

Notice No. 110

Date: 14/09/18

NOTICE FOR RE-BIDDING

MIT Muzaffarpur is in the process of procuring the instruments for strengthening the laboratories of Civil Engineering Department under TEQIP-III scheme. The quotations for the following packages are re-invited by the interested bidders. Details of the instruments and their specifications are provided in the link.....

The instruments are to be procured for the following laboratories:

1. Fluid Mechanics, Hydraulics and Hydrology Laboratory
2. Surveying Laboratory
3. Engineering Geology Laboratory

Interested bidders/suppliers are required to give the following information/documents on principal@mitmuzaffarpur.org latest by 20/09/2018 so that invitation for bidding process can be initiated through PMSS.

1. Firm Name
2. Postal Address (with Pin Code)
3. Contact Person Name
4. Mobile No.
5. TIN/GST No.
6. Email Id:
7. PAN No.

NOTE: The bidders who have applied previously and supplied the quotation in the requisite format **MUST RE-APPLY**.

Principal

MIT MUZAFFARPUR

Package Name: MIT/CIVIL/FLUID MECHANICS LABORATORY			
Sr.no	Item Name	Item Description/ Specification	Item Quantity
1	Venturi meter apparatus	Venturimeter and Orificemeter of size 25mm inlet dia fitted on a pipeline and control valve. Differential manometer for the measurement of differential head, supplied with mercury. Fibre glass lined M.S. Measuring tank of size 300×300×400mm height to measure the discharge water from the unit provided with a gauge glass, scale arrangement and drain valve. Fibre glass lined M.S. Sump 800×300×300mm height to store sufficient water for independent circulation through the unit for experimentation and arranged within the floor space of the main unit. Supply pumpset of 0.5HP, 25mm size to pump water	1
2	Forced & Free Vortex Apparatus	FREE AND FORCED VORTEX APPARATUS SPECIFICATIONS. Cylindrical vessel 308mm dia with central bottom outlet, mounted over rotating platform. D. C. motor with controller to rotate the vessel. 2) Measuring tank - 300 x 300 x 300 mm mounted over the sump tank. 3) Centrifugal pump to circulate the water. 4) x-y co-ordinate measurement probe.	1
3	Friction loss along a pipe	Friction Losses along a Pipe SPECIFICATIONS: Circuit of two pipes 20mm & 15 mm Sudden contraction from 40 mm to 20 mm Sudden enlargement from 20mm to 40 mm A bend and an elbow of 20mm each& 15mm each. Supporting stand structure. Measuring tank of 100 litre capacity with drain valve & gauge glass. Sump Tank 200 liter capacity with monoblock pump for recirculating. Differential manometer of one meter length without mercury.	1
4	Impact of Jet	IMPACT OF JET APPARATUS SPECIFICATION:- Square box with one leak proof transparent side (Approx. size: 30cm × 30cm × 40cm) Differential lever mechanism with adjustable load screw mechanism & dead weight to measure the force. M.S. stand for supporting test set-up. Measuring tank (100 liter capacity) with drain valve & indicating arrangement. Two gun metal nozzles with inside section. (a) Straight Taper (b) Curved Taper Five gun metal vanes of shape Semicircular vane with angle of deflection 180° Curved vane with angle of deflection 90° 60° inclined flat vane. 30° inclined flat vane.	1
5	Pitot Tube Apparatus	PITOT TUBE APPARATUS (CLOSED CIRCUIT)(HEAVY DUTY) A 25mm dia pipe with prandle pitot tube arrangement with strong iron stand for mounting the unit. A differential manometer of suitable range. Fibre glass lined M.S.Measuring tank made of mild steel of size 300×300×500mm. Fibre glass lined M.S. sump tank of size 1000×300×300mm height capacity to measure the discharge water from the unit, provided with a gauge glass, scale arrangement and drain valve. Supply pumpset of 0.5HP capacity to pump water from the sump to store the unit through proper piping system with a gate valve to control the rate of flow, and connected with a DP switch. Rigid M.S.Frame work compactly fitted with all the above items as self sufficient package unit, suitable for operation without any foundation.	1
6	Bernoulli's Apparatus	Bernoulli's Theorem Technical Description It consists of a test section made of acrylic with convergent and divergent sections. Pressure tapings available at different locations in convergent and divergent sections. Flow control and by-pass fitted in water line to conduct the experiment with different flow rates. Technical Data Test section: Material acrylic(single piece) Pizometer tube: Material PU(7 Nos.) Flow measurement: using measuring tank with piezometer Stop watch: electronic Tank's material: Stainless Steel	1

7	Stability of floating bodies	<p>Stability of Floating body</p> <p>The experiment should be conducted in a tank filled with water. A transparent body with a rectangular frame cross-section should be used as the floating body. Clamped weights that should also be moved horizontally and vertically make it possible to adjust the centre of gravity and the heel. The position of the clamped weights should be read on scales.</p>	1
8	Reynold's apparatus	<p>REYNOLDS APPARATUS</p> <p>The apparatus consists of a water supply tank to which a glass tube is connected and enters at the center of glass tube cross section.</p> <p>SPECIFICATIONS:</p> <p>Glass/Acrylic tube - (Transparent) – 25mm. O.D. & 750 mm long. Supply tank of M.S.:300x300x500 mm height. Dye tank (approx. 0.5 lit.) with die needle. Sump tank of M.S. :500x500x300 mm height. Measuring flask of 0.5 lit for flow measurement. Flow control valve. FHP Recirculating pump. Digital stop watch.</p>	1
9	Rectangular and 'V' Notch Apparatus	<p>Discharge Over Notches Apparatus</p> <p>The setup consists of a channel having sufficient length and width in which water is supplied from the Hydraulic Bench. R. Set of three notches, i.e. rectangular notch, 60° V notch & 45° V notch is provided along with the set-up. This set-up should be used with the hydraulic bench which will act as water re-circulating unit. Flow rate of water is measured with the help of measuring tank and stopwatch.</p> <p>Technical Details:</p> <p>Notches : Material Brass Rectangular Notch: 45° V Notch, 60° V Notch Pointer Gauge : With Vernier scale. Water Circulation: Through Hydraulic Bench Flow Measurement: Using Measuring Tank with Piezometer, Capacity 25 Ltrs. Stop Watch: Electronic.</p> <p>Instruction Manual: An ENGLISH instruction manual will be provided along with the Apparatus. Tanks and Channels are made up of Stainless Steel.</p>	1
10	Orifice and Mouth Piece Apparatus	<p>Flow Through Orifice And Mouthpiece Apparatus</p> <p>It consists of a tank provided with inlet supply diffuser, overflow. Provision for fitting Orifice or mouthpiece at the outlet of tank. An arrangement is done to vary head and keep it constant at desired level. A pointer gauge arrangement for measuring X-Y co-ordinates of Jet is also fitted.</p> <p>Technical Details:</p> <p>Set of Orifices: Material Acrylic (2 Nos.), Dia. 10mm and 15 mm Set of Mouthpieces:Material Acrylic (3 Nos.), Dia 10 mm (L/D = 1), Dia 10 mm (L/D = 2.5), Dia 10 mm (L/D = 4) Constant Head tank : 35 Ltrs. Pointer Gauge : To measure X-Y co-ordinates of Jet. Tanks will be made of Stainless Steel.</p>	1
11	Automatic Rain Gauge	<p>Automatic Raingauge :Sensor : Tipping bucket / Syphon Sensitivity : 0.25 mm / 0.5 mm Operating Range : 0 to 500 mm/h Mouth : Ring Diameter of 203 mm Catch area collector : 330 cm² Insect Protection : Metal Mesh in the discharge Panel Tipping Detector : Double Reed switch activated by a magnet Memory size : 200000 reading Measuring period : User programmable Sensor construction : Fiber Operating Temperature : -30 Deg C to 70 Deg C</p>	1
12	Non Recording (Symon's Gauge)	<p>Non Recording (Symon's Gauge)</p>	1

13	Evaporimeter Pan (Class 'A' Pan) (IS: 5973:1970)	<p style="text-align: center;">Evaporation PAN (GI)</p> <p style="text-align: center;">This Open PAN Evaporimeter is manufactured as per IS : 5973 : 1970 This PAN manufactured from Painted GI sheets tested for water leak proofness. The stilling well and thermometer clamps are manufactured from Brass . This is supported on Wooden platform and covered with reinforced chickon , Measuring</p>	1
14	Double Ring Infiltrometer Outer Ring (ID-45cm) Inmer Ring (ID-30cm)	<p style="text-align: center;">The Double Ring Soil Infilltrometer</p> <p style="text-align: center;">Is a simple instrument which is used to determine the infiltration rate of water into the soil . The instrument consist of two rings , driving plate , for inner & outer rings. The Outer ring (ID = 45 cm) ; The Inner ring (ID = 30 cm) ;</p>	1

Package Name: MIT/CIVIL/SURVEYING LABORATORY			
Sl.no	Item Name	Item Description/ Specification	Item Quantity
1	Total Station •	Accuracy : 5", Focus type : Auto Focus, Tilt Sensor : Dual-axis, Telescope Magnification: 30X , Minimum Focusing Distance: 1.5m or better , Distance accuracy with Prism: 2mm +2ppm X D. , Distance accuracy with Reflector less: 3mm +2ppm X D. , Measurement range: Single Prism: 5000m or more , Reflector less mode: 800m., Dust and water Protection: IP66 , Operating temperature: -20°C to +50°C, Battery type : hot-swappable Plummet: Built in optical or Laser plummet (Class 2 eye safe), Operating time : Approx. 14 hours or more, Dual slot battery Charger (01) no, Prism-(1) no., Telescopic Rod – 1 no., Tripod - Heavy Duty Wooden – 1 no.	1
2	Direct reading transit theodolite 2" with tripod.	Telescope length 178 mm with focusing screw fitted with eye piece, glass diaphragm with Stadia 1:100, Horizontal Circle 4.5" dia. and Vertical Circle 4" dia. at reading edge. Graduated to read opposite Vernier up to 20 Second, totally enclosed,dust and water proof.	5
3	Dumpy level with tripod	Internal focusing telescope having 3 foot screws leveling base with locking arrangement, diaphragm etched on glass with Stadia 1:100, screw focusing eye piece, highly sensitive spirit bubbles, aperture not less than 3.76 cm. Magnification 38 X, fitted with magnetic compass having prismatic reader. with Aluminium Folding Stand	5
4	Prismatic Compass with tripod	Made of brass with aluminium ring, engine divided to read 30 minutes with fine agate centre, well magnetized needle, automatic lifter and prism reading, hinged coloured shades and reflector packed in fiber case with tripod stand having ball and socket head made of aluminium.	5
5	Cross Staff	CROSS STAFF OPEN TYPE BRASS 6" WITH STEEL POLE	6
6	Optical Square	As per ISI specifications	6
7	Ranging Rod (Steel) 4m	Made of steel conduit pipe.Alternatively painted black and white or red and white. Fitted with strong shoe at the bottom. Size 4 Mtr in two parts. In canvas cover.	30
8	Levelling, Staff (4m, 5m and 6m)	Made of aluminium channel. Screen printed figures in four sections. Packed in canvas cover. (4m, 5m and 6m) any one of this	10
9	Engineers Measuring Chain 30m	ENGINEERS CHAIN Size 100'. (100 Links) As per ISI specifications	6
10	Metallic Tape 30 m	As per ISI specifications	12
11	Plane table with all accessories	Made of pine wood with hard wooden battens at back having thorough slots for screws and washers nut for clamping. With all the accessories such as Brass Plum-bob, Brass Plumbing-fork, Brass Spirit Level, Brass Alidade, Al. Trough Compass,and canvas cover.	6
12	Arrows (Metal)	Arrows made of 8 SWG wire	100
13	Mallet and pegs (wooden)	Wooden or Steel Pegs	25
14	Spirit level	SPIRIT LEVEL BRASS MADE SIZE 6": „FRONT- LINE" MAKE	10
15	Invar Tape 30m	As per ISI specifications	5

Package Name: MIT/CIVIL/ENGINEERING GEOLOGY LAB			
Sl.no	Item Name	Item Description/ Specification	Item Quantity
1	Mineral & Rock Slides	Mineral & Rock Slides	1
2	MAPS	MAPS	1