Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu
Dean, Faculty of Agricultural Engineering,
Main Campus, Chatha -180009

Notice Inviting e-Tender

e-NIT No: AUJ/SWE/26-27/F-25/319-324 **Dated:- 06-11-2026**

For and on behalf of the SKUAST-J, tenders are invited by e-tendering mode from the eligible registered/specialized firms dealing with the lab equipment related to Agricultural Engineering and allied field for the equipment listed as below:-

S. No.	Name of item/equipment	Amount (₹ in lakhs)	Qty.	Specifications	Delivery /installation period	EMD Amount	Cost of Tender Document (in Rs.)
1.	Basic Hydrology Study System	6.00	01	Annexure- B	21 days	80000.00	1000
2.	Ground water flow unit	4.50	01				
3.	Sediment transport apparatus	4.50	01				
4.	Venturi meter and Orifice meter Apparatus	0.90	01				
5.	Notches and weir apparatus	0.90	01				
6.	Hydraulic Jump Apparatus	1.42	01				
7.	Digital Lysimeter	6.00	01				
8.	Digital soil Tensiometer	1.00	01				
9.	Demonstration Infiltration apparatus	2.00	01				
10.	Soil Moisture Suction Sand Unit	2.00	01				
11.	Centrifugal pump test rig (variable speed)	1.50	01				
12.	Reciprocating pump test rig	1.40	01				
13.	Gear pump Test Rig	1.35	01				
14.	Time Domain Reflectometer (Digital Soil Moisture, Temperature & Conductivity Meter	3.50	01				
15.	Darcy law apparatus	2.50	01				
16.	Pen Type Ec meter	0.05	01				
	Total	**39.52**					

1. The Bidding documents/NIT can be downloaded from the website http://jktenders.gov.in from **06-11-2026 (9:30 A.M.) to 26-11-2026 (4:00 P.M.)**. Bid document contain qualifying criteria for bidder, specifications, terms & conditions and other details/requirements.

2. a) The bids shall be deposited in electronic format on the website http://jktenders.gov.in **06-11-2026 (9:30 A.M.) to 26-11-2026 (4:00 P.M.).** The Technical bids received will be opened on or after 26-11-2026 online. Financial bids of only those bidders will be opened online who are found technically responsive by the evaluation committee.

   b) The complete bidding process will be online.
   c) The contractors/firms are advised to go through the technical specifications mentioned in the NIT and quote the rates accordingly.

3. List of original copies of tender documents to be scanned and uploaded with the bid:-
   i. Copy of PAN Card
   ii. Copy of GST Number.
   iii. Demand draft towards the cost of tender documents, drawn in favour of Comptroller, SKUAST-J, Main Campus, Chatha, Jammu.

4. Any other information/ clarification can be had from the office of the undersigned on all working days from 9:30 a.m to 5:00 p.m. and email id: rksrivastav74@yahoo.co.in **(Contact No. 9419795823)**

Note:- Only scanned copies of Undertaking of not being blacklisted by any Govt. Agency/ department. Registration Card and other documents will be accepted, failing the bid will be rejected. However, original cost of tender document and EMD in form D.D. must be submitted in the Office of Head, Division of Soil and Water Engineering, Faculty of Agricultural Engineering, SKUAST-J, Chatha, Jammu, PIN: 180003 (J&K) before or on due date.

Terms and Conditions:-

1. The bidder will be responsible to fulfil all formalities of the supply himself/herself.
2. It shall be exclusive right of SKUAST-J to accept or reject any or all offers including lowest offer either wholly or partly without assigning any reason thereof.
3. In case any clause of the terms/condition, as laid down in tender document/ agreement, is affected by force majeure, then the decision of Competent Authority, SKUAST-Jammu will be final.
4. The Hon'ble High Court of J&K at Jammu will have the jurisdiction to settle disputes, if any, in respect of the present Tender.
5. The bidders shall quote prices which shall be inclusive of all taxes including transit insurance, freight, installation and commissioning at destination site. The breakup of basic rates and taxes shall be shown while quoting the rates.
6. The taxes as admissible/applicable during the process and at the time of procurement shall be levied on the supplier/bidder.
7. Income tax on the value of supply under rules shall be deducted at source as per rules.
8. The bidder must have GST Registration Certificate, PAN Number.
9. Annual Turnover Statement: Bidders must provide their annual turnover statement for three years.
10. Non-Conditional Bids: Conditional bids will be liable to be rejected.
11. The bidder should supply OEM certificate or certificate of authorized distributor from the parent manufacturer of the product to sell and to provide service and warranty for the product.
12. Proof of Documents: Firms must provide proof of all required documents for technical evaluation. Failure to do so may result in disqualification.
13. Undertaking: Firms must furnish an undertaking of not being blacklisted by any Govt. Agency/ department
14. The bidder must have an experience of 2-3 years for supply of similar type of lab (Fluid mechanics/Soil water/Hydrology/Irrigation/Meteorological equipment
15. The university has a right to withdraw the bid at any stage.

16. The product should be installed, commissioned and demonstrated at site by the supplier
17. The supplier shall provide a minimum one-year warranty from the date of successful installation and commissioning, along with three years after-sales service and technical support.
18. 100% payment shall be made on installation and commissioning of the equipment. However, the tenderer shall have to furnish a bank guarantee equal to 2% of the total cost of that equipment which is having the quoted rate more than 5.0 lakhs each towards performance guarantee for one year which shall be released on successful completion of the warranty period.

Sd/-

Prof & Head
Soil & Water Engg.
E-Mail: rksrivastava74@yahoo.co.in
Contact No. 9419795823

No: AUJ/SWE/26-27/F-25/319-324
Dated:- 06-11-2026

Copy to:-

1. Director Research, SKUAST-J, Chatha. This is in reference to his office letter No. DR/Capex-budget-1/7250-7254 dated 03-11-2026
2. Dean, FoAE, SKUAST-J, Chatha
3. Comptroller, SKUAST-J, Main Campus, Chatha
4. Estates Officer, SKUAST-Jammu with request to upload on http://jktenders.gov.in
5. I/C Data Centre, SKUAST-J, Main Campus, Chatha for uploading of NIT on the University website
6. SVC for timely publication of NIT in two local dailies as per **Annexure "A"** having wide circulation.

Division of Soil and Water Engineering, e-tender equipment list with specifications (Annexure-B)			
Sr. No	**Name of the equipment**	**Specifications**	**Tentative unit Cost (lakhs.)**
1.	Basic Hydrology Study System	The unit comprises a rectangular open sand tank, made of stainless steel. At inlet side, another tank of stainless steel is fitted with stilling section. A junction of nozzles is fitted on the top of the sand tank. This junction is provided with the variable height adjusting arrangement. Every nozzle has a valve which facilitates to select combination of nozzles and geometry of rain fall. The water is fed to these nozzles with the help of a centrifugal pump connected to a sump tank. A valve arrangement is provided to change the water flow either through nozzles or direct to the tank. A Rota meter with integral adjusting valve is used to control and measure the various flows into the sand tank. Sand is filled in the tank to conduct the experiment. At outlet side of the sand tank, a stainless-steel tank with weir arrangement is also supplied to measure the outlet flow from the sand tank. The sand tank also has pressure tapings which are connected to manometer to observe the water level in the sand tank during the experiments. A screw jack arrangement with hand wheel is fitted to tilt the sand tank and angle of the tilting can be measured with the help of a scale provided. Sand tank also incorporates two wells. Set-up should be self-contained water re-circulating unit, provided with a sump tank, centrifugal pump etc. Water is pumped by means of centrifugal pump and passing through the Nozzles and Sand Tank, it returns back to the sump which make the system re-circulating type. Flow control valve and by-pass valve are fitted in water line to conduct the experiment on different flow rates.	6.00

		Sand Tank : Material Stainless Steel, Size (approx.) : 1500 (Length) x 750 (width) x 200 mm (depth), Tilting Arrangement Screw Jack with hand operated wheel, Nozzles : 8 Nos. with individual valve, Well : 2 Nos, Inlet Flow Measurement : Rotameter, Range 1000 LPH, Outlet Flow Measurement : Weir, 0-150 mm approx., Sump Tank : Material Stainless Steel, capacity 100 Ltrs. (approx)., Pump : ½ HP, Crompton/Standard make. Manometer: 19 Tube Manometer, Range 300 mm of WC. An instruction manual (English) consisting of experimental procedures, block diagram etc. should be provided along with the Apparatus. Complete working setup. The whole set-up is well designed and arranged on a rigid structure painted with industrial PU Paint. Complete working setup with all essential accessories. The whole set-up is well designed and arranged on a rigid structure painted with industrial PU Paint. An instruction manual (English) consisting of experimental procedures, block diagram etc. should be provided along with the apparatus. The supplier shall provide a minimum one-year warranty from the date of successful installation and demonstration, along with after-sales service and technical support.	
2.	Ground water flow unit	A bench-standing sand tank capable of demonstrating, on a small scale, the hydrological principles of groundwater flow. The unit allows simple three dimensional flow situations to be set up quickly and measurements of piezometric levels taken at appropriate positions within the model under study. Ground Water Flow Unit consists of Sand Tank manufactured from Fibre Reinforced Plastic for durable life & corrosion-free operation. The tank is mounted on a free- standing steel frame. The tank is to be filled with a layer of fine sand. The tank has inlet & outlet connections at each end. Each connection has a flow control valve to maintain the desired water level in the tank. The bed has 19 pressure tappings at the base that are connected to a 19 tube piezometer panel at the front to indicate the	4.50

		profile of the water table in the sand. For studies of abstraction, two wells are provided at the base of the tank. Water can be supplied to the unit from Hydraulic Bench or Tap Connection inside the lab. The specification of tank: Length: 990 mm, Width: 490 mm and depth : 235 mm. Overall dimension: Length: 1115 mm, Width: 585 mm, Height: 530 mm Complete working setup with all essential accessories. The whole set-up is well designed and arranged on a rigid structure painted with industrial PU Paint. An instruction manual (English) consisting of experimental procedures, block diagram etc. should be provided along with the apparatus. **The supplier shall provide a minimum one-year warranty from the date of successful installation and demonstration, along with after-sales service and technical support.**	
3.	Sediment transport apparatus	The unit consists of an inclinable channel mounted on a frame, together with a discharge tank and recirculating pump of suitable size. To commence a demonstration, sand is placed evenly along the channel bed, between the inlet tank and the overfall discharge weir. Water is circulated around the system at one of the three selectable flow rates. The channel slope is adjusted by means of a fine screw jack to which an accurate slope indicator is attached. The channel sides are transparent in order that bed profile changes can be observed, and a section of one side is provided with graphical grid markings to permit quantitative assessments to be made of bedform dynamics. Size of channel: Length: 2000 mm , Width: 200 mm and depth: 150 mm. Sump tank: 100 litre, Measuring tank: 40 litre, Pump 1 HP (Crompton/Standard make). Complete working setup with all essential accessories. The whole set-up is well designed and arranged on a rigid structure painted with	4.50

		industrial PU Paint. An instruction manual (English) consisting of experimental procedures, block diagram etc. should be provided along with the apparatus. **The supplier shall provide a minimum one-year warranty from the date of successful installation and demonstration, along with after-sales service and technical support.**	
4.	Venturi meter and Orifice meter Apparatus	The unit consist of two pipe emerging out from common manifold along with a Venturi Meter & orifice meter, tappings are provided to measure pressure differences which are connected to differential manometer. A flow regulating valve is provided at the down speed stream of pipe. A measuring tank is provided to collect the flow. The system should be in closed circuit. Venturimeter: Material Acrylic/Brass compatible to 1" Diameter Pipe. • Orificemeter: Material Acrylic/Brass compatible to 1" Diameter Pipe. • Water Circulation: 0.5. H.P. Pump (Kirloskar Make) Single Phase, 220 Volt. • Rotameter: Glass Tube Rotameter. • Flow Measurement: Using Measuring Tank, 400 x 300 x 300 mm. , Capacity 25 liter • Sump Tank: 600 x 300 x 350 mm. Capacity 50 liter • Manometer : differential (mercury) of length 30 cm. • Each line provided with flow control value for setting of different flow rate. • Pressure tube of different pipe lines are connected to a common manometer through cocks. • Easy to operate and replacement of venturimeter and orifice meter. • Stop Watch: Electronics.	0.90

		• Control Panel Comprises of: Standard make on/off switch Mains Indicator, etc. • Tanks will be made of S.S. The inside surfaces of the tank all MS fittings and components should be provided with corrosion resistant paint. Complete working setup with all essential accessories. The whole set-up is well designed and arranged on a rigid structure painted with industrial PU Paint. An instruction manual (English) consisting of experimental procedures, block diagram etc. should be provided along with the apparatus. The supplier shall provide a minimum one-year warranty from the date of successful installation and demonstration, along with after-sales service and technical support.	
5.	Notches and Weir apparatus	Notches and weirs apparatus of channel size of 250 mm (depth) x 200 (Width) mm x 1000 mm (Length) with suitable tank and sump capacity with head measuring scale. Weir plate of trapezoidal weir, Triangular weir and rectangular weir of suitable size and thickness for flow measurement. Suitable capacity of pump and other arrangement for conducting necessary experimentation. The system should be in closed circuit. Complete working setup with all essential accessories. The whole set-up is well designed and arranged on a rigid structure painted with industrial PU Paint. An instruction manual (English) consisting of experimental procedures, block diagram etc. should be provided along with the apparatus. The supplier shall provide a minimum one-year warranty from the date of successful installation and demonstration, along with after-sales service and technical support.	0.90

6.	Hydraulic Jump Apparatus	Hydraulic Jump Apparatus should be of recirculating type, designed for conducting experiments and practical demonstrations related to hydraulic jump phenomena in open-channel flow. The apparatus should consist of a rectangular open-channel flume of minimum 2.5 m length, approximately 200 mm width and 300 mm depth, fabricated with transparent acrylic side walls and a corrosion-resistant base to facilitate clear visualization of flow characteristics and hydraulic jump formation. The flume should be mounted on a rigid, heavy-duty, corrosion-resistant MS supporting frame with suitable levelling arrangements. The apparatus should be provided with a water recirculation system comprising a centrifugal pump of approximately 0.5–1 HP capacity, a water storage sump of minimum 100 litres capacity, a calibrated measuring tank, connecting pipes, control valves and necessary fittings. An adjustable upstream sluice gate and downstream tailgate should be provided for controlling flow conditions and regulating the formation and position of the hydraulic jump. The equipment shall include a digital flow meter or calibrated discharge-measuring arrangement for discharge measurement and a digital point gauge/hook gauge having a resolution of 0.1 mm or better for measuring upstream and downstream water depths. The apparatus should be suitable for studying hydraulic jump characteristics. The system should be in closed circuit. Complete working setup with all essential accessories. The whole set-up is well designed and arranged on a rigid structure painted with industrial PU Paint. An instruction manual (English) consisting of experimental procedures, block diagram etc. should be provided along with the apparatus. The supplier shall provide a minimum one-year warranty from the date of successful installation and demonstration, along with after-sales service and technical support.	1.42

7.	Digital Lysimeter	The Digital Weighing Lysimeter should be a high-precision, automatic weighing-type system designed for measuring actual evapotranspiration (ET), crop water use, soil-water balance, percolation and water loss under field conditions. The system shall consist of a suitably sized soil monolith container, preferably having a surface area of approximately 1.0 m^2 and a soil depth of 1.0–1.5 m, suitable for growing agricultural and horticultural crops. The lysimeter shall be equipped with high-precision electronic load cells (minimum four numbers) having adequate load-bearing capacity to measure the total weight of soil, water and growing crops. The weighing system shall have a minimum resolution of 0.01 kg or better and suitable accuracy to detect small changes in soil-water storage corresponding to approximately 0.1 mm water depth or better over the lysimeter surface area. The system shall be provided with a digital weighing indicator, microprocessor-based data logger and computer-compatible data acquisition system for continuous and automatic recording of weight variations at user-selectable time intervals. The data logger shall have USB/RS-485 or equivalent communication facility for data transfer and shall be compatible with computer-based software for real-time monitoring, data storage, processing and graphical presentation. The system shall also include a suitable drainage and percolation water collection arrangement with provision for measuring drainage losses, soil moisture monitoring sensors at different depths, and a rain gauge or provision for integrating rainfall data. The lysimeter shall be provided with suitable weatherproof protection for load cells, electronic components and data acquisition instruments to ensure reliable operation under outdoor field conditions. The complete system shall be supplied with all necessary accessories, materials, computer software, calibration certificates, user manuals	6.00

		The supplier will install and demonstrate the working of equipment at the university research farm and also impart training for operation and data interpretation,. The supplier shall also provide a minimum warranty of one year from the date of successful installation and commissioning, along with after-sales service technical support and manual.	
8.	Digital soil Tensiometer	The digital soil tensiometer should be a microprocessor-based electronic instrument designed for accurate measurement of soil water tension (matric potential) under field and laboratory conditions. It should have a minimum measuring range of 0–100 kPa, with an accuracy of ±1% of full scale or better and a resolution of 0.1 kPa or better. The instrument should comprise a high-quality porous ceramic cup, soil insertion probe, pressure transducer and digital display unit. It should provide direct readings in kPa and preferably support continuous monitoring of soil water tension. The system should have an inbuilt data logger with a minimum storage capacity of 4,000 readings, USB/Bluetooth connectivity for data transfer, and rechargeable battery operation. Different probe lengths (15, 30, 45 and 60 cm) should be available for monitoring soil water tension at different root-zone depths. The instrument should be suitable for irrigation scheduling, soil-water-plant relationship studies and evaluation of soil moisture dynamics. The complete unit should be supplied with all necessary accessories, calibration certificate, user manual. The supplier shall provide a minimum one-year warranty from the date of successful demonstration along with after-sales service and technical support.	1.00
9.	Demonstration Infiltration apparatus	The unit comprises three transparent cylinders resting on a permeable support screen into which soil samples are placed. Water poured onto	2.00

		the soil surface can then be observed as it infiltrates the sample. Each cylinder features a graduated scale so that observations may be quantified. The complete apparatus is supported by a metal stand and may be bench mounted. Each cylinder incorporates an air breather and a perforated base plate to facilitate drainage without undue soil loss. The complete unit should be supplied with all necessary accessories, calibration certificate, user manual. The supplier shall provide a minimum one-year warranty from the date of successful demonstration along with after-sales service and technical support.	
10	Soil Moisture Suction Sand Unit	The Soil Moisture Suction Sand Table (300 mm diameter) shall be a laboratory apparatus designed for determining soil moisture retention characteristics and studying the relationship between soil moisture content and soil-water matric suction. The equipment shall consist of a circular sand table of approximately 300 mm diameter with a soil-water tension range of 0–800 mm of water column (approximately 0–7.85 kPa). It shall be equipped with a sliding-type suction control mechanism for precise adjustment of the required tension and a buried porous pipe arrangement for uniform application of suction through the saturated sand medium. The apparatus shall have provision for accommodating a minimum of three soil sample retaining rings, each approximately 80 mm in diameter, to facilitate simultaneous testing of multiple soil samples. It shall also include a leak-proof water chamber, necessary connecting tubes and fittings, a lightweight removable cover to minimize evaporation losses, and a suitable water supply arrangement for maintaining the desired suction level. The complete unit should be supplied with all necessary accessories, calibration certificate, user operating instructional manual. The	2.00

		supplier shall provide a minimum one-year warranty from the date of successful demonstration along with after-sales service and technical support.	
11.	Centrifugal pump test rig (variable speed)	Centrifugal pump are Dynamic Pressure Pumps. This unit is a self-contained recirculation type unit. All the measurements are provided to evaluate the performance of the pump. The system is closed circuit. ⏩ Centrifugal pump of 25x25mm coupled to 1 H.P. A.C. motor (2800 RPM). ⏩ S.S.Sump tank of size 70 Ltr. ⏩ Discharge S.S.measurement tank of size 40 Ltr. ⏩ Pressure Gauge, Range: 0-4 Kg/cm^2 ⏩ Vacuum Gauge, Range: 0-760 mm/hg ⏩ Control Valve to control discharge. **Control Panel:** ⏩ Digital Voltmeter & Current meter ⏩ DPDT Switch **Range of Experiment:** ⏩ To determine the efficiency of pump. ⏩ Discharge V/s Total head ⏩ Discharge V/s Input power ⏩ Discharge V/s Output power ⏩ Discharge V/s Efficiency of pump Discharge V/s Overall efficiency Complete working setup with all essential accessories. The whole set-up is well designed and arranged on a rigid structure painted with industrial PU Paint. An instruction manual (English) consisting of experimental procedures, block diagram etc. should be provided along with the apparatus. The supplier shall provide a minimum one-year warranty from the date of successful installation and demonstration, along with after-sales service and technical support.	1.50

12.	Reciprocating pump test rig	Reciprocating double acting Pumps are positive displacement pumps. This unit is a self-contained recirculation type unit. All the measurements are provided to evaluate the performance of the pump. The system is closed circuit. **Specifications:** » Reciprocating pump of 25x25mm coupled to ½ H.P. A.C. motor (1400 RPM). » S.S.Sump tank of size 70 Ltr. » Discharge S.S.measurement tank of size 40 Ltr. » Pressure Gauge, Range: 0-28 Kg/cm^2 » Vacuum Gauge, Range: 0-760 mm/hg » Control Valve to control discharge. **Control Panel:** » Digital Voltmeter & Current meter » DPDT Switch **Range of Experiment:** » To determine the efficiency of pump. » Discharge V/s Total head » Discharge V/s Input power » Discharge V/s Output power » Discharge V/s Efficiency of pump Discharge V/s Overall efficiency Complete working setup with all essential accessories. The whole set-up is well designed and arranged on a rigid structure painted with industrial PU Paint. An instruction manual (English) consisting of experimental procedures, block diagram etc. should be provided along with the apparatus. The supplier shall provide a minimum one-	1.40

		year warranty from the date of successful installation and demonstration, along with after-sales service and technical support.	
13.	Gear pump Test Rig	Gear Oil Pumps are positive displacement pumps. This unit is a self-contained recirculation type unit. All the measurements are provided to evaluate the performance of the pump. The system is closed circuit. **Specifications:** ⏩ Gear Oil Pump of 25x25mm coupled to ½ H.P. A.C. motor (1400 RPM). ⏩ S.S.Sump tank of size 70 Ltr. ⏩ Discharge S.S.measurement tank of size 30 Ltr. ⏩ Pressure Gauge, Range: 0-7 Kg/cm^2 ⏩ Vacuum Gauge, Range: 0-760 mm/hg ⏩ Control Valve to control discharge. **Control Panel:** Digital Voltmeter & Current meter ⏩ DPDT Switch **Range of Experiment:** ⏩ To determine the efficiency of pump. ⏩ Discharge V/s Total head ⏩ Discharge V/s Input power ⏩ Discharge V/s Output power ⏩ Discharge V/s Efficiency of pump Discharge V/s Overall efficiency Complete working setup with all essential accessories. The whole set-up is well designed and arranged on a rigid structure painted with industrial PU Paint. An instruction manual (English) consisting of experimental procedures, block diagram etc. should be provided along with the apparatus. The supplier shall provide a minimum one-	1.35

		year warranty from the date of successful installation and demonstration, along with after-sales service and technical support.	
14.	Time Domain Reflectometer (Digital Soil Moisture, Temperature & Conductivity Meter	A complete integrated time domain reflectometer that combines ultra-fast waveform generating & digitizing functions with a precision 5 pico-second resolution time base & highly sophisticated waveform digitizing & analyzing firmware that provides true time domain analysis of soil-propagated waveforms. A probe guide is provided to ensure that the waveguide rods are parallel when pushing them into the soil. It has faster rise time, lower power consumption & very fast response time. **Features:** Waterproof Epoxy-filled Housing; 20% to 80% Incident Wave Rise Time: 300 ps; Waveform Digitizing Resolution: 5 ps; 34 mm round cross section • 3-element 10 cm stainless steel waveguide • 1.5 m 3-conductor waterproof cable of 4.8 mm overall dia. • Volumetric Water Content: 0% to 100%; Resolution: 0.1% VWC; Accuracy: +/- 2% • Medium Permittivity: 1 to 100; Resolution: 0.1 RH; Accuracy: +/- 2 relative permittivity units • Medium Bulk Electrical Conductivity: 0 to 6000 uS/cm; Resolution: 1 uS/cm; Accuracy: 0 to 1000 uS/cm: ± 25 uS/cm; 1000 to 2500 uS/cm: +/- 2.5%; 2500 to 6000 uS/cm: +/- 5% • Medium Temperature: -40 to +60 °C; Resolution: 0.1 °C; Accuracy: +/- 0.25 °C • Pore Water EC (Hilhorst Model): 0 to 55000 uS/cm • Dimension & Weight: 20 cm x 3.3 cm; 200 gm appx with cable Able to obtains data from the connected sensor, displays the data on the LCD screen, records and displays waveform readings from	3.50

		compatible sensors. It should have,GPS connectivity, 32-GB thumb drive (with micro- and standard USB connectivity) for data storage and updates ,Rechargeable 18650 lithium ion battery (with included international power adapter kit) The complete unit should be supplied with all necessary accessories, calibration certificate, user operating instructional manual. The supplier shall provide a minimum one-year warranty from the date of successful demonstration along with after-sales service and technical support.	
15.	DARCY LAW APPARATUS	The set-up consists of a Cylindrical test section filled with porous medium. Pressure tapping's are provided in the test section to measure the pressure drop with the help of differential manometer. Present set-up is self-contained water re-circulating unit, provided with a sump tank and a centrifugal pump etc. Flow control valve and by-pass valve are fitted in water line to conduct the experiment on different flow rates. Flow rate of water is measured with the help of measuring tank and stop watch. Technical Details : Test Section : Made of Stainless Steel material having dia 120mm & height 500 mm approximately. Water Circulation : A centrifugal pump of 25mm × 25 mm with ½ HP mono-block pump Crompton make. Flow Measurement : Using Measuring Tank Capacity 40 Ltrs. Sump Tank : Approximate size 100 cm × 69 cm × 30 cm to collect water Capacity 100 ltr to collect water Stop Watch : Digital Racer Make 1/10th Sec. Control Panel : Standard ISI make On/Off Switch, Mains Indicator etc.	2.50

		Control Valve : G.I. Pipe of internal dia 25.4 mm (1") and ISI mark control valve and regulating values to circulate water. Bye Pass : Bye-pass line to regulate discharge. Tanks will be made of Stainless Steel. Instruction Manual : An instruction manual will be provided along with the Apparatus. Complete working setup with all essential accessories. The whole set-up is well designed and arranged on a rigid structure painted with industrial PU Paint. An instruction manual (English) consisting of experimental procedures, block diagram etc. should be provided along with the apparatus. The supplier shall provide a minimum one-year warranty from the date of successful installation and demonstration, along with after-sales service and technical support	
16.	Pen Type Ec meter **Correct Specification:** The accuracy for the EC Low unit is strictly **±1% full scale**.	It should be compact & reliable handheld conductivity meter designed for accurate low-range measurements in both field and laboratory conditions. Its rugged construction, waterproof design & user-friendly features make it suitable for routine water quality testing across multiple applications. **Key Features** • Wide measurement range: 0 to 1990 µS/cm • High accuracy: ±1% full scale (±2% above 10 mS/cm) • Stainless steel pin-type sensors for fast and stable readings • IP67 waterproof housing with floating capability • Manual 1-point calibration (push-button operation) • Auto Temperature Compensation (ATC) • Hold function for freezing readings	0.05

		• Dual-purpose cap (sensor protection + sample/calibration container) • Tool-free battery replacement (click-lock compartment) • Auto-off The complete unit should be supplied with all necessary accessories, calibration certificate, user operating instructional manual. The supplier shall provide a minimum one-year warranty from the date of successful demonstration along with after-sales service and technical support	
		Total	**39.52 lakhs**

Certified that above specifications are generic in nature

Dr. Piyush Pradhan **Associate Professor, FMPE** **Member**	**Dr. J.P.Singh** **Professor & Head, FMPE** **Member**	**Dr. Sushil Sharma** **Professor & Head, BES** **Member**	**Dr. R.K.Srivastava** **Professor & Head, SWE** **Chairman**