



**OFFICE OF THE RESEARCH OFFICER  
GROUND WATER RESEARCH UNIT-1  
IRRIGATION RESEARCH INSTITUTE  
ROORKEE-247 667**



Email address:- rogwl.iri@gmail.com

**QUOTATION NOTICE No. 01/GWRU-1/IRI dated 30.09.2020**

Sealed quotations are invited on behalf of Hon'ble Governor of Uttarakhand from authorized manufacturing company/whole seller/distributor for the supply of 14 machines/equipments for the establishment of Timber Testing Lab. at IRI, Roorkee. The Quotation should be submitted up to **25.10.2020 at 03:00 PM** in the office of undersigned and shall be opened on the same day i.e. **25.10.2020 at 03:30 PM** in the office of undersigned in presence of the Quotationer(s) or their authorized representatives. List/name of the aforesaid 14 different machines/equipments, terms & conditions, specifications etc. can be downloaded from our website [www.iri-roorkee.res.in](http://www.iri-roorkee.res.in) or can be taken from the office of the undersigned after payment of Rs. 590/- (Five hundred ninety only).

*(Signature)*  
**(Research Officer)**

**Ground Water Research Unit-1**

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**(Ground Water Research Unit-1)**

**QUOTATION NOTICE No. 01/GWRU-1/IRI dated 30.09.2020**

**1. List/Name of the 14 Nos. Machines/Equipments for Timber Test**

S.No.	Name of the Machines/Equipments	Quantity
1.	Universal Testing Machine (UTM) capacity 100 KN (with least count 5 N) with all accessories	01
2.	Weighing Balance (Digital) 0-3 kg (with Least Count = 0.001gm)	01
3.	Weighing Balance (Digital) 0-10 kg (with Least Count = 0.1gm)	01
4.	Oven (Digital)	01
5.	Vernier Scale (Digital)	01
6.	Mercury Volumeter	01
7.	Measuring Vessel	01
8.	Apparatus for determining Shrinkage	01
9.	Micrometer Screw Gauge (Digital)	01
10.	Torsion Testing Machine	01
11.	Impact Bending Test Machine with Dial gauge	01
12.	Apparatus JIG	01
13.	Hand drill machine	01
14.	Grinder 600 watt	01

**2. Terms and Conditions:**

1. The above rates shall be F.O.R. Roorkee and shall be inclusive of one year warrantee and one year comprehensive Annual Maintenance Contract (AMC) and all prevailing taxes.
2. The above rates should also include all the costs such as freight charges from ex-store to IRI, Roorkee Lab., unloading, installation, demonstration, calibration, training, AMC for 01 year etc.
3. The above rates should be valid for a minimum period of 120 days from the date of opening of quotation (in the stamp Paper of Rs.100).
4. The Quotationer(s)/Bidder(s) shall have to supply within 30 days after the receipt of supply order.
5. The comprehensive warrantee will be of minimum 01 year after issuing of installation certificate by the department and comprehensive AMC period of 01 year will be started after completion of 01 year warrantee period.

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6. The quantity of instrument/machine mentioned above can be reduced or increased upto any extent depending on the requirement at the time of purchase.
7. The 90% of the cost of the apparatus/machine shall be paid only after satisfactory supply, installation, demonstration, calibration, training to IRI Officers and Staff at IRI, Roorkee, etc. complete. 5% of the cost of the apparatus/machine shall be paid after one year of issuing of installation certificate after satisfactory performance of Quotationer(s)/Bidder(s) in respect of warrantee & AMC and similarly, the balance 5% of the cost of the apparatus/machine shall be paid after two years of issuing of installation certificate after satisfactory performance of Quotationer(s)/Bidder(s) in respect of warrantee & AMC.
8. The Quotationer(s)/Bidder(s) shall have to submit 'Calibration Certificate' from any Govt. recognized laboratories.
9. Bidders have to attach a certificate of successful supply of equipment to any organization by them.
10. Conditional/incomplete quotation shall not be accepted and the undersigned reserves the right to reject anyone or all quotations without assigning any reason.

### 3. Specifications

S.No.	Name of the Machines/Equipments	Quantity	Justification (For Test/Purpose)	Specifications
1.	Universal Testing Machine (UTM) capacity 100 KN (with least count 5 N) with all accessories	01	<ul style="list-style-type: none"> <li>*Static bending</li> <li>*Impact bending</li> <li>*Compressive strength</li> <li>*Compressive strength perpendicular to grain</li> <li>*Surface hardness</li> <li>*Shear strength radial</li> <li>*Shear strength tangential</li> <li>*Tensile Strength parallel/perpendicular to grain</li> <li>*Cleavage Test</li> <li>*Nail &amp; Screw pulling or withdrawal</li> <li>*Torsion</li> <li>*Glue Adhesion</li> <li>*Micrological</li> <li>*Modulus of rupture for Parallel/Perpendicular to grain</li> <li>*Modulus of elasticity Parallel/Perpendicular to grain</li> </ul>	<p><b>For all Types of UTM i.e. Computerized/Digital/Analog</b> Capacity 100KN (with least count 5 N) as per Class 1 of IS 1828 Part1 2015</p> <p><b>Structure and Base:</b> Made of cast steel and hardened surface treatment. High strength, Resistance to shock.</p> <p><b>Accuracy:</b> <math>\pm 1.0\%</math></p> <p><b>Driving Mechanism:</b> Hydraulic System</p> <p><b>Testing Speed (mm/min.):</b> 50 to 250</p> <p><b>Accessories, Attachments and Grips:</b> UTM should comply all accessories to perform all tests as mentioned in Column 4 of this table along with following Attachments and Grips: Plywood grips, static bending, screw grip, Mechanical Wedge, grip, wedge type self tightening grip.</p> <p>1. <b>Analog</b> Capacity 100KN (with least count 5 N) and Dial gauge (with least count 0.02 mm.)</p> <p>2. <b>Digital</b> Capacity 100KN (with minimum display 5 N)</p> <p>3. <b>Computerised</b> <b>Capacity:</b> 100 KN <b>Minimum Resolution:</b> 05 KN <b>Effective column interval:</b> 750</p> <p><b>Control Unit:</b> <b>Setting Range (mm/min):</b> 0.5 to 70 <b>Constant speed load control:</b> 5 to 100% of full scale load <b>Constant speed strain control range:</b> 5 to 100% of full scale strain <b>Emergency shut down button &amp; over load protection (auto stop)</b> <b>Display of testing parameters:</b> Value and real-time curve</p> <p><b>Computer System:</b> *Windows software, CPU: Intel Pentium 4, 2.55GHz, RAM 256MB, Std.1.44MB FDD, Hard Disk Drive 20GB, 52X high Speeds CD-ROM, Monitor Type-Flat screen 17", Printer.</p>

2.	Weighing Balance (Digital)	01	Shrinkage (Radial/ Volumetric/Tangential), Moisture Content, Specific Gravity	0-3 kg (with Least Count = 0.001gm)
3.	Weighing Balance (Digital)	01	-do-	0-10 kg (with Least Count = 0.1gm)
4.	Oven (Digital/Analog)	01	Moisture Content, specific Gravity	(0 <sup>0</sup> C-300 <sup>0</sup> C) Min. Regulate 1 <sup>0</sup> C
5.	Vernier Scale (Digital /Analog)	01	Glu Adhesion Test, Mycological test	With Least Count. = 0.01cm.) as per IS 1708(Part-2)
6.	Mercury Volumeter	01	Specific Gravity	As per IS 1708 (Part-2)
7.	Measuring Vessel	01	Volumetric Shrinkage	With Least Count = 0.01ml) as per IS 1708 (Part-3).
8.	Apparatus for determining Shrinkage.	01	Shrinkage (Volumetric/ Radial/Tangential)	As per IS 1708 (Part-3 & 4)
9.	Micrometer Screw Gauge (Digital /Analog)	01	Shrinkage (Radial/Tangential)	With Least Count = 0.002 cm) as per IS 1708 (Part-4).
10.	Torsion Testing Machine	01	Torsion	As per IS 1708 (Part-18).
11.	Impact Bending Test Machine	01	Impact bending	With Dial gauge (Least Count = 0.02 mm) as per IS 1708 (Part-7).
12.	Apparatus JIG	01	Swelling	As per IS 2380 (Part-17).
13.	Hand Drill Machine	01	Drilling	500 watts, 220-230 volts with all bits for timber & other accessories
14.	Grinder 600watt	01	Grinding	600 watts. 220-230 volt with 100mm grinder, wheel guard and wheel wrench

Note: Quationer(s) may quote any one or all types of UTM and other equipments viz. analog/digital/computerized.

  
 (Research Officer)  
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