

**BAHAUDDIN ZAKARIYA UNIVERSITY,**  
**MULTAN.**

**TENDER DOCUMENT**

**For**

**LAB. EQUIPMENT FOR THE UP-GRADATION OF FLUID MECHANICS**  
**LAB. OF DEPARTMENT OF CIVIL ENGINEERING**

**Last Date of Submission: 15.02.2017**

# **BAHAUDDIN ZAKARIYA UNIVERSITY, MULTAN**

[www.bzu.edu.Pk](http://www.bzu.edu.Pk)

Tel.# 9210071-5 Ext.1318

## **TENDER FORM OF THE BAHAUDDIN ZAKARIYA UNIVERSITY, MULTAN FOR THE YEAR 2016-17.**

**Lab. Equipment for the Up-gradation of Fluid Mechanics Lab.  
Department of Civil Engineering  
ON LC (C&F) Basis**

**Advertised Tender No. T/2016-17/83**

**Last Date of Receipt of Tender 15-02-2017 12:30PM**

**Date of Tender Opening 15-02-2017 01:30PM**

**Tender Price:- Rs.1000/- (Non-refundable)**

**Earnest Money @5% on Estimated Amount (Refundable)**

**VENUE TENDER: Treasurer Office B.Z. University, MULTAN.**

1. All tender must be submitted on their tender document with sealed envelope and addressed to the Treasurer, Bahauddin Zakariya University, Multan.
2. Any offer not received as per terms & conditions of the tender will be rejected.
3. Photocopy of CDR should be attached with Technical Bid.
4. No offer shall be accepted if:
  - (i) It is received after the time and date fixed for its receipt.
  - (ii) Received without earnest money from the firms.
  - (iii) The tender document is unsigned.
  - (iv) The tender is ambiguous.
  - (v) The offer is conditional.
  - (vi) The offer is from a firm, black listed /suspended or removed from the approved list.
  - (vii) The offer is received by telegram or Fax.
  - (viii) The offer is received with shorter validity than required in tender enquiry.
  - (ix) The offer is not conforming to specifications indicated in the tender enquiry.

# Detail

## LC (C&F) Basis

### Fluid Mechanics Laboratory

Sr. No.	Descriptions	Qty	Earnest Money @5% on Estimated Cost
01	<p><b>Current Meter Propeller Type</b> <b>Specifications:</b> Current Meter is a world recognized designed instrument commonly known as the Ott-type current meter. This current meter is suspended in the water using a cable with sounding weight or wading rod and will accurately measure stream-flow velocities from 0.1 to 33 feet per second (0.03 to 10 meters per second) with multiple propellers. The Current Meter consists of a streamlined body which houses the sensing mechanism, an encapsulated reed switch, and the horizontal axis propeller shaft which has a permanent magnet mounted such that each rotation of the shaft produces a pulse from the reed switch. The pulses are conducted through a lead to the surface where they are counted by a Current Meter Counter. The velocity of the stream is proportional to the rotations of the propeller. Provided with a calibration certificate and rating table. Comes with wading rod and digital counter. USA/U.K/Thailand/Singapore/Italy/Germany</p>	1	<b>\$310 or Equal to Pak. Rupees</b>
02	<p><b>Pitot Tube Apparatus</b> <b>Specifications:</b> This apparatus is for a study of velocity distribution across pipe section for a water flow in pipe, and for measurement of flow velocity. It is to be used with Hydraulics Bench. The apparatus consists of a total head tube and a static head tube for the Pitot, clear acrylic pipe, inlet and outlet, and an inclined manometer. The total head tube can be moved up or down vertically with a scale for indication of the tube position. Differential pressure is measured by a multiple inclination manometer. Acrylic tube: Inside diameter: 34 mm. Length: 550 mm. Total head tube diameter: 3 mm. Manometer: Inclination: 1:10, 1:5, 1:2 and 1:1. Scale: 0-450 x 1 mm graduation. USA/U.K/Thailand/Singapore/Italy/Germany</p>	1	<b>\$44 or Equal to Pak. Rupees</b>
03	<p><b>Osborne Reynolds Apparatus</b> <b>Specifications:</b> This equipment provides laminar, transitional, and turbulent flow as predicted by Osborne Reynolds. It is to be used with Hydraulics Bench. It consists of a removable clear acrylic cylinder with an adjustable overflow pipe. Water is admitted at the bottom of the tank through a diffuser and stilling materials,</p>	1	<b>\$104 or Equal to Pak. Rupees</b>

	<p>and is discharged via a bell mouth transparent vertical test pipe with a flow control valve at the end. Flow rate is measured by a measuring cup. A dye injection system is installed on top of the acrylic cylinder tank and flow patterns in the pipe can be observed against a white background plate. Cylinder diameter: 150 mm. Test pipe inside diameter: 9-11 mm acrylic or 13 mm glass. Length of test pipe: 720 mm. Dye reservoir: 1 each. Measuring cup: 2 liters.</p> <p>USA/U.K/Thailand/Singapore/Italy/Germany</p>		
04	<p><b>Flow Meters</b>  <b>Specifications:</b>  This equipment determines the coefficients of discharge for different flow measuring devices. It is to be used with Hydraulics Bench. The equipment consists of a Venturi tube, an orifice plate, and a Pitot tube, made from a clear acrylic, connected in series. Pressure drop across each device is connected to a water manometer bank with a vent valve and a hand air pump. Variable area flow meter: Up to 35 lpm. Venturi diameters : 29 mm inlet with 17 mm throat. Orifice plate diameter: 20 mm on 29 mm diameter tube. Pitot tube: On 19 mm diameter tube. Water manometer: 8 tubes x 450 mm x 1 mm graduation.</p> <p>USA/U.K/Thailand/Singapore/Italy/Germany</p>	1	<p><b>\$132  or  Equal to  Pak. Rupees</b></p>
05	<p><b>Cavitation Panel</b>  <b>Specifications:</b>  This apparatus is for demonstrating the liquid vaporization under low pressure due to high flow velocity such as when water flows through a restriction in a pipe or a water passage. The test section is a transparent Venturi for vapor observation. Pressure and vacuum gauges are connected to pressure tapings at the upstream end and throat respectively of the test section. The test section and the gauges are mounted on a panel. The panel is intended for use with a Hydraulics bench already available in the laboratory or an outside water supply with sufficient pressure and flow rate. Venturi diameter: 20.5 mm. Gauges: Pressure 0 to 1kg/cm<sup>2</sup> at inlet. Vacuum 0 to -1 kg/cm<sup>2</sup> at throat.</p> <p>USA/U.K/Thailand/Singapore/Italy/Germany</p>	1	<p><b>\$110  or  Equal to  Pak. Rupees</b></p>
06	<p><b>Free and Forced Vortex Apparatus</b>  <b>Specifications:</b>  This equipment is designed to produce and measure free and forced vortices. It is to be used with already available in the laboratory Hydraulics Bench. The equipment consists of a clear acrylic cylinder on a plinth. The free vortex is generated by water discharging through an interchangeable orifice at the base of the cylinder and the resulting profile is measured by a combined caliper and depth scale. The forced vortex is generated by a paddle at the base of the cylinder which is rotated by jets of water, and the profile is measured by a series</p>	1	<p><b>\$260  or  Equal to  Pak. Rupees</b></p>

	<p>of depth gauges. The velocity at any point in the free and forced vortices may be measured using a pitot tube. Cylinder diameter: 250 mm. Height to over flow point : 180 mm. Orifice diameters: 8, 12, 16 and 24 mm. Distance from center of depth probes: 0, 30, 50, 70, 90 and 110 mm. Pitot tube measuring points: 15, 25 and 30 mm radius. USA/U.K/Thailand/Singapore/Italy/Germany</p>		
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Note:

1. For all the Brands mentioned in this tender (if any), the term “or equivalent” is hereby added and shall be considered as per PPRA rules.
2. The firm should prepare Technical bid as per requirement of Tender Document and submit with clear heading “Technical Bid/Offer”.
3. Further, Company profile may be submitted (with supporting documents) in the sequence as required for Technical evaluation of firm/tender.
4. Technical bid/offer complete in all respect being submitted be paginated by the firm.

TENDER DOCUMENT

# Certificate

1. We / I hereby confirm to have read carefully the terms & conditions of your Tender Enquiry dated for opening on ----- for the purchase of ----- . We agree to abide by all these terms & conditions/instructions.
2. Certified that the prices quoted against advertises tender dated-----are not more than the prices charged from any other purchasing Agencies in the country in the financial year ----- and in case of any discrepancy, we/I hereby undertake to refund the price charged in excess if and when asked to do so.

1. NAME OF FIRM-----
2. ADDRESS-----
3. INCOME TAX NO-----
4. SALE S TAX REGN NO-----
5. NAME OF TENDERER-----
6. NAME OF BANK AND A/C NO.-----
7. C.N.I.C NO.-----
8. SIGNATURE OF TENDERER -----
9. DATE AND STAMP -----

**CRITERIA FOR TECHNICAL EVALUATION OF THE TENDER**

The quotation /bid who secure 60% marks will qualify for the competition.

<b>Sr. No.</b>	<b>Parameter</b>	<b>Weight age</b>
1	Technical Specification of Product	45%
2.	Age of Company/Firm	10%
4.	Financial strength of the vender	15%
5.	H.R. Strength	05%
6.	On site back up support	10%
7.	Relevant experience	10%
8.	Certified Engineer	05%
<b><u>Total</u></b>		<b>100%</b>

TENDER DOCUMENT

# **TERMS & CONDITIONS**

- i. Sealed bids are invited for the purchase of Lab. Equipment for the Up-gradation of Fluid Mechanics Lab. of Department of Civil Engineering, B.Z. University Multan.
- ii. The interested bidders shall submit their bids under Single stage- two envelope procedures as defined by Govt. of Punjab Procurement Regulatory Authority.
- iii. The bidders will submit their bid in the two envelopes shall contain technical and financial proposals separately and clearly marked as "TECHNICAL PROPOSAL" & "FINANCIAL PROPOSAL" in bold letters. The financial proposal should accompany earnest money amounting to 5% of the estimated price, in the form of call deposit in favor of the Treasurer, B.Z University Multan.
- iv. In the first stage, only the envelopes containing "TECHNICAL PROPOSAL" shall be opened in the presence of bidders (or their authorized representatives) who may like to attend the tender opening meeting.
- v. The "TECHNICAL PROPOSAL" shall be evaluated and no amendments in the "TECHNICAL PROPOSAL" permitted.
- vi. **The Technical Committee may accept or reject supplier bid after inspection of their services/equipment and demonstration of the quoted equipment.**
- vii. Financial bid will be opened after the completion of all codal formulation of evaluation of the Technical Bid on the date, and time which will be communicated to the bidders.
- viii. Financial bid will be opened for those bidders who submitted their Technical bids OR fulfill the Technical requirement in the presence of the bidders in case any bidder after written call will not be present at the time of opening due to any reason then any claim by him will not be accepted in future. Otherwise their Financial Bids shall be returned un-opened to the respective bidder.
- ix. **Prices of items should be quoted on LC (C&F) basis and foreign currency to be quoted for C&F price as USD.**
- x. Bahauddin Zakariya University, Multan reserves the right to drop any items given in the tender without assigning any reason and also reserves the right to reject any or all bids.
- xi. Sole distributor certificate (if any) should be attached with the bids.
- xii. **Exclusive distributorship certificate duly signed and stamped from Principal and attested by Chamber of Commerce (as the case may be) and/or Embassy of the manufacturer Country may also be provided.**
- xiii. The quotations offering substandard product can be screened out to ensure procurement of Lab. Equipment.
- xiv. The rates will be valid up for 120-days from the date of opening the tender.
- xv. A University Inspection committee will inspect the Lab. Equipment and further will recommend for payment.
- xvi. The firm must attach photocopy of income tax and Sales Tax Registration with the quotation, otherwise quotation will not be accepted.
- xvii. Attached proforma/Certificate should invariable be filled and submitted with the quotation.
- xviii. All bids should reach the office of Treasurer, Bahauddin Zakariya University, Multan on or before **15.02.2017** at 11:30 am. The bids will be opened on the same date at 12:30 pm.
- xix. Quotation should be submitted in print output/typed condition preferably.
- xx. **An affidavit on stamp paper Rs.200/- regarding Terms & Conditions of the bid contract maintenance of equipment & replacement of defective parts under warranty shall be done without any cost & that the firm has never been blacklisted on any grounds whatever.**
- xxi. The successful bidders will be responsible for payment of custom clearance/agent charges/insurance premium and transportation from Air Port/Sea to B.Z. University premises in case of LC's.

**TREASURER**  
**UAN. 111229988 Ext.1318**