



**CHANDIGARH COLLEGE OF ENGINEERING &  
TECHNOLOGY,  
(DEGREE WING), CHANDIGARH  
e-SHORT TERM TENDER NOTICE**

Chandigarh College of Engineering & Technology, Sector-26, Chandigarh invites short term tenders through e-tendering for purchase the Machinery/Equipments/Items for following Department:-

<b>Name of Department</b>	<b>Earnest Money (₹)</b>	<b>Start Date and Time of uploading of e-tender</b>	<b>End Date and Time of uploading of e-tender</b>	<b>Date and Time of opening of Online Bid (Technical Bid)</b>
Civil Engineering	25000/-	11.10.2012 at 3.00 P.M.	26.10.12 upto 3.00 P.M.	26.10.12 at 3.00 P.M.

**Detailed Terms and Conditions are available in e-tender document.**

The bid document can be downloaded from the website of Chandigarh Administration <http://www.etenders.chd.nic.in> however for general information, guidance and reference, the tenderer can approach to office of Principal, Chd. College of Engg. & Tech., Sector-26, Chandigarh ( Phone No. 0172-2750943 )

**Principal**

## **INSTRUCTIONS TO BIDDERS REGARDING E-TENDERING PROCESS**

- a. Tenders without Digital Signatures will not be accepted by the electronic tendering system. No tender will be accepted in physical form and in case it has been submitted in physical it shall be rejected.
- b. Before submission of on line bids, bidders must ensure that scanned copies of all the necessary documents have been uploaded with the bid.
- c. Principal, Chd. College of Engg. & Tech., Chandigarh will not be responsible for any delay in online submission of bids due to any reason whatsoever.
- d. Bidders should get ready with the scanned copies of EMD as specified in the tender documents. The original instruments in respect of EMD in the shape of FDR or Deposit at Call or Term Deposit Receipt or Demand Draft in favour of the Principal, Chd. College of Engg. & Tech. (Degree Wing), Sector-26, Chandigarh and Affidavit regarding non blacklisting should reach on or before 26-10-2012 by 3.00 p.m.
- e. The details of EMD specified in the tender document should be same as submitted online (scanned copies). Otherwise tender will be rejected summarily.

## **TERMS AND CONDITIONS OF THE SHORT TERM TENDER**

### **CCET STANDS FOR CHD. COLLEGE OF ENGINEERING & TECHNOLOGY, CHANDIGARH.**

1. The last date and time for receipt of tenders is **26.10.2012 upto 3.00 p.m.** through e-tendering only.
2. Tender must be accompanied with Earnest Money Deposit of Rs. 25,000/- for Civil Deptt, in the shape of FDR or Deposit at Call or Term Deposit Receipt or Demand Draft in favour of the Principal, Chandigarh College of Engineering & Technology, Chandigarh, valid for six months payable at Chandigarh on any Scheduled Bank.
3. The sealed envelope of EMD should bearing the Advertisement No. and should be clearly superscribed as “EMD for Purchase of Machinery /Equipment/Items for Civil Engineering Deptt due on **26.10.2012** should be separately submitted in the office of Principal, Chandigarh College of Engineering & Technology, Sector-26, Chandigarh on or before **26.10.2012 upto 3.00 p.m.**
4. Any attempt direct or indirect, to cast influence, negotiation on the part of the tenderer with the officials/authority to whom he will submit the tender or the tender accepting official/authority before the finalisation of tenders will render the tenderer liable for exclusion from consideration.
5. Tender(s) received without earnest money shall be rejected straightway.
6. Earnest Money deposited with the Chd. College of Engg. & Tech., (Degree Wing), Chandigarh in connection with any other tender will not be considered against this tender.
7. The Public Sector Undertaking of the Central / State Govt. are exempted from furnishing Earnest Money Deposit.
8. This tender is not transferable.
9. The tender i.e. Pre-qualifying-cum-Technical Bid shall be opened at **3.00 p.m. on 26.10.2012** at Chandigarh College of Engineering & Technology (Degree Wing), Chandigarh.
10. Conditional offer shall be rejected.
11. The requirements of the Institute in terms of category of machinery/equipment/items, detailed specifications and quantity are

given in **SCHEDULE OF TECHNICAL SPECIFICATION / REQUIREMENT (AS PER ANNEXURE-I)**. Principal, CCET reserves the right to change the quantity for any/all items without assigning any reason.

12. The tenders not accompanied by Earnest Money or incomplete in any respect will be rejected outrightly.
13. No advance payment will be made. Payment will be made after receipt of machinery/equipment/items, its inspection, installation and testing to the satisfaction of the Technical and Purchase Committees.
14. **The quoted prices must be inclusive of Excise Duty, VAT, Sale Tax, Central Sale Tax, Freight Duty and any other charges etc. etc. It is clarified that no payment on account of taxes / freight etc. will be made extra other than those quoted in the price bid.** Tenderers / Bidders / contractors must ensure that all the taxes are included in the price bid. If any bid / tender is found exclusive (without) of taxes will not be entertained in any circumstances and the same will be rejected straightway. **Tenderers / Bidders / contractors are instructed to mention the rates of Excise Duty, VAT, Sale Tax, Central Sale Tax, Freight Duty etc. for each and every item in Annexure –III and submit with the technical bid.**
15. The Principal, CCET reserves all rights to accept or reject any tender without assigning any reason.
16. Rates should be quoted F.O.R. Chd. College of Engg. & Tech., Sector-26, (Degree Wing) Chandigarh including packaging, forwarding, postage and freight etc.
17. The Principal, CCET reserves all rights to reject the goods if the same are not found in accordance with the required description / specifications.
18. In case of violation of any term and condition as mentioned, Earnest Money Deposit of the tenderer shall be forfeited in full or part at the entire discretion of the Principal, Chd. College of Engg. & Tech., Chandigarh.
19. Training for the operation of equipments, if any, shall be provided by the firm free of cost to the faculty / other staff of the college.

20. The defective machinery/equipment/items from the Store of Chd. College of Engg. & Tech., Chandigarh will be lifted at the entire cost & risk of the firm. Chd. College of Engg. & Tech., Chandigarh will not bear any expenses on this account and the machinery/equipment/items lying in the CCET premises will be at tenderers risk and cost.
21. The machinery/equipments/items will be maintained free of charges during the warranty period.
22. **PERFORMANCE SECURITY:-** Performance security @10% of the value of supply order covering the warranty period shall be furnished by the firm in the shape of Bank Guarantee duly pledged in favour of Principal, Chd. College of Engg. & Tech., Chandigarh before / along with supply of machinery/equipments/items. **The performance security should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligations.**
23. The CCET would return the Earnest Money Deposit to the successful tendering firm on the submission of the Bank Guarantee. EMD of unsuccessful tenderer will also be returned.
24. Rates quoted in Indian Currency only shall be accepted irrespective of foreign make of machinery/equipment/items which should include all kinds of charges, taxes, duties etc. Financial bids showing the rates in other currency shall not be considered and deemed to be rejected automatically.
25. **PERIOD FOR WHICH THE OFFER WILL REMAIN OPEN:-**  
The tendering firms should keep their offers valid for acceptance upto **30.09.2013**. If the firms are unable to keep their offers open for the above said period, they should specifically state the period for which their offers would remain open but such a provision may result in the rejection of their offers.
26. Any conditional tender or any deviation from the terms and conditions of the tender document shall render the tender liable to rejection.
27. The machinery/equipments/items will be installed free of charge by the firm / agent at the designated premises. The cost of material required for installation shall be borne by firm. Material for experimental set up such as Table, Stand etc. should be provided by

the firm at its own cost. CCET will not provide any material required for installation. Foundations of equipments wherever necessary shall be provided/constructed by the supplier free of cost.

28. **DELIVERY PERIOD:-** The Delivery period of the machinery/equipment/items shall be strictly 6-8 weeks from the date of supply order. The delivery period will be extended at the sole discretion of the Principal, CCET in special circumstances on written request from the firm. Penalty @ 1% per week of the cost / price of machinery/equipment/items for actual period of delay after the due date of supply of machinery/equipments/items will be charged.
29. Installation and demonstration will be done by the supplier to the satisfaction of Head of Department concerned.
30. Warranty period, where applicable, should be clearly specified but not less than 1-year in any case.
31. Any fault or deficiency in the machinery/equipments/items should be rectified by the supplier within two weeks after intimation.
32. Instructional materials and **e-manuals** will be uploaded by the supplier free of cost.
33. The technical broucher for the equipments shall be uploaded along with Pre-qualifying – cum – Technical Bid.
34. **INSPECTION OF MACHINERY/EQUIPMENT/ITEMS**  
The machinery/equipments/items will be inspected only at CCET premises. However, the inspection of machinery/equipments/items at factory site or any other place, if any, shall be carried out at the risk and cost of the Tenderer / Bider. The CCET will not bear any expenses on this account.
35. In the cases of failure or default in the performance or responsibilities or breach of terms and conditions of DNIT or MOU or any agreement of contract between the company / firm / agency / person or any legal entity and CCET, as the case may be, the said company / firm / agency / person or any legal entity shall be black listed in the light of notification issued by Chandigarh Administration vide their letter No. 1927-F&PO(3)-2009/1170 dated 27-02-2009 or any other instructions issued from time to time.

36. The tenderer has to submit an affidavit (as per Annexure II) regarding non black listing of individual / firm/ company, as the case may be and forward along with EMD.
37. **JURISDICTION**  
The courts of Chandigarh alone will have the jurisdiction to try any matter, dispute or reference between the parties arising out of this purchase. It is specifically agreed that no Court outside and other than Chandigarh Court shall have jurisdiction in the matter.
38. **Force majeure:-** Any failure or omission or commission to carry out provision of this tender by tenderer shall not give rise to any claim by one party against the other if such failure or omission or commission arise from an Act of God; which shall include all Acts of natural calamities such as fire, flood, earthquake, hurricane, or any pestilence or from civil strikes, compliance with any status and / or regulation of the Government, look outs and strikes, riots, curfew, embargoes or from any political or other reason beyond the parties control including war (whether declared or not), civil war or stage of insurrection, provided that notice of the occurrence of any event by either party to the other shall be given within two week from the date of occurrence of such any event which could be attributed to force majeure conditions.

**Annexure-I**

**Schedule of Technical Specification / Requirement**

**(SPECIFICATIONS AND ALLIED TECHNICAL DETAILS OF MACHINERY/  
EQUIPMENTS/ITEMS AND SCHEDULE OF REQUIREMENT)**

1. Civil Engineering Deptt.

Schedule I



**ANNEXURE-II**

I/We (Name) \_\_\_\_\_

Contractor / partner / sole proprietor (strike out word which is not applicable)

or (Firm)/Company \_\_\_\_\_

do hereby solemnly affirm and declare that the individual firm / companies are not black-listed by the Union or State Government or any autonomous body.

DEPONENT

Address \_\_\_\_\_

\_\_\_\_\_

I/We do hereby solemnly affirm and declare that the above declaration is true and correct to the best of my knowledge and beliefs. No part of it is false and nothing has been concealed.

DEPONENT

Dated:

**CHECK LIST DULY FILLED IN TO BE ATTACHED WITH PRE-QUALIFYING-  
CUM-TECHNICAL BID FOR THE EQUIPMENT OF THE DEPARTMENT OF  
CIVIL ENGINEERING DEPTT.**

- |    |  |          |
|----|--|----------|
| 1. | Whether EMD in the shape of FDR or Deposit at Call or Term Deposit Receipt or Demand Draft valid for six months, for the asked-for amount attached?                | Yes / No |
| 2. | Whether tender document duly signed by authorized signatory attached?  | Yes/No   |
| 3. | Whether affidavit duly attested by Notary / Executive Magistrate regarding non-black listing of firm Attached?   | Yes/No   |
| 4. | Whether a list of institutions / organizations where your firm has supplied this item / equipment / instrument recently, is attached.                              | Yes/No   |
| 5  | If you are an authorized agent / dealer / distributor of the firm / company / manufacturer and whether authority letter as issued by them in your favour attached? | Yes/No   |
| 6. | Whether Technical broucher of the equipments attached?   | Yes/No   |
| 7. | Whether information regarding rate of Excise Duty, VAT, Sale Tax, Central Sale Tax, Freight Duty etc. for each and every item attached as Annexure III?            | Yes/No   |

Signature of authorized signatory  
with seal of the firm

**SCHEDULE-I**  
**CHANDIGARH COLLEGE OF ENGG. & TECHNOLOGY, CHANDIGARH**  
**SPECIFICATIONS AND ALLIED TECHNICAL DETAILS OF EQUIPMENTS**  
**AND SCHEDULE OF REQUIREMENT FOR RCC LAB, CIVIL ENGG. DEPTT.**

Sr. No	Name of Equipment and Specification	Qty. Required
1.	<p><b>Buoyancy Balance</b>  It should consist of rigid support frame, incorporating a water tank mounted on a platform. A mechanical lifting device should be used to raise the water tank through frame height immersing the specimen suspended below the balance. The supply may also be used as standard weighing system in the laboratory i.e. 15 kg X 0.5 g must be operated on 220 V, 50 Hz, single phase AC supply.</p>	01
2.	<p><b>Vicat's Apparatus</b>  It should conform to IS 5513/2542(P2)/2645/1727, BS 12.146/915/1370/4027/4248, ASTM C 91/141/187/308/472 &amp; AASTHO T 129, E 131 with ISI mark. It consist of : Vicat's mould, glass base plate, consistency plunger, initial needle , final needle, mild steel base plate, Vicat's mould with split type with clamping ring.</p>	02
3.	<p><b>Le- Chatelier Apparatus</b>  It should conform to IS 5514. It should consist of a small split cylinder forming a mould 30 mm internal dia and 30 mm height. On either side of the split cylinder two parallel indicating arms with pointed ends should be fixed. Two loops of suitable material and strength soldered to the upper half of the mould on each side of the central split should be provided to facilitate demoulding of the hardened paste specimen after test. The resilience of the mould should be such that the action of a mass of 300 gm applied should increase the distance between the indicator ends of the needle by 17.5 mm± 2.5 mm without permanent deformation. The mould should be supplied complete with two glass plate and lead weights.</p>	02
4.	<p><b>Density Bottle- (IS: 2720 (Part- I)</b>  Density Bottle of 100 ml, 200 ml with capillary vent leak proof stopper.</p>	01
5.	<p><b>Ultrasonic Pulse Velocity Tester -:</b> The ultrasonic test equipment should comply with the following standards:</p> <ul style="list-style-type: none"> <li>• EN12504-4 (Europe)</li> <li>• ASTM C 597-02 (North America)</li> <li>• BS 1881 Part 203 (UK)</li> <li>• ISO1920-7:2004 (International)</li> <li>• IS1311 (India)</li> </ul> <p>Transit time measurement</p> <p>1. Range      0.1 – 9999 µs</p> <p>2.Resolution   0.1 µs</p> <p>3.Display      79 x 21mm passive matrix OLED</p> <p>5.Transmitter   Optimized energizing pulse 125V, 250V, 350V, 500V, AUTO</p> <p>Receiver</p> <p>1. Selectable gain steps   1x, 10x, 100x, AUTO</p> <p>2. Bandwidth      20 kHz – 500 kHz</p> <p>3. Memor          Non volatile, &gt; 500 measured values</p>	01

	<p><b>4. Regional Settings</b> Metric and imperial units supported</p> <p><b>Power Supply</b></p> <p>1. <b>Battery</b>            4x AA batteries (&gt;20 hours continuous use)</p> <p>2. <b>Mains</b>             Via USB charger</p> <p>3. <b>PC</b>                 Directly via USB cable</p> <p><b>Mechanical</b></p> <p><b>Dimensions</b>        172 x 55 x 220 mm</p> <p><b>Weight</b>              1.316kg (incl. batteries)</p> <p><b>Environmental conditions</b></p> <p><b>Operating temperature</b> -10° to 60°C (0° to 140°F)</p> <p><b>Humidity</b>            &lt;95% RH, non condensing</p>	
<p>6.</p>	<p><b>Profometer</b></p> <p>It should have indicating device, universal probe, probe cable, data transfer cable, Pro-Vista data transfer/display software, headset, carrying strap, carrying case and operating instructions.</p> <p>1. <b>Measuring Range:</b> Small range up to 100 mm (3.94”) deep depending on bar size.</p> <p>2. <b>Large range:</b> up to 188 mm(7.41”) deep depending on bar size. Example 16mm (#5) bar: 80 mm (3.15”) deep in small measuring range or 147 mm (5.71”) deep in large measuring range.</p> <p>3. <b>Measuring Accuracy:</b> Better than ±2mm (0.08”) or ±5 % for concrete cover.</p> <p>4. <b>Bar sizing:</b> 8-40 mm (# 3-12) diameter bars at better than ± 1 bar size.</p> <p>5. <b>Display:</b> 128x 128 pixel graphic LCD with backlight.</p> <p>6. <b>Memory:</b> Up to 40’000 measured values that can be stored in up to 60 test file locations (Non –Volatile).</p> <p>7. <b>Data Output-</b> RS232 interface, USB via adapter.</p> <p>8. <b>Case Dimension:</b> 415 x500 x125 mm(16.3” x 19.7” x 4.9”)</p> <p>9. <b>Weight:</b> net 4.2 kg(9.2 lbs); Shpg 6.2 kg(13.7 lbs).</p> <p><b>With Accessories:</b></p> <p>Telescopic extension Rod</p> <p>Test Block</p> <p>Marking pen with 3 refills.</p> <p>RS 232/ USB</p> <p>Printer Cable(serial)</p> <p>Interface converter( for parallel printer)</p> <p>Probe cable, 3 m.( 10 ft)</p> <p>Path measuring device cable , 3m (10 ft)</p> <p>Upgrade package.</p>	<p>01</p>

**SCHEDULE-I**  
**CHANDIGARH COLLEGE OF ENGG. & TECHNOLOGY, CHANDIGARH**  
**SPECIFICATIONS AND ALLIED TECHNICAL DETAILS OF EQUIPMENTS AND**  
**SCHEDULE OF REQUIREMENT FOR ENVIRONMENTAL LAB, CIVIL ENGG.**  
**DEPTT.**

SI. No.	Item Description	Nos.
<b>1</b>	<p><b>Hot Air Oven High Temperature</b>            Suitable for application involving high temperature up to 300°C provided with stainless steel chamber , filled with special quality insulation (mineral wool) &amp; controlled by digital temperature controller cum indicator and air circulating fan            Size 355x355x355 mm. Capacity 45 Ltrs.</p>	<b>2</b>
<b>2</b>	Fortin's <b>Barometer</b> without mercury brass parts	<b>1</b>
<b>3</b>	<p><b>Digital Hot Plates</b>            Temp range: 122 to 932°F (50 to 500°C), Top plate dimensions: 4 in x 4 in, Top plate material: Ceramic, Dimensions: 6 in W x 4 in H x 10.25 in D, Power (VAC): 230, Power (Hz): 50/60, CE Compliance: Yes, It includes: 5-ft cord with plug.</p>	<b>1</b>
<b>4</b>	<b>Refrigerator</b> 210 Ltrs. LG	<b>1</b>
<b>5</b>	<p><b>Digesdhal Apparatus</b>            Digesdhal Apparatus 230V 50/60 HZ  <b>Included:</b>            Digesdhal Main Instrument, Heater Assembly, Vertical Support, Shielded Fuse, Column, Receptacle, Digestion Flasks (2), Flask Weight, Heat Shield, Power Cable 230v, Aspirator, Cooling Pad, Finger Cots (2), Goggles Safety, Instruction Manual, Fractionating Column with Protector, Capillary Funnel, Capillary Funnel Adapter, Vent Trap Body, Vent Trap Cap, Column Baffle, Tubing C-Flex 5 Ft &amp; Extension Tube.            Cat. No: 23130-21            Make: Hach, U.S.A.</p>	<b>1</b>
<b>6</b>	<p><b>Vacuum Dessicator</b>            Body is constructed of molded fiberglass reinforced polyester. Nine shelf supports are molded into the walls of the cabinet on 1" (25 mm) centers. Side hinged door frame is constructed of epoxy-coated cold rolled steel. Clear 3/8" (9.5 mm) tempered safety glass window is mounted in the door and is fully gasketed. Door lock has polished chrome finish. Brass needle valve has barbed tip and is designed for 1/4" (6.4 mm) ID vacuum tubing. The cabinet is vacuum tested to 25 inches of mercury. Unit includes two 12" (30.5 cm) square aluminum shelves with twelve 7/8" (22 mm) holes to support crucibles, stainless steel pan for granular desiccant and epoxy-coated steel wire support stand.</p>	<b>2</b>

**SCHEDULE-I**  
**CHANDIGARH COLLEGE OF ENGG. & TECHNOLOGY, CHANDIGARH**  
**SPECIFICATIONS AND ALLIED TECHNICAL DETAILS OF EQUIPMENTS AND**  
**SCHEDULE OF REQUIRMENT FOR GEOTECH LAB, CIVIL ENGG. DEPTT.**

Sr. No.	Name of equipments and specification	Qty. required
1.	<p><b>Standard Penetration Test Apparatus</b>  SPT should confirms to IS:2131, IS: 9640.  Standard Penetration Resistance should measure the number of blows 'N' required to drive a split spoon sampler to a depth of 300 mm using a 65 kg weight falling freely through a height of 750 mm.</p> <p><b>The outfit consists of:</b>  <b>Split Spoon Sampler without Brass liner</b>  <b>50.8 mm OD and 38 mm ID. 1 No.</b>  &amp; should consist of  Body split lengthwise.  Shoe hardened with an inside cutting edge.  Head fitted with a ball check valve.  Adapter to connect 'A' type drill rod.  Drive Weight Cast Iron, of 63.5 kg, 78 mm bore ID approx. 1 No.  Guide Pipe Assembly, Bore 73 mm OD approx. 1 No.  Tripod with Pulley and built-in Ladder. 1 No.  'A' Type Drill Rods 0.5 mtrs. 2 Nos.  Manila Rope 19mm dia 10 m 1 No.</p> <p><b>Split Spoon Sampler with Brass Liner, 50.8 mm OD and 35 mm ID should consist of</b>  Body split lengthwise.  Shoe hardened with an inside cutting edge.  Head of split spoon sampler with  Adapter to connect A-type drill rod.  Brass Liner.</p>	01
	a) Drill Rod 1.0 meter long complete with adaptor	04
	b) Drill Rod 1.5 meter long complete with adaptor	03
	c) Drill Rod 3.0 meter long complete with adaptor	02
	d) Drill Rod 0.75 meter long complete with adaptor	02
	e) Drill Rod 0.5 meter long complete with adaptor	02
2.	<p><b>Compaction Apparatus</b>  It should confirm. Standards IS:2720 (Part 7), IS:2720 (Part 8) IS:9198, IS:10074  The apparatus consists of Compaction mould, complete Rammer with Collar and Base Plate, made of Gunmetal with 150 mm ID, 127.3 mm height 4.9 kg x 450 mm fall. It should have rammer of 4.9 kg x 450 mm fall as per IS: 9198</p>	01
3.	<p><b>Core Cutter</b>  It should confirm to IS:2720 (Part 29)  The outfit comprises of Cylindrical Core Cutter made of steel, 100 mm diameter x 130 mm long, Steel Dolly 25 mm high and 100 mm diameter &amp; Rammer with Steel Rod</p>	01
4.	<p><b>Relative Density apparatus</b>  It should confirm to IS: 2720 (Part XIV)  The outfit consist of Vibrating Table having frequency of approx. 3600 vibrations per min under 115 kg load and Suitable for operation on 220 V, 50 Hz, single phase, AC supply. Cylindrical Metal Unit Weight Mould with 3000 ml capacity with Guide Sleeve with clamp assembly.</p>	01

	<p>Surcharge base plate &amp; Handle  The total weight should be equivalent to 140g /cm for the Mould being used.  Dial Gauge Holder.  Calibration Bar, 75x300x3 mm.  Dial Gauge 25 mm travel, 0.01 mm least count, with an extension piece.</p>	
5.	<b>Small Containers</b> for carrying soil (50 mm dia and 50 mm depth)	15
6.	<p><b>Hydrometer as per IS:2720(Part IV)</b></p> <p>Used for particle size analysis of soil in suspension. The scale is marked from 0.995 to 1.030 in terms of density of suspension.</p>	02
7.	<p><b>Cone Penetrometer</b></p> <p>For determination of liquid limit. It consists of:  Universal Penetrometer  Penetration test cone  Penetration test cup</p>	01
8.	<p><b>Speedy Moisturemeter</b></p> <p>As per IS 2720 (part-2)  Range 0- 50% , Gauge Div. = 1%</p> <p>It consists of carrying case fitted with counterpoised balance for weighing sample, scoop for measuring carbide reagent, a set of steel balls and a cleaning brush.</p>	01
9.	<p><b>Pick Axe</b></p> <p>Approx. 3' length</p>	01
10.	<p><b>Plastic Limit Device</b></p> <p>A rod of 3mm diameter</p>	01
11.	<p><b>IS Sieve Set</b>  (2mm, 1mm, 425<math>\mu</math>, 150 <math>\mu</math>, 75 <math>\mu</math>)</p>	01
12.	<p><b>Field Shear Test Apparatus</b></p> <p>This Apparatus is designed for conducting In-situ Vane Shear test from bottom of bore hole in saturated cohesive deposits, for determining their in-place shearing resistance.  The Equipment consists of torque applicator assembly mounted on abase. A gear wheel. which is marked in degrees, holds a torque ring and is geared to a crank.</p>	01

## SCHEDULE-I

**CHANDIGARH COLLEGE OF ENGG. & TECHNOLOGY, CHANDIGARH**  
**SPECIFICATIONS AND ALLIED TECHNICAL DETAILS OF EQUIPMENTS AND**  
**SCHEDULE OF REQUIREMENT FOR TRANSPORTATION LAB, CIVIL ENGG. DEPTT.**

S.no	Name of equipments and specification	Qty.
1	Light compaction apparatus Ref. Standard BS:1377 Proctor Mould, 105 mm ID, 115.5 mm height, 1000 ml volume. Rammer- (2.5 KG X 300 mm Fall).	01
2	16.0 mm IS Sieve Ref. Standard IS:460 (45 cm dia).	01
3	Containers 125mm x 60mm (dia and height).	10
4	Ring and ball apparatus Ref. Standard - IS:1205 Appratus consists of Electrical heating with a heater and energy regulator. Suitable for operation on 220 V,50 Hz, single Phase,AC supply. Each unit of heat resistant glass beaker approx. 8.5 cm I.D, 12 cm high, Tapered rings 10 mm dia (2Nos.),Ball Centering Guide (2Nos.), Steel Balls of 9.5 mm dia. (2Nos.),Ring Holder (1No.),Electric Heater (Hot Plate 1No.), Thermometer Ranges : 2° C to 80° C & 30° C to 200° C.	01
5	Penetrometer Ref. Standard - IS:1448 (Part 60) Penetrometer with a plunger weighting 47.5g along with 50g and 100g weights, Penetration cone weighing : $102.5 \pm 0.05$ g, Penetration needle, Transfer Dish (Copper), Aluminium Sample Cointainers (set of two).	01
6	Trays 26x21x4 cm	04
7	Keys 18-20 dia 20-22 dia	1 each
8	Standard Tar Viscometer(IS: 1206) With variable autotransformer, suitable for operation on 220 volts, 50 hz, single phase supply	01



**ANNEXURE –III (Please refer Condition No. 14 of Tender Document)**

Tenderers / Bidders are instructed to mention Rate of Excise Duty / VAT / CST / Freight/  
Any other taxes etc. (if applicable). This annexure must be submitted along with technical  
bid

Sr. No.	Name of the Item	Excise Duty (if applicable)	VAT / CST (if applicable)	Freight (if applicable)	Any other tax (if applicable)
1	Buoyancy Balance				
2	Vicat's Apparatus				
3	Le-Chatelier Apparatus				
4	Density Bottle (IS : 2720 (Part-I)				
5	Ultrasonic Pulse Velocity Tester				
6	Profometer				
7	Hot Air Oven High Temperature				
8	Fortin's Barometer				
9	Digital Hot Plates				
10	Refrigerator210Ltr.LG				
11	Digesdhal Apparatus				
12	Vacumm Dessicator				
13	Standard Penetration Test Apparatus				
13 a	Drill Rod 1.0 meter long complete with adaptor				
13b	Drill Rod 1.5 meter long complete with adaptor				
13c	Drill Rod 3.0 meter long complete with adaptor				
13d	Drill Rod 0.75 meter long complete with adaptor				
13e	Drill Rod 0.5 meter long complete with adaptor				
14	Compaction Apparatus				
15	Core Cutter				
16	Relative Density Apparatus				
17	Small Containers				
18	Hydrometer as per IS : 2720 (Part IV)				
19	Cone Penetrometer				
20	Speedy Moisturemeter				
21	Pick Axe				
22	Plastic Limit Device				
23	IS Sieve Set				
24	Field Shear Test Apparatus				
25	Light Compaction Apparatus				
26	16.0 mm IS Sieve				
27	Containers				
28	Ring and ball Apparatus				
29	Penetrometer				
30	Trays				
31	Keys				
32	Standard Tar Viscometer (IS : 1206)				

