Sealed tenders are hereby invited by the Principal, Govt. Polytechnic - Diu for supply of Civil Engineering Equipment's, as stated below as per the terms and condition stipulated attached herewith. Tender documents should be submitted along with nonrefundable tender fees of Rs. 500/- DD, in favour of Daman & Diu Society for Technical Edu. & Higher Edu. (CENT) and refundable E.M.D Rs. 89,500/- of the total cost of supply items in favor of Daman & Diu Society for Technical Edu. & Higher Edu. (CENT). With the VAT / GST Department of U.T. of Daman & Diu [Lowest bidder must obtain local VAT/GST Registration within 15 days]

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Configuration/ Specification</th>
<th>Qty.</th>
<th>Rate</th>
<th>Total</th>
</tr>
</thead>
</table>
| 1.      | Computerized Universal Testing Machine of 200T Capacity (2000kN) with computer & Printer, Maximum Capacity 2000 kN or 200T Least Count (kN) 0.1 Accuracy ±1% Clearance for Tension Test (mm) 50 - 850 Clearance for Compression Test (mm) 0 - 850 Piston Speed Adjustable Clearance between Columns (mm) Minimum 750 Voltage 400-440V Supply Three Phase supply For Tension Test Clamping Jaws for round specimens 8 mm – 45 mm Clamping Jaws for flat specimens 0 mm – 65 mm For Compression Test Pair of compression plates Minimum 220 mm For Transverse Test Table with the adjustable rollers Width of rollers Minimum 160 mm Diameter of rollers Minimum 50 mm Max. clearance between supports 800 mm Radius of punch tops 16 mm, 22 mm Computer: i3 processor, 1 TB HDD, 8 GB RAM, DVD R/W drive, key board, optical mouse, 6 USB ports, 17" TFT screen with UPS 500 VA Software Package: User friendly Software should be provided with the system to control the machine and analyze the various result parameters. Printer: DeskJet Colored The software shall have following features:-  • Windows based & user friendly  • Programming of Rate of Loading.  • Safety features for overload and over travel  • Saving & Retrieving of Test Files  • On line display of Load & Displacement  • Start, Stop, Hold operation  • Inching/Release operation to set Sample  • Online Plot of Graph for single sample and multi sample  • Display of recorded Data on the Screen  • Storing of Data in Numeric form  • Calculation of various parameters (Tensile Strength, Young's Modulus, Yield Stress, Ultimate Stress, % Elongation, max. strain etc.)  ACCESSORIES TO BE SUPPLIED WITH THE MACHINE  • Clamping Jaws for round specimens 8 mm – 45 mm  • Clamping Jaws for flat specimens 0 mm – 65 mm  • Clamping Jaws for compression plates Minimum 220 mm  • Adjustable rollers Width of rollers Minimum 160 mm  • Diameter of rollers Minimum 50 mm  • Max. clearance between supports 800 mm  • Radius of punch tops 16 mm, 22 mm  • UPS 500 VA  • Key board  • Optical mouse  • 6 USB ports  • 17" TFT screen  • 1 TB HDD  • 8 GB RAM  • DVD R/W drive  • Software Package

Last date of Submission of Tender : 27/03/2019 at 12:00 PM
Opening of Tender : 27/03/2019 at 03:00 PM (if Possible)
| Clamping Jaws for flat specimens 0mm – 65mm  
| Pair of compression plates Minimum 220mm  
| Transverse test attachment  
| Diameter of rollers 50mm  
| Radius of punch tops 16mm, 22mm  

**SOME OTHER REQUIREMENTS:**

- **Bend – Rebend Test Attachment**
- **Shear Test Attachment** suitable for size 6mm, 10mm, 12mm, 16mm, 20mm, 25mm diameter.
- **Load Stabilizer** suitable for stabilizing load at any particular point for about 10 minutes
- **Wire Rope Test: Attachment** suitable to carry out Tensile Test on wire ropes up to 10mm
- **Electronic Extensometer**: Gauge length of 50mm and +50% measuring range sensitivity of 1 micron. Suitable for using for round and flat specimens
- **The machine shall be suitable for testing the cylindrical rock specimen of size 38-40 mm dia. & 76-80 mm in length.**

| 2. **Cube Moulds** | ISI marked cube Mould 150 x 150 x 150 mm | 6 |
| 3. **Cube Moulds** | ISI marked cube Mould 70.6 x 70.6 x 70.6 mm | 6 |
| 4. **Cylinder Molds** | ISI Marked 150 mm dia x 300 mm high,  
The moulds is split vertically into two parts. The mean internal diameter in within +/-0.2mm and height is within +/-1mm. The ends are machined to +/-0.05. The base plate and top plate are machined flat to +/-0.03mm. | 6 |
| 5. **Beam mould,** | 100 mm x 100 mm x 500 mm made of Cast Iron  
Made of Cast Iron / Mild Steel. The mould are made of 4 plates assembled together. Each mould is supplied complete with base plate. Faces are machined flat to ±0.2mm. And finished in size to 0.2 mm | 6 |
| 6. **Slump cone test apparatus,** | The slump cone has internal dimensions 20 cm dia at base  
10 cm top dia and 30 cm height. Foot pieces can be fixed to  
the clamps on the base plate  
The base plate has lifting handle for easy transportation  
One graduated steel rod 16 mm dia x 600 mm long,  
rounded at one end and graduated in mm, is also supplied | 1 |
| 7. **Vibrating table** | It is designed to carry a load of 140 kg. The apparatus consists of a motor fitted with a variable pitch pulley housed in a cabinet. The vibrations are imparted by means of off-balance masses rotating on a shaft of a vibrator clamped to the underside of the table top. The table top is 50cm x 50cm. and has stops along its edges to prevent moulds from walking off the table during vibration. A cross arm adjustable on a vertical rod at the center of the table is provided to hold the moulds while operating the table. The variable pitch pulley arrangement permits the frequency to be varied between a maximum of 3600 vibrations per minute. A speed regulation handle is provided for increasing or decreasing the frequency. A switch is provided for starting the motor, suitable for operation on 440 volts, 3 phase, 50 cycles, A.C. supply. Vibrating Tables of table top size 75cm x 75cm as well as 100cm x 100cm are also available | 1 |
| 8. **A standard metal thickness gauge (for Flakiness Index)** | 1 |
| 9. **Length gauge (for Elongation Index)** | 1 |
| 10. **Le-chatelier molds (Set of Six)** | With two glass plates and lead a transparent disc is screwed.  
A brass cylinder mold split down one side and provided with two parallel indication arms. | 1 |
| 11. **Flow table apparatus,** | As Per IS 9103 – 1999  
A conical mould having 130mm Top Dia x 200mm  
Base Dia and 200mm Height.  
A flow table having mild steel top having plain area of 700x700mm. The center of the table is scribed with cross marks. | 1 |
12. Rebound Hammer,  
Type with aluminum body case calibrated in Kgf / Cm (Analog)  
Range : 10 – 70 N/mm  

13. Ultrasonic pulse velocity tester battery operated,  
Conforming to EN 12504-4 and ASTM C597  
Specifications - Microprocessor incorporated  
Frequency range: 24 to 150 kHz - Receiver input impedance: 1 M ohm - RS 232 output -  
Connectable to oscilloscope - Transit time measurement: from 0.1 to 1999.9 microsecond  
Pulse rate: from 1 to 10 per second, selectable -  
Resolution: 0.1 microsecond - Transmitter output: 800V - The tester is supplied complete with two 54  
kHz transducers (transmitter and receiver) with 3 m cable, calibration rod, coupling agent (250 cc  
bottle), nylon carrying case  

14. Apparatus for aggregate crushing test,  
- Steel cylinder with open ends and internal dia 152mm,  
square base plate, plunger having a piston of dia of 150  
mm, with a hole provided across the stem of the plunger  
so that a rod could be inserted for lifting or placing the  
plunger in the cylinder  
- Cylindrical measure having internal dia of 115 mm and  
height 180 mm  
Steel tampering rod with 1 rounded end, having a dia of 16  
mm and length 450 to 600 mm  

15. Aggregate Impact testing machine,  
As per IS: 2386 (IV) 9377. This Apparatus is used to  
determine aggregate impact value of coarse aggregate. The  
hammer of the tester fall freely from 380 mm height on  
coarse aggregate for 15 times/15 sec the crushed aggregate  
removed from the cup, then sieved and weighed. The %  
ratio of the weight passing 2.36mm sieve and weight of oven  
dried sample is Aggregate Impact value.  
The instrument consists of a circular base with two vertical  
guides. The hammer of weight 13.75 ± 0.25 kg can be raised  
to fall freely down the vertical guides. The height of fall can  
be adjusted through 380 ± 5mm. The hammer is provided  
with a locking arrangement. The hammer falls freely to the  
base and is removable for emptying. Supplied complete with  
metal measures 75mm dia x 50mm high for (for specimen  
preparation) and tamping rod 230mm long x 10mm dia.  

16. Los angles Abrasion test machine,  
Dimensions approx.: 1005x820x950 mm  
Power supply: 230 V, 50 Hz, 1 ph  
Set of 12 abrasive charges conforming to Indian standard  

17. Simple beam & fixed beam load frame for deflection  
test with weights  

18. Concrete mixer 1 bag capacity tilting type  

19. Half cell potentiometer  

20. Density basket  

21. Simple machines simple wheel and axle with weights,  
30cm  

22. Simple machines simple purchase crab with weights  

23. Simple machines double purchase crab  

24. Simple machines wheel and differential axle  

25. Worm and worm wheel, Single  

26. Simple screw jack  

27. Inclined plain with pan and weights  

28. Jib crain  

**SOIL MECHANICS**  

29. Core Cutter  

30. Steel Dolly  

31. Rammer
| 32. | Pycnometer Bottle, Test is performed as per IS: 2720 (Part-III). Suitable for determination of specific gravity of sand and fine gravel. The apparatus consists of a glass jar of 1 kg capacity, complete with brass cone, rubber seal and screwed cap. | 6 |
| 33. | Standard Proctor Apparatus, Rammer 2.6 kg x 310 mm controlled fall through guide tube. Rammer 4.89 kg x 450 mm controlled fall for heavy compaction test as per IS-2720 part VII. | 1 |
| 34. | Liquid Limit Device, Conforms to IS :2720 | 1 |
| 35. | Palette knife | 2 |
| 36. | straight Edge | 1 |
| 37. | Steel Rule | 1 |
| 38. | Bowl | 10 |
| 39. | Spatula | 2 |
| 40. | Sand pouring Cylinder, The apparatus is suitable for field density estimation of fine and medium grained soils, as per IS: 2720 (Part XXVIII). It consists of: i) Sand Pouring Cylinder 115 mm internal dia with conical funnel and shutter. ii) Calibrating Container, 100 mm inner dia and 150 mm deep with flange 50 mm wide. iii) Metal tray 300 mm square x 40 mm deep with a 100 mm dia hole at the centre. | 1 |
| 41. | HOT AIR OVEN-BOTTOM HEATED Double wall chambers inner made of SS and outer of Mild Steel sheet duly powder coated with 2½” thick glass wool insulation. Temperature is controlled by an imported thermostat with an accuracy of +/-1°C and working temperature of above 50°C to 250°C and without thermometer. Size: 600 x 600x600 includes | 1 |
| 42. | Shrinkage Limit Apparatus, conforms to IS: 10077 | 1 |
| 43. | Direct Shear Apparatus Electrical Single Speed, 3 speed, Motorised IS : 2720 (Part XIII) IS:11229 It comprises :- i) Shear box assembly, 60 mm square, complete with a U-bracket, guide pins and spacing screws, made of brass. ii) Gripper assembly consisting of two plain grid plates, two perforated grid plates, one base plate and one loading pad, all made of brass. iii) Two porous stones, each 6 mm thick, fitting the shear box iv) Shear box housing of brass, complete with two ball roller strips. v) Loading unit with normal loading of 8 kg/cm² on 60 mm square specimen. vi) Specimen cutter for a specimen size of 60 mm x 60 mm x 25 mm. vii) The unit is provided with a turret type gear box to get 3 different constant rates of strain and arrangements to carry out residual shear strength tests. Supplied complete with 1 No. proving ring and 2 Nos. of dial gauge of 0.01 x 25 mm | 1 |
| 44. | IS Proctor compaction apparatus Standard, Compaction Mould 100 mm internal dia x 127.3 mm height, 1000 ml volume complete with collar and base plate, all made of gun metal tie rods of mild steel | 1 |
and wing nuts for clamping.
2. Compaction rammer, light, made of mild
steel 2.6 kg weight, 50 mm dia
compaction face, and 310 mm
controlled free vertical fall.
3. Compaction rammer, heavy, made of
mild steel 4.89 kg weigh, 50 mm dia
compacting face, 450 mm controlled
free vertical fall.

| 45. Permeability Apparatus (can conduct constant head and falling head experiment) IS: 2720 (Part-17), IS 11209 | 1 |

It comprises:
1. Compaction Permeameter Mould
1000 ml capacity, clamped between top and bottom
drainage plates having recess for porous stones. Supplied along with a false bottom plate for use during compaction of soil in the permeameter and extension collar.
2. Stand pipe panel, with three glass tubes of 6 mm, 10 mm and 20 mm dia, one meter long, supplied with wooden meter scale and 3 meter rubber tubing

| 46. Split Spoon Sampler | 1 |
| 47. Proving rings |
| 1000 kg, (10 KN) | 1 |
| 500kg, (5 KN) | 1 |
| 100kg (1 KN) | 1 |
| 48. Auger outfit with heads, 100 mm dia | 1 |
| 49. Consolidate apparatus, Single gang | 1 |
| 50. Unconfined compression testing machine | 1 |

**TRANSPORTATION ENGINEERING**

| 51. Ductility testing machine, The rates of pull of 50 mm/min and 10 mm/min are incorporated. Suitable for operation on 230 volts, 50 cycles, single phase, A.C. supply | 1 |

| 52. Penetration testing machine, Automatic Bitumen Penetrometer Electrically operated, including adjustable weight arrangement. | 1 |

| 53. Flash & Fire Point Test Apparatus, It consists of brass test cup with handle removable cup cover with the spring operated rotated shutter having oil test jet flame device, stirrer with flexible shaft. | 1 |

| 54. California Bearing ratio (CBR) test, 1. Cylindrical mould with inside dia 150 mm and height 175 mm, provided with a detachable extension collar 50 mm height and a detachable perforated base plate 10 mm thick.
2. Spacer disc 148 mm in dia and 47.7 mm in height along with handle.
3. Metal rammers. Weight 2.6 kg with a drop of 310 mm (or) weight 4.89 kg a drop 450 mm.
4. Weights. One annular metal weight and several slotted weights weighing 2.5 kg each, 147 mm in dia, with a central hole 53 mm in diameter.
5. Loading machine. With a capacity of atleast 5000 kg and equipped with a movable head or base that travels at an uniform rate of 1.25 mm/min. Complete with load indicating device.
6. Metal penetration piston 50 mm dia and minimum of 100 mm in length.
7. Two dial gauges reading to 0.01 mm. | 1 |

| 55. Standard Ring and Ball Apparatus, Steel balls 2 No. each 9.5mm in diameter and weighing 3.5 + 0.05 grams.
• Brass rings 2 No., the rings shall be tempered and shall confirm to the following Depth : 6.4 + 0.1 mm Inside diameter at top : 15.9 + 0.1 mm Inside diameter at bottom : 17.3 + 0.1 mm Outside diameter : 29.5 + 0.1 mm
• Thermometer capable of reading temperature up to 0 to 250 0 C.
• Water bath should be a heat resistant glass vessel not less than 85mm in diameter and 120mm in depth.
• Stirrer shall be mechanical operated to ensure uniform heat distribution at all times throughout the water bath. | 1 |

| 56. Specific gravity bottle. 50 ml | 6 |
57. TOTAL STATION
   Having 30X Magnification 1” Least Count and 2”
   Accuracy
   Distance Measuring range of 1.8KM with single Prism
   Alphanumeric Key Board (Dual Display) with standard
   accessories
   Batteries Charger – 01 Nos.
   Batteries – 01 Nos.
   Manual 01 Nos.
   Tool kit – 01 Nos.
   Carrying case - 01 Nos.
   Plumbob – 01 Nos.
   Data Downloading cable 01 Nos.
   Software
   Prism with holder and target – 01Nos.
   Prism pole – 01 Nos.
   Aluminum Tripod 01 Nos.

58. Fibre tape 30m.

All the suppliers are directed to scanned the following documents:-

- VAT/GST Registration.
- Latest Solvency Certificate 40% of Estimate cost within one year from the last date of
  tender uploading.
- PAN Card.
- Tender EMD in form of FDR (Jointly) valid for 6 months i.e. (180 days) from the last
date of tender uploading.
- Tender Fee in form of Demand Draft (Non Refundable).
- Experience certificate.
- Registration Certificate
- Labour License Registration.

The documents prescribed in the NIT to be submitted alongwith bid.
For supply items Authorized Dealers, Vendors, Suppliers, etc. can also bid for Tender.
For Electrical works Electrical license is mandatory.

If the scanned copy of the above documents are not visible during opening of the tender
the tender shall not be downloaded.

Quantities may vary according to the requirement.

**TERMS & CONDITIONS**

1. Eligibility:
   i. The bidder should be registered under Sales Tax/VAT, GST.
   ii. The bidder should have their support center at Diu or nearby.
2. The Earnest Money Deposit (EMD) of Rs. 89,500/- is payable in the form of FDR/Demand
   Draft issued by Scheduled Bank in favor of Daman & Diu Society for Technical Edu. &
   Higher Edu. (CENT) payable at Diu. Tender received without Earnest Money Deposit will
   be treated as invalid.
3. The rate(s) quoted should be strictly for free door delivery at Diu Districts respectively &
   will be valid and operative for supply order issued on or before.
4. The rates should be quoted inclusive of all taxes, installation & commissioning charges.
5. No extra charge for packaging, forwarding and insurance, transportation etc. will be paid
   in addition to the rates quoted.
Financial Bid Cover.

1. The rates should be quoted only for the items specified in the list of requirement and should be for the items of given special make/make/manufacture.
2. Rates quoted for items other than the required specification/make/manufacture may not be considered.
3. The decision of the Principal, Govt. Polytechnic-Diu for acceptance/rejection of any articles supplied including the decision for equivalent specifications, standard and quality etc. of articles shall be final.
4. The Purchase Committee will open the Tenders online in presence of tenderer(s) or their representatives, if any presents in the Office of the Principal, Govt. Polytechnic-Diu on 27/03/2019 at 03:00 pm.
5. The Principal, Govt. Polytechnic-Diu will be at liberty to accept the tender for the entire quantity or the part thereof at the rates submitted by the Bidder or at reduced rate during the negotiations if any.
6. Rates tendered/offered in response to the concerned Tender Notice by the successful bidder shall be considered as acceptance of all above terms and conditions for supply for all legal purpose.
7. (a) The Successful Tenderer will have to pay an amount equal to 05% of the total value of articles mentioned in the supply order within 10 days from the date of the order as Security Deposit in form of FDR/Demand Draft in favor of Daman & Diu Society for Technical Edu. & Higher Edu. (CENT). The successful bidder has to submit performance bank guarantee (hereafter referred to as Security Deposit) from any nationalized bank of 05% amount of his final offer towards performance security within 15 days from the date of issue of supply order for the duration of warranty period.
   (b) Non-receipt of Security Deposit within stipulated time limit will result in automatic cancellation of the order for supply without any intimation.
8. The Earnest Money(s)/Security Deposit(s) paid by the tenderer(s) earlier against any tender(s) or supply order(s) is/are not adjustable with Earnest Money or Security Deposit required as per conditions of this tender.
9. All bills should be in Triplicate and should invariably mention the number and date of supply order.
10. All bills for amount above Rs. 5,000/- should be pre-receipted on a Revenue Stamp of proper value. Bills for amount exceeding Rs. 5,000/- not pre-receipted on Revenue Stamp of proper value will not be accepted for payment.
11. Each bill in which Value Added Tax is charged must contain the following certificate on the body of the bill.

   "CERTIFIED that the goods on which Value Added Tax has been charged have not been exempted under the Central Sale Tax Act or the Rules made there under and the amount charged on account of Value Added Tax on these goods is not more than what is payable under the provisions of relevant Act or Rules made there under".

12. In respect of any dispute given rise to the legal proceedings between the parties, the courts at Daman and Diu & DNH shall alone have the jurisdiction.
13. The tender can be submitted up-to 12:00 pm 27/03/2019 and shall be opened on same day at 03:00 hrs if possible in the office of the Principal, Govt. Polytechnic-Diu or in the office of the Hon’ble Collector, Diu in the presence of the Purchase committee and Tenderer(s) or their representative(s) if present.
14. Items should be covered by ‘onsite warranty’ for a period of One year (or mentioned in specification) from the date of installation and bidder must have service/support location at local level i.e. Diu or nearby.
15. The designated committee will check quality of the Civil Engineering Equipment’s supplied before installation at Principal, Govt. Polytechnic-Diu.

(N. G. Gajwani)
Principal
Govt. Polytechnic-Diu.