	ITEMS	Qty.	Unit Price Inclusive of GST (Rs.)
1	Hooke's law apparatus with stand, springs, weights and digital vernier caliper: Extension & Compression of Springs App with wts, Wall mounted unit with 0,1mm vernier, adjustable, scale, set of five each tension & compression, springs, set of conical springs with adaptor, load, hanger. Supplied with an instruction manual. M/S. Norwood Instruments Ltd., UK <i>or Equivalent</i>	01	
2	Moment disc Apparatus with Spring balance & Weights: Moments Disc App with wts. Bench mounted unit to investigate the law of moments. Ball bearing bushed disc on stand with levelling screw feet, set of mounting pegs, load cords and three hangers, adjustable scale. Supplied with an instruction manual. M/S. Norwood Instruments Ltd., UK <i>or Equivalent</i>	01	
3	Funicular Polygon of Forces with wts: Funicular Polygon of Forces with wts. Polygon of Forces (Funicular Pattern). Bench mounted steel table on a stand with levelling screws protractor attached to table top for angular measurements, central peg, five pulley-clamp units with ball bearing pulleys, load cords, hooks, load hangers and load cord ring, rectangular link, bell crank, circular plate, warren girder. Supplied with an instruction manual. M/S. Norwood Instruments Ltd., UK <i>or Equivalent</i>	01	
4	Beam reaction Apparatus with Meter scale, Load Hangers, Spring balance & Weights: Beam Reaction App with wts. Bench mounted unit to investigate beam support reactions. Rigid gantry frame, scales to BS4372, graduated test beam, three load hangers and 100 x 1N spring balances. Supplied with an instruction manual. M/S. Norwood Instruments Ltd., UK <i>or Equivalent</i>	01	



5	<p>Deflection beam Apparatus including simply supported, Cantilever, Overhanging &amp; Continuous beams with all accessories:</p> <p>Deflection of Beams App with wts. Bench mounted unit with 1m long mm division scale, set of test beams, two knife edge supports, built-in support, three load hangers and stirrups, position indicator, slope indicator with clamp, two dial gauges reading to 0,01mm with supports. Supplied with an instruction manual. M/S. Norwood Instruments Ltd., UK <i>or Equivalent</i></p>	01	
6	Moment of inertia of Fly wheel:	01	
7	<p>Shearing &amp; Bending moment Apparatus with all accessories:</p> <p>Bending Moment &amp; Shearing Force App with wts. Shearing Force Apparatus. Bench mounted unit comprising rigid beam unit with accurately set spring balance - 10 x 0,05kg, set of three adjustable load hangers and stirrups, stand with screw feet and adjustable support point. Supplied with an instruction manual. M/S. Norwood Instruments Ltd., UK <i>or Equivalent</i></p>	01	
8	<p>Axial forces in Truss Member with all accessories:</p> <p>Bench mounted unit to investigate force distribution within a truss. Pin jointed frame with leaf spring balances. Adjustable tie and right hand end support, Supplied with a digital caliper and an instruction manual. M/S. Norwood Instruments Ltd., UK <i>or Equivalent</i></p>	01	
9	<p>Forces in various parts of wall crane:</p> <p>Wall Jib Crane with wts, Wall mounted with spring balances in jib and tie, adjustable length jib and tie to maintain apparatus geometry during loading, load applied via a cord over a pulley or direct to the jib and tie apex, load cord and hanger. Supplied with an instruction manual. M/S. Norwood Instruments Ltd., UK <i>or Equivalent</i></p>	01	



**Specification of Equipment for Geotechnical Engineering Lab, DCE, FET**

S. NO	Items	Quantity		Unit Price with GST (Rs.)		Total Price with GST (Rs.)	
		Local	Imported	Local	Imported	Local	Imported
1	Casagrande Apparatus (Porcelain dish, spatula/Knife, Grooving tools. Liquid limit apparatus, Glass surface for rolling, Containers for moisture content determination (Italy)	6	2				
2	Speedy Moisture Testers (Italy)	3	1				
3	Electric Drying Oven (780 Liters with internal approximate dimensions ) 605 x 755 x 1000 mm3 (Italy)	1	1				
4	Weighing Balance 60 kg with 0.1 Least Count, LC 10 GRAM	3	2				



5	Sieve Sets 12 inch diameter:  8 inch Dia (3/4", 1/2", 3/8", #4, #8, #10, #16, #30, #40, #50, #80, #100, #200, Wet washing sieve 4" deep with 75 micron, Lid and receiver), 12 inch Dia (3", 2.5", 2", 1.5", 1", 3/4", 1/2", 3/8", #4, Pan cover)	4	1					
6	Sand cone apparatus (tray with hole, hand chisels for digging hole, container for retaining excavated soil, container for moisture content) Accessories Local	6	2					
7	Constant Head Permeameter (permeameter cylinder, bottom porous disk, manometer outlets, top porous disk, large funnels, vibrating tamper, sliding tamper, vacuum pump, manometer tubes, scoop, thermometers, stop watch, graduated cylinder, mixing pan etc.) Italy	0	1					



8	Variable Head permeable apparatus (cutting edge compaction permeameter, measuring panel, perforated base plate, upper plate) Italy	0	1				
9	Sand equivalent test (weight approximate 12 kg) Italy	2	1				
10	Hydrometer (Hydrometer jar 1000 ml, rubber bung, glass thermometer, water bath, stirrer, beaker) Italy	2	1				
11	Mechanical Sieve Shaker: Italy	1	1				
12	Shrinkage limit Set complete: Italy	1	1				
13	Trays Galvanized set small: 12"x12"x2	3	0				
14	Trays Galvanized set medium: 18"x12"x2", 18"x18"x3, 18"x24"x3",	3	0				
15	Trays Galvanized set large 48"x36"x3"	3	0				
16	Standard & Modified Proctor Test Apparatus (Mold with detachable collar and detachable base plate, rammer with a mass of 2.5 & 4.5kg, straight edge for trimming the soil) LOCAL	3	2				



17	Core cutter mold (drive cylinder , detachable drive head, drive hammer, hand chisels for digging test hole, steel straight edge, container for moisture content), container for retaining excavated soil. WITHOUT ACCESSORIES	4	1						
18	Marital Stability Test Appratus with 12 molds, Hammer, Temp Controlling Water Tank, Theoretical Maximum Specific Gravity Appratus, Vacume Pump, Sample Extruder (Relating to Higway Engineering)		1						
19	Specific Gravity of fine soil by Pycnometer Test with all accessories		3						

	Total Value of the Bid	
	Earnest Money @ 2% of total value of the bid	

**Note:**

Please give all the available technical details of the items offered by you, supported with the technical literature, brochure, drawings and pictures, client list details, warranty, authorization certificates, etc.

For any further technical query, please contact with Dr. Saeed Badshah, Chairman, Department of Civil Engineering (Male) at his office telephone # 90192497.