



SHIVAJI UNIVERSITY, KOLHAPUR

Department of Technology

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A
Accredited By NAAC

INVITATION FOR QUOTATION

TEQIP-III/2019/dtsk/Shopping/14

02-Jan-2019

To,

Sub: Invitation for Quotations for supply of Goods

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

Sr. No	Brief Description	Quantity	Delivery Period(In days)	Place of Delivery	Installation Requirement (if any)
1	BERNOULLIS THEOREM APPARATUS	1	30	Department of Technology Shivaji University Kolhapur	yes
2	CENTRIFUGAL PUMP TEST SETUP Single Stage	1	30	Department of Technology Shivaji University Kolhapur	yes
3	LOSSES IN PIPES FITTINGS SETUP	1	30	Department of Technology Shivaji University Kolhapur	yes
4	LOSSES IN PIPES SET UP (Pipe Friction)	1	30	Department of Technology Shivaji University Kolhapur	yes

5	MEASURING INSTRUMENTS	1	30	Department of Technology Shivaji University Kolhapur	yes
6	MODELS OF PUMPS	1	30	Department of Technology Shivaji University Kolhapur	yes
7	MODELS OF VALVES	1	30	Department of Technology Shivaji University Kolhapur	
8	MOUTHPIECE & ORIFICEMETER APPARATUS	1	30	Department of Technology Shivaji University Kolhapur	
9	PITOT TUBE APPARATUS	1	30	Department of Technology Shivaji University Kolhapur	yes
10	PRESSURE HEAD MEASUREMENT UNIT	1	30	Department of Technology Shivaji University Kolhapur	yes
11	RECIPRO-CATING PUMP TEST SETUP	1	30	Department of Technology Shivaji University Kolhapur	yes
12	REYNOLD'S APPARATUS	1	30	Department of Technology Shivaji University Kolhapur	yes
13	ROTAMETER CALIBRATION SETUP	1	30	Department of Technology Shivaji University Kolhapur	yes
14	THERMAL CONDUCTIVITY OF INSULATING POWDER APPARATUS	1	30	Department of Technology Shivaji University Kolhapur	yes

15	Venturimeter & Orifice meter Calibration Setup	1	30	DEPARTMENT OF TECHNOLOGY SHIVAJI UNIVERSITY KOLHAPUR	YES
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2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme[TEQIP]-Phase III** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.
3. Quotation,
 - 3.1 The contract shall be for the full quantity as described above.
 - 3.2 Corrections, if any, shall be made by crossing out, initialing, dating and re writing.
 - 3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit price.
 - 3.4 Applicable taxes shall be quoted separately for all items.
 - 3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
 - 3.6 The Prices should be quoted in Indian Rupees only.
4. Each bidder shall submit only one quotation.
5. Quotation shall remain valid for a period not less than **45** days after the last date of quotation submission.
6. Evaluation of Quotations,

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

 - 6.1 are properly signed ; and
 - 6.2 confirm to the terms and conditions, and specifications.
7. The Quotations would be evaluated for all items together.
8. Award of contract:

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

8.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.

8.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.

9. Payment shall be made in Indian Rupees as follows:

Delivery and Installation - 90% of total cost
Satisfactory Acceptance - 10% of total cost

10. All supplied items are under warranty of **12** months from the date of successful acceptance of items.

11. You are requested to provide your offer latest by **18:00** hours on **15-Jan-2019** .

12. Detailed specifications of the items are at Annexure I.

13. Training Clause (if any) **yes**

14. Testing/Installation Clause (if any) **yes**

15. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.

16. Sealed quotation to be submitted/ delivered at the address mentioned below,

17. We look forward to receiving your quotation and thank you for your interest in this project.

(Authorized Signatory)

Name & Designation

Annexure I

Sr. No	Item Name	Specifications
1	BERNOULLIS THEOREM APPARATUS	Bernoullis Beam Unit : It consists of a convergent divergent transparent acrylic channel with Inlet & Outlets eddies removal tanks. The top of the flow channel piezometer tubes are mounted. Sump Unit : M.S. C.R.C. sheet metal sump of size 800 mm x 400 mm x 350 mm with inside fiber lamination and drain plug. Flow Measurement Unit : M.S. C.R.C. sheet metal measuring tank of size 500 mm x 350 mm x 300 mm with 2" drain valve. A pizometer level gauge & scale fitting are fitted on measuring tank for discharge measurement Water Circulating Unit : ½ H.P. centrifugal monoblock pump. Whole unit is fitted on strong and sturdy supporting stand with appreciate colour combination powder coating
2	CENTRIFUGAL PUMP TEST SETUP Single Stage	Centrifugal Pump Unit : Variable speed 1 HP Kirlosker make centrifugal pump of size 25 mm suction x 25 mm delivery to discharge 1.5 LPS flow at 12 mtr head. Sump Unit : M.S. C.R.C. sheet metal sump of size 900 mm x 450 mm x 350 mm with inside fiber lamination and drain plug. Flow Measurement Unit : M.S. C.R.C. sheet metal measuring tank of size 500 mm x 350 mm x 450 mm with swinging hopper. A pizometer level gauge & scale fitting are fitted on measuring tank for discharge measurement. Prime Mover Unit : 1 HP single phase 240 Volt excitation D.C. motor with rigid coupling. Suction & Delivery Piping and fittings are provided with Pressure gauge and vacuum gauge Control Panel Unit : i. Digital Speed Indicator with speed sensor. ii. On-Off Cam Switch. iii. Energy meter for Input power measurement. iv. 0 - 230 V., Single phase Auto transformer . Whole unit is fitted on strong and sturdy supporting stand with appreciate colour combination powder coating
3	LOSSES IN PIPES FITTINGS SETUP	Pipe Fitting Assembly Unit : i. Losses of Energy due to Sudden Enlargement. ii. Losses of Energy due to Sudden Contraction. iii. Losses of Energy in 90° Bend. iv. Losses of Energy in 60° Bend. v. Losses of Energy in Sharp Elbow Sump Unit : M.S. C.R.C. sheet metal sump of size 800 mm x 400 mm x 350 mm with inside fiber

		<p>lamination and drain plug. Flow Measurement Unit : M.S. C.R.C. sheet metal measuring tank of size 500 mm x 350 mm x 300 mm with 2" drain valve. A pizometer level gauge & scale fitting are fitted on measuring tank for discharge measurement Water Circulating Unit : ½ H.P. centrifugal monoblock pump. Head Loss Measuring Unit : Differential manometer with gauge & scale fitting. (With out Mercurry) Whole unit is fitted on strong and sturdy supporting stand with appreciate colour combination powder coating</p>
4	LOSSES IN PIPES SET UP (Pipe Friction)	<p>Pipe Assembly Unit : Three different diameters circular M.S. pipes are mounted horizontally. Each pipe having the pressure tapings with separate cocks connected to a common manifold which is connected to the manometer. Pipe lines of sizes 25 mm, 20 mm. & 15 mm dia. with pressure tapings, at 1.2 m centre distances.. Sump Unit : M.S. C.R.C. sheet metal sump of size 800 mm x 400 mm x 350 mm with inside fiber lamination and drain plug. Flow Measurement Unit : M.S. C.R.C. sheet metal measuring tank of size 500 mm x 350 mm x 300 mm with 2" drain valve. A pizometer level gauge & scale fitting are fitted on measuring tank for discharge measurement Water Circulating Unit : ½ H.P. centrifugal monoblock pump. Head Loss Measuring Unit : Differential manometer with gauge & scale fitting. (With out Mercury) Whole unit is fitted on strong and sturdy supporting stand with appreciate colour combination powder coating</p>
5	MEASURING INSTRUMENTS	<p>Heleshow Apparatus For Flow net Visualization Pizometer : 0 to 500 mm height U-Tube Manometer : 0 to 500 mm height U-Tube Differential Manometer : 0 to 500 mm height U-Tube Differential Manometer : 0 to 1000 mm height Inclined Tube Manometer : 0 to 500 mm height Bourdon Tube Pressure Gauge : 4" Dial, 3/8 Connection, 0-7 Kg/cm² range</p>
6	MODELS OF PUMPS	<p>Centrifugal Pump Actual original Cut Section model Reciprocating Pump Actual original Cut Section model Gear Pump Actual original Cut Section model Jet Pump Actual original Cut Section model Open Well Pump Actual original Cut Section model</p>
7	MODELS OF VALVES	<p>Globe valve, Gate Valve, Angle Valve, Needle Valve, Ball</p>

		Valve, Swing Valve, Foot Valve, Non Return valve, Cylindrical Valve, Hand Shut Off Valve Actual original Cut Section model
8	MOUTHPIECE & ORIFICEMETER APPARATUS	Orifice Unit : An orifice is the opening through which fluid flows. The orifice is fixed to the mounting plate by screws. It is made by non corrosive brass material. Sump Unit : M.S. C.R.C. sheet metal sump of size 800 mm x 400 mm x 350 mm with inside fiber lamination and drain plug. Flow Measurement Unit : M.S. C.R.C. sheet metal measuring tank of size 500 mm x 350 mm x 300 mm with 2" drain valve. A pizometer level gauge & scale fitting are fitted on measuring tank for discharge measurement Water Circulating Unit : ½ H.P. centrifugal monoblock pump. X-Y coordinator with gauge & pointer assembly Whole unit is fitted on strong and sturdy supporting stand with appreciate colour combination powder coating
9	PITOT TUBE APPARATUS	Pitot Tube Unit : 1" size copper chrome plated pitot tube is fitted on line. Sump Unit : M.S. C.R.C. sheet metal sump of size 800 mm x 400 mm x 350 mm with inside fiber lamination and drain plug. Flow Measurement Unit : M.S. C.R.C. sheet metal measuring tank of size 500 mm x 350 mm x 300 mm with drain valve. A pizometer level gauge & scale fitting are fitted on measuring tank for discharge measurement Water Circulating Unit : ½ H.P. centrifugal monoblock pump. Head Loss Measuring Unit : Differential manometer with gauge & scale fitting. (Without Mercury) Whole unit is fitted on strong and sturdy supporting stand with appreciate colour combination powder coating
10	PRESSURE HEAD MEASUREMENT UNIT	Pressure Head measurement Unit : i. Pizometer Tube. ii. Single Limb manometer. iii. Differential manometer. vi. Pressure Gauge. vii. Vacuum Gauge. Sump Unit : M.S. C.R.C. sheet metal sump of size 800 mm x 400 mm x 350 mm with inside fiber lamination and drain plug. Flow Measurement Unit : M.S. C.R.C. sheet metal measuring tank of size 500 mm x 350 mm x 300 mm with 2" drain valve. A pizometer level gauge & scale fitting are fitted on measuring tank for discharge measurement Water Circulating Unit : ½ H.P. centrifugal monoblock pump. Whole unit is fitted on strong and sturdy supporting stand with appreciate colour

		combination powder coating
11	RECIPRO-CATING PUMP TEST SETUP	<p>Reciprocating Pump Unit : Variable speed 1 HP double acting reciprocating piston pump of size 25 mm suction x 20 mm delivery to discharge 1.2 LPS flow at 40 mtr head. Sump Unit : M.S. C.R.C. sheet metal sump of size 900 mm x 450 mm x 350 mm with inside fiber lamination and drain plug. Flow Measurement Unit : M.S. C.R.C. sheet metal measuring tank of size 500 mm x 350 mm x 450 mm with swinging hopper. A pizometer level gauge & scale fitting are fitted on measuring tank for discharge measurement. Prime Mover Unit : 1 HP single phase 240 Volt excitation D.C. motor with belt drive power transmitting arrangement. Suction & Delivery Piping and fittings are provided with Pressure gauge and vacuum gauge Control Panel Unit : i. Digital Speed Indicator with speed sensor. ii. On-Off Cam Switch. iii. Energy meter for Input power measurement. iv. 0 - 230 V., Single phase Auto transformer. Whole unit is fitted on strong and sturdy supporting stand with appreciate colour combination powder coating</p>
12	REYNOLD'S APPARATUS	<p>Sump Unit : M.S. C.R.C. sheet metal sump of size 1200 mm x 300 mm x 300 mm with inside fiber lamination and drain plug. Reynolds Assemble : Transparent tube assembly with dye supply tank & control valve. Flow Measurement Unit : 1 Lit Measuring Jar with water collecting tank.</p>
13	ROTAMETER CALIBRATION SETUP	<p>Rotameter Unit : A Rotameter consists of a gradually tapered glass tube mounted vertically suitable for 1" pipe line. The fluid flows upward through the tapered tube and suspense freely a float. The float is the indicating element and greater the flow rate the higher the float rises in the tube. Sump Unit : M.S. C.R.C. sheet metal sump of size 800 mm x 400 mm x 350 mm with inside fiber lamination and drain plug. Flow Measurement Unit : M.S. C.R.C. sheet metal measuring tank of size 500 mm x 350 mm x 300 mm with 2" drain valve. A pizometer level gauge & scale fitting are fitted on measuring tank for discharge measurement Water Circulating Unit : ½ H.P. centrifugal monoblock pump. Whole unit is fitted on strong and sturdy supporting stand with</p>

		appreciate colour combination powder coating
14	THERMAL CONDUCTIVITY OF INSULATING POWDER APPARATUS	<p>Insulating Powder Unit : Two thin walls concentric copper spheres. The inner sphere houses the heating coil, the insulating powder, as lagging material is packed between two shells. Heating Unit : 400 watt capacity Nicrom wire heating element sandwiched between Mica sheets. Heater Control Unit : 0 - 230 V., Single phase Auto transformer Control Panel Unit : i. Digital temperature Indicator with or switch with set of thermocouples are mounted on various locations. ii. Cam operated On-Off switch. iii. Voltmeter provided for voltage measurement. iv. Ammeter provided for load measurement. Whole unit is mounted on a heavy CRC structure with appreciate colour combination powder coating.</p>
15	Venturimeter & Orifice meter Calibration Setup	<p>Venturimeter Unit : 1" size aluminium chrome plated venturimeter is fitted on line. It consists of short piece of pipe which is converging upto certain length & then which diverging upto certain length. Orificemeter Unit : 1" size Orificemeter is fitted on line. It consists of a brass Orifice plate is sandwiched between two M.S. flanges. Both sides of orifice plate, Pressure tapings are provided. Sump Unit : M.S. C.R.C. sheet metal sump of size 800 mm x 400 mm x 350 mm with inside fiber lamination and drain plug. Flow Measurement Unit : M.S. C.R.C. sheet metal measuring tank of size 500 mm x 350 mm x 300 mm with 2" drain valve. A pizometer level gauge & scale fitting are fitted on measuring tank for discharge measurement Water Circulating Unit : ½ H.P. centrifugal monoblock pump. Head Loss Measuring Unit : Differential manometer with gauge & scale fitting. (Without Mercurry) Whole unit is fitted on strong and sturdy supporting stand with appreciate colour combination powder coating</p>

FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Date: _____

To:

Sl. No.	Description of goods (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. _____

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. _____ (Amount in figures) (Rupees _____ amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of _____ months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: _____

Address: _____

Contact No: _____