

Tender Notification for Procurement of the Equipments and Instruments along with some civil works for the self PI run project of DJFT,IJT, CU sponsored byMoT, GoI (Components I & II) vide Adt. F.No. 10/1/2013-A&MMT, dated 20.08.2015

Sealed tenders/quotations for supplying Equipments and Instruments along with some civil work are invited from the authorized bonafide, resourceful preferably manufacturers/ sole distributors/ authorized agentsexperienced in this type of jobs having license, PF & E.S.I., Credentials of Govt. or Calcutta University. Manufacturers / sole distributors are hereby requested to submit quotation for the listed items below including the current Trade License, GST Registration, PAN etc. and other credentials within 7 days from the date of publication of this Notice in a sealed envelope addressed to the **HoD, Department of Jute and Fibre Technology, Institute of Jute Technology, University of Calcutta, 35, Ballygunge Circular Road, Kolkata - 700019**. The sealed envelope must clearly state the **Project Title** and for submitting quotations for more than one **Project Title** use separate envelope.

PROJECT TITLE ALONG WITH SPECIFICATIONS –

1. Design and Engineering of Jute and Jute Blended Combined Fabrics and its suitable after treatment to develop Geo-membrane and Tarfelt for potential use in civil Engineering Construction

Required Equipments and Instruments	Required Specifications
1. In plane water permeability tester	Following standards ASTM –D6574
2. Cross plane water permeability tester	Following standards ASTM –D4491,
3. Bursting Strength tester	Following standards ASTM – D3786, Capacity 100kg/cm ²

2. Development of jute and Jute Blended Nonwovens for use in Thermal and Acoustic Insulation Applications

Required Equipments and Instruments	Required Specifications
1. Gravimetric Fibre laying machine	Laboratory Scale machine : Working width 600 mm (maximum).Capacity 20kg with air flow fan and level sensing arrangements, synchronize with other machines in the line. Suitable unwinding and take up arrangements.
2. Web laminating and Fusing machine	Laboratory Scale machine : Working width 600mm (maximum).Suitable for laminating polymers, metal foil and metalized polymers.
3. Thermic fluid heater Batch oven laboratory model	Laboratory Scale machine : Maximum working width 600mm x 900mm. Level 4, with hot air circulatory system. Temperature up to 190 degree Celsius.
4. Laboratory High Speed Spraying machine	Laboratory Scale machine : Maximum working width 600mm fogging area 600mm x 800mm. High speed spraying machine suitable for spraying solid powders, high viscosity liquids and gels.

3. Design and Development of Jute-Cotton Blend based Nonwoven Fabrics for potential uses as Surgical Disposable (SD), Medical Packaging (MP) and Medical Disposable Baggage (MDB)

Required Equipments and Instruments	Required Specifications
1. Atmospheric plasma treatment unit	Mains voltage and frequency:100-250VAC-50/60Hz (Universal power input); Output voltage/power - 550VA ; Ramp up time 10 ms ; Shut down time < 1 ms ;Control interface - M12 (8 pole) ; Dimensions (WxLxH) mm - 150x470x198 ;Weight in kg -6,1 ; Compressed air supply 5-6 bar, dry and clean ; Compressed air connection –OD 8mm Quick connection; Regulation compliance - CE - RoHs - WEEE

2. Centrifugal Spinning Unit	Designed motor for 12000 rpm, Digital Speed Indicator, Thyrester Drive Speed Controller, Shaft & 11 cm radius disc. of metal. Motor operateable of 220/230 V, AC, Single Phase. Mounted on metallic frame and fitted with Vibration Damper.
3. Laminar hood with HEPA filter and UV-sterilization system	Cleanliness- Class 100;Velocity - 90 FPM \pm 20%; HEPA Filter -99.999 % efficiency for particles >0.3 μ m ; Pre-Filter - 85 %efficiency for particles >0.5 μ m(Washable); Particle Count Better than US Fed Std 209B Class10 and VDI 2083 Class 3; Cabinet Laminated High Quality Wooden Board /PCRC Sheet Powder Coated/Stainless Steel SS 304 (optional 316 grade); Work Table 304 Stainless Steel (optional 316 grade) ; Airflow Speed Control Speed Controller (Three Step Speed Controller) ; Blower High efficient centrifugal type with lifetime lubricated bearings; Light High intensity, low wattage >800 lux ;Noise Level <55 dBA,; Standard Accessories Air/gas cock and mains power socket (16A); Power Supply 220-230 V, 50 Hz. & Optional Accessories - Microprocessor LCD Controller, Digital display for air flow rate , Transparent Front Door , Gauges Pressure (Statics Pressure Mano-Mater) , Magnahelic Gauge (for filter pressure) , U. V. Germicidal Tube in work area , Electronic Filter choke alarm,Spare HEPA Filters, Auto switch on/off for U.V. Germicidal tube & fluorescent light, Hour Meter for UV light.

4. Designing, Engineering and Application of Jute Based Agrotextiles: A Bio-engineering measure for Soil and Water Conservation and Fertility Enhancement of the barren (Tanr) and Baid lands of Purulia, West Bengal, India

A.

Required Equipments and Instruments	Required Specifications
1. Hygrometer (Dry & Wet Bulb temperature and humidity measuring device with clock) / Wireless Humidity Logger	As per Standard Specifications
2. Stevenson Screen or instrument shelter for housing thermograph, hydrograph, dry and wet bulb, Thermometer and Maximum-Minimum Thermometer	As per Standard Specifications
3. Rain Gauge along with AcuRite 01512 Pro Color Weather Station with Rain Wind Temperature Humidity and Weather Ticker	As per Standard Specifications
4. Maximum and minimum temperature bulb	As per Standard Specifications
5. Open pan evaporimeter& Stokes Sunshine recorder	As per Standard Specifications
6. Mini Power tiller	Type of Engine :4 Stroke Max Power (HP) :5.5 HP, Speed :3600 rpm, Blade Dia :300mm
7. Generator	Output : 3 KVA / 3 KW, Super silent,Portable& Light weight, Petrol + LPG (Dual) Fuel Option Generator,Best for General Lighting Load
8. Pumpset for water lifting	Type of Product :Self Priming Monoblock Pump Suc x Del (mm) , 25 X 25 mm, Voltage :220 V Phase :Single Phase
9. Sprinkler irrigation set for covering 3 acres	Suitable Sprinkler for available area between half acre ; Working Method: Half Circle and Full Circle; Area Coverage: 30 Feet Radius , 5 HP Motor Runs, 30 to 45 Sprinklers covers 1/2 to 3/4 Acre at a Time.
10. Drip irrigation set for a land of over 3 acres	Drip Irrigation Kit- 82FT Irrigation Pipe, Irrigation Spray , Complete Irrigation Parts, Perfect Irrigation Systems for Flower Bed, Patio, Garden Greenhouse Plants
11. Soil thermometer	As per Standard Specifications
12. Clinometer/ Brunton Compass	As per Standard Specifications
13. Tape, Abneys level, Auto level, Discharge Meter	As per Standard Specifications
14. Soil Moisture meter Lutron PMS-714 Soil Moisture Meter	As per Standard Specifications
15. Soil conductivity /EC tester	As per Standard Specifications
16. Soil Testing Kit for testing content, composition, nutrient	As per Standard Specifications
17. Sediment Analysis machine	Sieving: Dry or Wet, Sieve Diameters: 50mm, 100mm,150mm,200mm or 8”;

<p>18. Sediment weighing machine cum balance</p> <p>19. Dictophone /Audio /video recording device /handicam</p>	<p>Maximum no. of sieve: 10*50mm(full) or 18 *25mm (half) height; Sieves: woven mesh metal sieve; Measuring range: dry sieve 25µm to 63mm
Wet sieving: 20µm to 10mm; Sample quantity: Dry sieving: up to 2kg (depending on the sample material and sieve used)
 Wet sieving: 20 to 100g; Sieving time: Dry sieving: 3 to 20 min
 Wet sieving: 5 to 10 min; Power supply: 100-240V/1~, 50-60Hz; Dimensions (W x D x H): 370 x 400 x 200mm; Net weight: 21kg 20,00,000 Internal Resolution; Full Digital Calibration;12.5 mm High Super Bright LED Display;Piece Counting Function;Built-in Battery Backup; Over / Under Settable Weighing Limits;Protection Class IP 66; Model: T 15 – WP/ T 30 – WP; Capacity: 15 kg x 2 g/ 30 kg x 5 g; Platform size: 215 x 265 mm/ 215 x 265 mm;Resolution: 1/7500. 1/6000 SONY ALPHAA6000Y 24.3 MP Digital SLR camera With 16-50 and 55-210 mm lens ILCE6000Y</p>
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A. CIVIL WORK

1. For Fencing at Kanchanpur [Length: 913]

Sl. No.	Description of items
1.	<p>Earth work in excavation of foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or stacking the spoils within a lead of 75m. as directed. The item includes necessary trimming the sides of trenches, leveling, dressing and ramming the bottom, bailing out water as required complete.</p> <p>(a) Depth of excavation not exceeding 1,500mm [Page No – 1, Item no. 2 (a), PWD, vol – 1,eft- 01/12/2015]</p>
2.	<p>Cement concrete (4:2:1) with graded stone chips (20mm size) excluding shuttering and reinforcement if any in ground floor as per relevant IS codes.</p> <p>(a) With pakur variety [PWD VOL – 1 Page No- 11 item no- 5(a)]</p>
3.	<p>Ordinary Cement concrete (mix 1:1. 5:3) with graded stone chips (20 mm nominal size) excluding shuttering and re reinforcement if any in ground floor as per relevant IS codes.</p> <p>(i) Pakur variety [Page No. – 28, item no. 15 (a) (i) (II), PWD, vol – 1,eft- 01/12/2015]</p>
4.	<p>Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc initial straightening and removal of lose rust (if necessary), cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black annealed wire at every intersection, complete as per drawing and direction.</p> <p>For works in foundation , basement and up to roof of ground floor/ up to 4m</p> <p>(i) Tor Steel/ Mild Steel (ii) SAIL / TATA / RINL [Page No. – 28, item no. 15 (a) (I), PWD, vol – 1,eft- 01/12/2015]</p>
5.	<p>Hire and labor charges for shuttering with centering and necessary staging up to 4m using approved stout props and thick planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (up to roof of ground floor)</p> <p>(i) 25mm to 30mm thick wooden shuttering as per decision and direction of Engineer – in –Charge [Page No. – 27, item no. 12 (a) , PWD, vol – 1,eft- 01/12/2015]</p>
6.	<p>Supplying, fitting galvanized 3 ply 12 gauge/ 4 points line of barbed wire in fencing (hole already made in the body of the post) or fixed by staples, straining bolt and binding wire where necessary. (Payments to be made on the length of individual lines of wire)</p> <p>[Page No. – 195, item no. 6 (a) , PWD, vol – 1,eft- 01/12/2015]</p>
7.	<p>M.S. or W.I. Ornamental grill of approved design joints continuously welded with M.S, W.I. Flats and bars of windows, railing etc., fitted and foxed with necessary screws and lugs in ground floor.</p> <p>(i) Grill weighing above 10Kg/sq.mtr [Page No. – 78, item no. 10(a) (i), PWD, vol – 1,eft- 01/12/2015]</p>

2. For Construction of Low Water Divide, Siltation Reservoirs, Water Harvesting Ponds at Kanchanpur and Ramkrishnapur Mouz

Sl. No.	Description of items
1.	Earth work in excavation of foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or stacking the spoils within a lead of 75m. as directed. The item includes necessary trimming the sides of trenches, leveling, dressing and ramming the bottom, bailing out water as required complete. (j) Depth of excavation not exceeding 1,500mm [Page No – 1, Item no. 2 (a), PWD, vol – 1, eft- 01/12/2015]
2.	Cement concrete (4:2:1) with graded stone chips (20mm size) excluding shuttering and reinforcement if any in ground floor as per relevant IS codes. (k) With pakur variety [PWD VOL – 1 Page No- 11 item no- 5(a)]
3.	Single Brick Flat Soling of picked jhama bricks including ramming and dressing bed to proper level and filling joints with local sand.
4.	Brick work with 1 st class bricks in cement mortar (1:4) (a) In foundation and plinth [Page No – 12, Item no. 1, PWD, vol – 1, eft- 01/12/2015] [Page No – 30, Item no. 21, PWD, vol – 1, eft- 01/12/2015]

5. Development of innovative low GSM Jute and Jute blended Scrimmed non-woven Fabric as a substituent of Polypropylene Spun Bond Bags and plastic Bags

Required Equipments and Instruments	Required Specifications
1. Vertical / angular fibre laying machine	Laboratory Scale machine : Working width 600mm (maximum). Retrofit with existing nonwoven line. Suitable for unwinding and take up arrangements.
2. Laboratory High Speed Ultrasonic Welding machine	Laboratory Scale machine : With suitable horns and other accessories. Suitable for welding Polyester (PET), Polypropylene (PP), and Polyacrylonitrile (PAN). Thickness up to 15mm.
3. Laboratory model Dip coating machine	Laboratory Scale machine : Working width 600 mm (maximum). SS roller 150 diameter, rubber roller 150 diameter. Chemical tray compatible for chemicals and resins. Mangle pressure by adjustable pneumatics. Squeeze load 1200kg minimum.
4. Thermic Fluid heater and laboratory model continuous Curing Oven	Laboratory Scale machine : Working width 600mm (maximum). Variable speed control. Oven temperature up to 190degree Celsius (controllable). Heating media Hot Air.

The authority reserves the right to accept / reject any quotation without showing any reason thereof.

Prof. (Dr.) S. K. Ghosh
PI of ongoing R&D Projects
Dept. of Jute and Fibre Technology,
Institute of Jute Technology,
University of Calcutta.