



## NATIONAL INSTITUTE OF TECHNOLOGY SIKKIM

Ravangla Campus, Barfung, South Sikkim 77139

[www.nitsikkim.ac.in/](http://www.nitsikkim.ac.in/) (Ph): 03595-260042

Tender No: 01/NITS/CE/Lab Equipment/15-16/29

Date: 15.10.2015

### SUPPLY OF EQUIPMENTS FOR MATERIAL TESTING LABORATORY (For Contracts value estimated to cost less than Rs.25lakhs)

<b>Closing Data &amp; Time for submission of bid</b>	05.11.2015 (4 am)
<b>Opening Date &amp; Time (Technical bid)</b>	06.11.2015 (2 pm )
<b>Bid to be submitted to</b>	Assistant Registrar, National Institute of Technology Sikkim, Ravangla Campus, Barfung, South Sikkim, 737139
<b>Place of opening of bid</b>	Conference Hall, National Institute of Technology Sikkim, Ravangla Campus, Barfung, South Sikkim, 737139
<b>Tender fee</b>	` 500 (non refundable) in form of a Demand Draft drawn in favor of DIRECTOR, NIT Sikkim
<b>Earnest Money Deposit (EMD)</b>	<b>Rs. 45,000/-</b> (Fourty Five Thousand only in form of a Demand Draft drawn in favor of DIRECTOR, NIT Sikkim payable at Ravangla South Sikkim, and valid for a period of 45 days beyond the final bid validity period

### NOTICE INVITING LIMITED TENDER ENQUIRY.

National Institute of Technology (NIT) Sikkim, Ravangla, South Sikkim invites most competitive bid for following Lab equipments. The bid documents for technical bid and price bid separately should be sent directly to the undersigned under Sealed Cover marked "Tender Reference No., Date", and "The Due Date:

Sl. No.	Brief description of equipments	Quantity	Place of Delivery	Installation required , if any
1	<i>Equipments for material testing laboratory for Civil Engineering Deptt. (detailed specification attached at Annexure-B</i>	As per Annexure B	NIT Sikkim	Partly Yes & Demonstration required

The bidders are requested to read the tender document carefully and ensure compliance with all specifications/instructions herein. Noncompliance with specifications/ instructions in this document may disqualify the bidders from the tender process.

Sd/-

Assistant Registrar,

National Institute of Technology Sikkim

## Instructions to Bidders

The technical and financial bids should be quoted separately and put in different sealed envelopes marked “**Technical bid**” and “**Financial bid**” are to be put in separate envelopes, which should be properly sealed. The EMD and Tender fee should be enclosed in the **technical bid** in the form of A/C payee DD in favors of “**Director, NIT Sikkim**”.

1. The financial bid should include the cost of main equipments/items and its accessories. If there is any separate cost for **installation, warranty extension** etc. that should be quoted separately.
2. The quotations shall be submitted in a sealed envelope duly marked “Tender reference no, Date and due date on the corner of the envelope.
3. The printed literature and catalogue/brochure giving full technical details should be included with the technical bid to verify the specifications quoted in the tender. The bidders should submit copies of suitable documents in support of their reputation, credentials and past performance. The rates should be quoted in figures (typed or printed) and cutting should be avoided. The final amount should be in figures as well as in words. If there are overwriting, they should be duly initialed, failing which the bids are liable to be rejected. No alternate price will be entertained in the quotation.
4. All tender documents should have to be sent through courier, speed post or registered post only or may be dropped in the tender box at NIT Sikkim.
5. Quotation received after the closing date/time will not be considered.
6. While sending rates, the firm shall give an undertaking to the effect that “*the terms/conditions mentioned in the inquiry letter/Tender Notice against which the rates are being given are acceptable to the firm.*” In case the firms do not give this undertaking, their rates will not be considered.
7. The supplier/firm must be either original equipment manufacturer (OEM) or authorized dealer/sole distributor of quoted items, the certificate to this effect must be attached.
8. The quantity shown against the item is tentative and may vary as per dynamic requirement of the Institute.
9. In the event of any dispute or difference(s) between the vender Institute (NIT Sikkim) and the vendor(s) arising out of non-supply of material or supplies not found according to specifications or any other cause whatsoever relating to the supply or purchase order before or after the supply has been executed, shall be referred to “The Director, NIT Sikkim”, Sikkim who may decide the matter himself.
10. All tenders in which any of the prescribed conditions is not fulfilled or any condition is put forth by the tenderer shall be summarily rejected.
11. If the successful bidder fails to supply the goods/equipments within stipulated time, then the EMD may be forfeited.
12. Successful bidder shall have to deposit PBG of 10% after the P.O. is endorsed to the suppliers.

**The technical and financial bids should be addressed to**

Assistant Registrar  
National Institute of Technology Sikkim  
Ravangla Campus, Barfung Block, South Sikkim 737139.  
Email: [ram.nitsikkim@gmail.com](mailto:ram.nitsikkim@gmail.com)

**The Technical bid will be opened on 06.11.2015.** The bidders or their authorized representative may also be present during the opening of the Technical Bid, if they desire so, at their own expenses.

**Price bids of only those bidders will be opened whose technical bids are found suitable by the committee appointed for the purpose.** Date and time of opening of price bids will be decided after the committee has evaluated technical bids. In exceptional situation, an authorized committee may negotiate price with the qualified bidder quoting the lowest price before awarding the contract.

**General Terms and conditions:****Clarifications:**

In case the bidder requires any clarification regarding the specification/tender document, they are requested to contact Samyajit Basu (e-mail: [samyajitnitskm@gmail.com](mailto:samyajitnitskm@gmail.com)), Assistant Professor, or the undersigned, NIT Sikkim on or before 03.11.2015.

**Pre – Qualification Criteria:**

- a. Bidders should be the manufacturer / authorized dealer. Letter of Authorization from original equipment manufacturer (OEM) on the same and specific to the tender should be enclosed for items as required.
- b. The bidder must be a registered/authorised firm with VAT /CST registration clearly mentioning the scope of items authorised to supply from the registration authority.
- c. The bidder must have experience in similar supply to central universities, IITs, NITs etc. in the past.

**Prices:**

The Prices quoted should be inclusive of all taxes or duties, packing, forwarding, freight, insurance, delivery and commissioning etc. at destination site (NIT Sikkim, Ravangla, Sikkim). The rates shall be firm and final. Nothing extra shall be paid on any account. The bidder should add 1% on material cost as ECESS payable to Govt of Sikkim.

**Validity:**

The bid should be valid for acceptance for a period of 120 Days. The Bidders should be ready to extend the validity, if required.

**Delivery:**

The Equipment should be delivered and installed within the period as specified in the purchase order and be ready for use within 6 weeks of the issue of purchase order unless otherwise prescribed.

**Liquidated Damage:**

If the bidder fails to deliver and place any or all the Equipment or perform the service by the specified date, penalty at the rate of 1% per week of the total order value subject to the maximum of 10% of total order value will be deducted.

**Warranty**

Bidders must give the comprehensive onsite warranty as required from the date of successful installation of Equipment against any manufacturing defects and also give the warranty declaration that *“everything to be supplied by us hereunder shall be free from all defects and faults in material, workmanship and shall be of the highest quality and material of the type ordered, shall be in full conformity with the specification and shall be complete enough to carry out the experiments, as specified in the tender document.”*

Any deviation in the material, and the specifications from the accepted terms may liable to be rejected and the bidders need to supply all the goods in the specified form to the satisfaction / specifications specified in the order / contract and demonstrate at the their own cost.

**Evaluation of Bids:** The bid Evaluation shall be done for all the equipments together.

**BID PROPOSAL SHEET****Annexure A**

(ON THE LETTER HEAD OF THE BIDDER)

**To**

**Assistant Registrar  
National Institute of Technology Sikkim  
Ravangla Campus, Barfung Block, South Sikkim 737139.**

Subject: “**SUPPLY OF EQUIPMENTS FOR MATERIAL TESTING LABORATORY**” at NIT Sikkim, Ravangla Campus Sikkim

Dear Sir,

We, the undersigned Tenderers, having read and examined in detail the specifications as specified in this document in respect of Supply and Installation of **EQUIPMENTS FOR MATERIAL TESTING LABORATORY (Civil Engineering Deptt.)** at NIT Sikkim, Ravangla Campus Sikkim do hereby propose to supply the required products and services.

<b>Tender No:</b>				
<b>Tender Fee</b> : Submitted		YES/NO (Please strike off whatever is not applicable)		
Amount	No (DD/Ch/BC)	Date of Issue	Name of Bank	Valid up to
	Demand Draft			
<b>EMD</b> : Submitted <b>(Item A)</b>		YES/NO (Please strike off whatever is not applicable)		
Amount	No (DD/Ch/BC)	Date of Issue	Name of Bank	Valid up to

(i) **BID PRICING**: We further declare that the prices stated in our proposal are in accordance with your Terms & Conditions in the bidding document. We further understand that the quantities as specified in this Tender may increase or decrease at the time of Award of Purchase Order as per the requirements of NIT Sikkim.

(ii) **QUALIFYING DATA**: We confirm that we satisfy the qualifying criteria and have attached the requisite documents as documentary proofs. In case you require any further information/documentary proof in this regard during evaluation of our bid, we agree to furnish the same in time to your satisfaction.

(iii) **CONTRACT PERFORMANCE SECURITY**: We hereby declare that in case the contract is awarded to us, we shall submit the performance Guarantee Bond in the form of Bank Guarantee for the amount mentioned at tender document of the total order value.

(v) **PAYMENT TERMS**: We hereby declare that in case the contract is awarded to us, we agree with payment terms specified in the tender documents.

(vi) **CERTIFICATE AND DECLARATION**:

a) I/We certify that no addition/modification/alteration has been made in the Original Tender Document. If at any stage addition /modification /alteration is noticed in the Original Document, I/We will abide by the terms and conditions contained in the original tender document, failing which NIT Sikkim reserves the right to reject the tender and/or cancel the contract

b) It has been certified that all information provided in tender form is true and correct to the best of my knowledge and belief. We hereby declare that our proposal is made in good faith, without collusion or fraud. No forged /tampered document(s) are produced with tender form for gaining unlawful advantage. We understand that NIT Sikkim is authorized to make enquiry to establish the facts claimed and obtained confidential reports from clients.

- c) In case it is established that any information provided by us is false / misleading or in the circumstances where it is found that we have made any wrong claims. Further NIT Sikkim is also authorized to blacklist our firm/company/agency and debar us in participating in any tender/bid in future.
- d) I / We assure the Institute that neither I /We, nor any of my /our workers, will do any act which is improper / illegal during the execution in case the tender is awarded to us.
- e) I / We assure the Institute that I / We will NOT be outsourcing any work specified in the tender document, to any other firm.
- f) Neither I / We, nor anybody on my /our behalf will indulge in any corrupt activities /practices in my /our dealing with the Institute.
- g) Our Firm / Company / Agency is not been blacklisted or banned by any Govt. Department, PSU, University, Autonomous Institute or any other Govt. Organization.
- h) I/We certify that, I have understood all the terms & conditions as indicated in enquiry of the tender document, and hereby accept all the same completely.
- i) I/We, further certify that I/We, possess all the statutory /non-statutory registrations, permissions, approvals, etc., from the Competent Authority for providing the requisite services,
- j) We understand that you are not bound to accept the lowest or any bid you may receive.
- k) I/We hereby declare that this tender on acceptance communicated by you shall constitute a valid and binding contract between us.
- l) I/We certify that the submitted quotation is duly paginated and contains from page no. 1 to .....

Date:

Signature and Seal of the Manufacturer/Bidder

## Technical Compliance of Equipments

(In the letter head of the bidder)

<b>MATERIAL TESTING LABORATORY (CIVIL ENGG DEPTT.)</b>				
Item No	Instruments with Specifications	Quantity	Compliance (Yes/No)	Quoted Model
1	<b>SIEVES</b> :45cm. dia. Sieves in G.I. Frame with NABL Certificate, S.S.Mesh:-Size:- 80mm, 63mm, 50mm, 40mm, 37.5mm, 31.5mm, 26.5mm, 25mm, 22.4mm, 20mm, 16mm, 13.2mm, 12.5mm, 11.2mm, 10mm, 6.3mm, 4.75mm, 3.35mm, 2.36mm.	3 nos each for 19		
2	Pan and cover for 45cm. dia sieves made of G.I.	3		
3	<b>SIEVES</b> :20cm. dia. Sieves in Brass Frame with NABL Certificate, S.S.Mesh:-Size:- 5.6 mm, 4.75mm, 3.35mm, 2.8mm, 2.36mm, 1.70mm, 1.18 mm, 850 micn., 600micn., 425micn., 300micn., 150 micn., 90micn., 75micn.	3 nos each for 14		
4	Pan and cover for 20cm. dia Sieves made of brass.	3		
5	<b>Motorised Sieve shaker with Built-in-digital timer for 20cm dia sieves</b> Carries up to 7 sieves of 150 mm. or 200 mm. diameter. The shaker is driven by a ¼ h.p motor	1		
6	<b>Length Gauge as per IS: 2386 (Part I)- 1963</b>	5		
7	<b>Thickness Gauge as per IS: 2386 (Part I)- 1963</b>	5		
8	<b>Pycnometer as per IS: 2386 (Part III)- 1963</b> with Brass Cone. Capacity 900ml. aprox. having a metal conical screw top with a 6-mm diameter hole at its apex.	6		
9	<b>Measuring graduated jar of 1000ml capacity (Borosil) as per IS: 2386 (Part III)- 1963</b>	5		
10	<b>Measuring graduated jar of 100ml capacity (Borosil) as per IS: 2386 (Part III)- 1963</b>	5		
11	<b>Volumetric flask with stopper capacity 1000ml ("Borosil")</b>	2		
12	<b>Aggregate Impact Tester as per IS 2386 (PART-IV):</b> Shall be consisting of a base weighing between 22-30 kg with a lower surface of not less than 300 mm and support columns to form a rigid frame work around the quick re lease trigger mechanism to ensure an effective free fall of the hammer during test. The free fall shall be adjusted through 380 + 5.0mm. The hammer should be provided with a locking arrangement. A metal top (Hammer) weighing 13.5 to 14.0 kg. The lower end in cylindrical shape, 100mm in diameter and 5cm long with a 2mm chamber at the lower edge and case hardened. Shall be complete with a cylindrical cup, 102mm dia x	1		

	50mm depth, one measure 75mm dia x 50mm deep and tamping rod of circular cross section 10mm in diameter and 230mm long rounded at one end.			
13	<b>Air Permeability Apparatus (Blain type) with ISI Certification mark IS: 5516- 1996</b> The apparatus shall comprise of a permeability Cell "U" tube manometer with stop cock mounted a sunmica wooden stand, perforated metal disc, plunger, Rubber, Stopper, Rubber tube with rubber bulb. ( with ISI certification mark).	5		
14	<b>Aggregate crushing Value Test Apparatus as per IS: 9376, IS:2386 (part IV):</b> Shall consists of M.S. Cylindrical container 150 mm plus minus 0.5 mm dia x 130mm to 140 mm high with base plate 200 to 230 mm/sqr x 6 mm thick. A plunger of 148±0.5 mm dia x 100 to 115 mm high. Shall be supplied complete with tamping rod ; 16 mm dia x 600 mm long, one end rounded and all other necessary accessories.	1		
15	<b>Vicat Apparatus with ISI certification mark As per IS:5513- 1976</b> Shall consists of a metallic frame bearing a movable rod with cap at one end a vicatmould 70mm dia. at the base, 50mm dia. at the top and 40mm high and with a glass base plate, consistency plunger, initial and final needles in a nice case.	5		
16	<b>Cast iron mould for 150mm cube with ISI Certification mark as per IS : 10086-1982</b>	18		
17	<b>Steel mould for 70.6mm cube with ISI Certification as per IS : 10080-1982</b>	18		
18	<b>Cast iron cylindrical mould with diameter 100mm and length 300mm with ISI certification mark as per IS : 10086-1982 with tamping bar 16 mm dia, 600 mm long.</b>	18		
19	<b>Split Tensile attachment ( For Split Tesile Test of concrete) as per IS 5816: 1999</b> Jigs consisting of the following:- Two packing strips of tempered hardboard of nominal thickness 4 mm conforming to IS 1658 having following dimensions of the test specimen: Width: 15±2mm Nominal thickness: 4mm Length: Greater than the length of the line of content of the test specimens Steel loading strips: A steel loading plate having minimum hardness value, when tested in accordance with IS 1500 shall be used between the platen of the machine and the hardboard packing strips. The piece shall not be shorter than the specimen. For cylindrical specimens it shall be of rectangular cross section. For cubic specimens, it shall be a section of a	1		



	cylinder, with a radius of 75 mm, so that the load is applied along a line on the surface of 550 when tested in accordance with IS 1500, shall be the specimen.			
20	<b>Thickness measuring device with dial gauge, having 25mm travel and 0.01mm least count</b>	5		
21	<b>Motorised Concrete Mixer (drum type) for Laboratory (Electrically operated):</b> The mixer shall consist of a steel vessel of 50-60 litres, mounted on a frame. The vessel can be tilted to any angle by a handle. This facilitates mixing and discharge. Blades are provided inside the vessel to mix the material thoroughly. The drum, handle and motor etc. shall be mounted on a steel frame. This model is provided with two large wheels for carting away.  Supplied complete, with motor of 1 HP along with lead wire. Suitable for operation on 220V, 50Hz, Single Phase, AC supply.	1		
22	<b>Slump cone apparatus as per IS 1199:1959</b> with Tamping rod 16mm dia, 600 mm length The mould for the test specimen shall be in the form of the frustum of a cone having the following internal dimensions: Dimensions- Bottom diameter: 200 mm Top diameter: 100 mm Height: 300 mm The mould shall be constructed of metal (brass or aluminium shall not be used) of at least 1.6 mm ( or 16 BG ) thickness and the top and bottom shall be open and at right angles to the axis of the cone. The mould shall have a smooth internal surface. It shall be provided with suitable foot pieces and also handles to facilitate lifting it from the moulded concrete test specimen in a vertical direction as required by the test. The tamping rod shall be of steel or other suitable material, 16 mm in diameter, 600 mm long and rounded at one end.	5		

23	<p><b>Compaction Factor Apparatus for determination of workability of concrete mixes as per IS 1199: 1959.</b></p> <p>The essential dimensions of the hoppers and mould and distances between them are as follows</p> <p>Upper hopper, A  Top internal diameter: 254 mm  Bottom internal diameter: 127 mm  Internal height: 279 mm</p> <p>Lower hopper, B  Top internal diameter: 229 mm  Bottom internal diameter: 127 mm  Internal height 229 mm</p> <p>Cylinder, C  Internal diameter: 152 mm  Internal height: 305 mm</p> <p>Distance between bottom of upper hopper and top of lower hopper: 203 mm</p> <p>Distance between bottom of lower hopper and top of cylinder: 203 mm</p> <p>The hopper and cylinder shall be of rigid construction, true to shape and smooth inside. They shall preferably be made of cast brass or bronze, but stout sheet brass or steel may also be considered satisfactory provided the inside surfaces of the joints are smooth and flush. The lower ends of the hoppers shall be closed with tightly fitting hinged trap-doors having quick release catches. Metal plate 3 mm thick is suitable for the doors. The frame in which the hoppers and cylinder are mounted shall be of rigid construction and shall be firmly located. The cylinder and hoppers shall be easily detachable from the frame.</p>	1		
24	<p><b>Vee Bee Consistometer as per IS 1199: 1959 and 10510:1983 with -</b></p> <p>a) A vibrator table 380 mm long and 260 mm wide resting upon elastic supports</p> <p>b) A metal pot open at both ends</p> <p>c) A sheet metal cone, open at both ends- 30 cm high, bottom diameter 20 cm, and top diameter 10 cm</p> <p>d) A standard iron rod: The standard iron shall be of 20mm diameter and 500 mm in length.</p>	1		

25	<p><b>Flow Test:- Flow Table Apparatus with all accessories and flow mould as per IS 1199: 1959, electrically operated.</b> The mould shall be made of a smooth metal casting in the form of the frustum of a cone with the following internal dimensions: A base 250 mm in diameter, upper surface 170 mm in diameter, and height 120 mm; the base and the top shall be open and at right angles to the axis of the cone. The mould shall be provided with handles.</p>	1		
26	<p><b>Rebound Hammer as per IS 13311 (Part II) : 1992 with calibration certificate.</b> It consists of a spring controlled mass that slides on a plunger within a tubular housing and a testing anvil.</p>	2		
27	<p><b>Battery Operated UltraSonic Pulse Velocity Testing Machine as per IS 13311 (Part I) : 1992 and ASTM C597</b> The apparatus for ultrasonic pulse velocity measurement shall consist of the following: a) Electrical pulse generator b) Transducer - one pair: Any suitable type of transducer operating within the frequency range of 20 kHz to 150 kHz may be used. Piezoelectric and magneto-strictive types of transducers may be used, the latter being more suitable for the lower part of the frequency range. c) Amplifier, and d) Electronic timing device: It shall be capable of measuring the time interval elapsing between the onset of a pulse generated at the transmitting transducer and the onset of its arrival at the receiving transducer. A direct reading digital display is more preferable.</p>	1		

28	<p><b>Electrically operated Digital Compression testing machine (capacity 2000 KN)as per IS 14858: 2000</b>  Loading Unit:  Electrically operated fully welded of steel cross head and machined steel base with solid support plates . The hydraulic jack of 2000 kN capacity shall be fixed on the base. The upper platen shall have a self-aligning action. The lower platen shall rest on the jack ram and positioned centrally with the help of a centering pin. Loading shall be accomplished by the upward movement of the lower platen. Both the lower and the upper platens shall be hardened, ground and polished. A dust cover shall be provided on the jack to prevent any dust going into the cylinder of the jack. Four spacers with locating pins shall be provided to be inserted in between the lower platen and the hydraulic jack to reduce the excessive gap between the two platens when small specimens along with brick platen are required to be tested.</p> <p>Motorized Pumping Unit :  Motorized pumping unit of 2000kN shall be housed in an elegant cabinet and is of two speed design driven by an electric motor. A connector shall be fixed to connect the motor to the mains through ON-OFF Push Button Switch . Release valve preferred to be provided on the top of the pump. A oil reservoir shall be fitted with oil filler plug cum dipstick , drain plug, and safety valve.</p>	1		
29	GI Tray 300x300 mm2	10		
30	GI Tray 450x600 mm2	5		
31	<b>Electric hot air oven:</b> Temperature range 40°C to 300°C. fitted with motorized air circulation system & inner chamber of stainless steel with digital controller cum indicator. Inner chamber size 600mmX600mmX900mm.	1		
32	<b>Platform type electronic weighing machine (Digital)</b> capacity -- 100kg L.C. – 10gm (0. 01kg) Platform size – 400 x 400 mm with Tare facility, In-built Battery Backup and with calibration certificate	1		
33	<b>Electronic weighing machine (Digital)</b> capacity -- 10kg L.C. – 0.1gm with Tare facility, In-built Battery Backup and with calibration certificate	2		

34	<b>Electronic weighing machine (Digital)</b> capacity -- 1kg L.C. – 0.01gm with Tare facility, In-built Battery Backup and with calibration certificate	2		
35	Spring weighing machine (Digital) with calibration certificate capacity -- 20kg L.C. – 0.5gm	1		
36	Trowel as per IS 10086: 1982	10		
37	Wash Bottle 500 ml (plastic)	6		

We also confirm that the normal commercial warrantee/guarantee of \_\_\_\_\_ months shall apply to the offered goods.

Date:

Signature and Seal of the Manufacturer/Bidder

Note:

1. Preference will be given to ISO 9001-2000 certified manufacture/supplier, who can ensure the manufacturing of the machine as per the required testing standards/tender specifications within the specified tolerance limit.
2. Bidders should provide copies of original Memorandum and Articles of Association, defining the constitution of legal status, place of registration and place of business of the company.

**PRICE BID** **ANNEXURE-C**  
(ON THE LETTER HEAD OF THE BIDDER)

<b>MATERIAL TESTING LABORATORY (CIVIL ENGG DEPTT.)</b>				
Item No	Instruments with Specifications	Quantity	Quoted price in Rs.	Total Amount (in words)
1	<b>SIEVES</b> :45cm. dia. Sieves in G.I. Frame with NABL Certificate, S.S.Mesh:-Size:- 80mm, 63mm, 50mm, 40mm, 37.5mm, 31.5mm, 26.5mm, 25mm, 22.4mm, 20mm, 16mm, 13.2mm, 12.5mm, 11.2mm, 10mm, 6.3mm, 4.75mm, 3.35mm, 2.36mm.	3 nos each for 19		
2	Pan and cover for 45cm. dia sieves made of G.I.	3		
3	<b>SIEVES</b> :20cm. dia. Sieves in Brass Frame with NABL Certificate, S.S.Mesh:-Size:- 5.6 mm, 4.75mm, 3.35mm, 2.8mm, 2.36mm, 1.70mm, 1.18 mm, 850 micn., 600micn., 425micn., 300micn., 150 micn., 90micn., 75micn.	3 nos each for 14		
4	Pan and cover for 20cm. dia Sieves made of brass.	3		
5	<b>Motorised Sieve shaker with Built-in-digital timer for 20cm dia sieves</b> Carries up to 7 sieves of 150 mm. or 200 mm. diameter. The shaker is driven by a ¼ h.p motor	1		
6	<b>Length Gauge as per IS: 2386 (Part I)- 1963</b>	5		
7	<b>Thickness Gauge as per IS: 2386 (Part I)- 1963</b>	5		
8	<b>Pycnometer as per IS: 2386 (Part III)- 1963</b> with Brass Cone. Capacity 900ml. aprox. having a metal conical screw top with a 6-mm diameter hole at its apex.	6		
9	<b>Measuring graduated jar of 1000ml capacity (Borosil) as per IS: 2386 (Part III)- 1963</b>	5		
10	<b>Measuring graduated jar of 100ml capacity (Borosil) as per IS: 2386 (Part III)- 1963</b>	5		
11	<b>Volumetric flask with stopper capacity 1000ml ("Borosil")</b>	2		
12	<b>Aggregate Impact Tester as per IS 2386 (PART-IV):</b> Shall be consisting of a base weighing between 22-30 kg with a lower surface of not less than 300 mm and support columns to form a rigid frame work around the quick re lease trigger mechanism to ensure an effective free fall of the hammer during test. The free fall shall be adjusted through 380 + 5.0mm. The hammer should be provided with a locking arrangement. A metal top (Hammer) weighing 13.5 to 14.0 kg. The lower end in cylindrical shape, 100mm in diameter and 5cm long with a 2mm chamber at the lower edge and case hardened. Shall be complete with a cylindrical cup, 102mm dia x	1		

	50mm depth, one measure 75mm dia x 50mm deep and tamping rod of circular cross section 10mm in diameter and 230mm long rounded at one end.			
13	<b>Air Permeability Apparatus (Blain type) with ISI Certification mark IS: 5516- 1996</b> The apparatus shall comprise of a permeability Cell "U" tube manometer with stop cock mounted a sunmica wooden stand, perforated metal disc, plunger, Rubber, Stopper, Rubber tube with rubber bulb. ( with ISI certification mark).	5		
14	<b>Aggregate crushing Value Test Apparatus as per IS: 9376, IS:2386 (part IV):</b> Shall consists of M.S. Cylindrical container 150 mm plus minus 0.5 mm dia x 130mm to 140 mm high with base plate 200 to 230 mm/sqr x 6 mm thick. A plunger of 148±0.5 mm dia x 100 to 115 mm high. Shall be supplied complete with tamping rod ; 16 mm dia x 600 mm long, one end rounded and all other necessary accessories.	1		
15	<b>Vicat Apparatus with ISI certification mark As per IS:5513- 1976</b> Shall consists of a metallic frame bearing a movable rod with cap at one end a vicatmould 70mm dia. at the base, 50mm dia. at the top and 40mm high and with a glass base plate, consistency plunger, initial and final needles in a nice case.	5		
16	<b>Cast iron mould for 150mm cube with ISI Certification mark as per IS : 10086-1982</b>	18		
17	<b>Steel mould for 70.6mm cube with ISI Certification as per IS : 10080-1982</b>	18		
18	<b>Cast iron cylindrical mould with diameter 100mm and length 300mm with ISI certification mark as per IS : 10086-1982 with tamping bar 16 mm dia, 600 mm long.</b>	18		
19	<b>Split Tensile attachment ( For Split Tesile Test of concrete) as per IS 5816: 1999</b> Jigs consisting of the following:- Two packing strips of tempered hardboard of nominal thickness 4 mm conforming to IS 1658 having following dimensions of the test specimen: Width: 15±2mm Nominal thickness: 4mm Length: Greater than the length of the line of content of the test specimens Steel loading strips: A steel loading plate having minimum hardness value, when tested in accordance with IS 1500 shall be used between the platen of the machine and the hardboard packing strips. The piece shall not be shorter than the specimen. For cylindrical specimens it shall be of rectangular cross section. For cubic specimens, it shall be a section of a	1		

	cylinder, with a radius of 75 mm, so that the load is applied along a line on the surface of 550 when tested in accordance with IS 1500, shall be the specimen.			
20	<b>Thickness measuring device with dial gauge, having 25mm travel and 0.01mm least count</b>	5		
21	<b>Motorised Concrete Mixer (drum type) for Laboratory (Electrically operated):</b> The mixer shall consist of a steel vessel of 50-60 litres, mounted on a frame. The vessel can be tilted to any angle by a handle. This facilitates mixing and discharge. Blades are provided inside the vessel to mix the material thoroughly. The drum, handle and motor etc. shall be mounted on a steel frame. This model is provided with two large wheels for carting away.  Supplied complete, with motor of 1 HP along with lead wire. Suitable for operation on 220V, 50Hz, Single Phase, AC supply.	1		
22	<b>Slump cone apparatus as per IS 1199:1959</b> with Tamping rod 16mm dia, 600 mm length The mould for the test specimen shall be in the form of the frustum of a cone having the following internal dimensions: Dimensions- Bottom diameter: 200 mm Top diameter: 100 mm Height: 300 mm The mould shall be constructed of metal (brass or aluminium shall not be used) of at least 1.6 mm ( or 16 BG ) thickness and the top and bottom shall be open and at right angles to the axis of the cone. The mould shall have a smooth internal surface. It shall be provided with suitable foot pieces and also handles to facilitate lifting it from the moulded concrete test specimen in a vertical direction as required by the test. The tamping rod shall be of steel or other suitable material, 16 mm in diameter, 600 mm long and rounded at one end.	5		



23	<p><b>Compaction Factor Apparatus for determination of workability of concrete mixes as per IS 1199: 1959.</b></p> <p>The essential dimensions of the hoppers and mould and distances between them are as follows</p> <p>Upper hopper, A  Top internal diameter: 254 mm  Bottom internal diameter: 127 mm  Internal height: 279 mm</p> <p>Lower hopper, B  Top internal diameter: 229 mm  Bottom internal diameter: 127 mm  Internal height 229 mm</p> <p>Cylinder, C  Internal diameter: 152 mm  Internal height: 305 mm</p> <p>Distance between bottom of upper hopper and top of lower hopper: 203 mm</p> <p>Distance between bottom of lower hopper and top of cylinder: 203 mm</p> <p>The hopper and cylinder shall be of rigid construction, true to shape and smooth inside. They shall preferably be made of cast brass or bronze, but stout sheet brass or steel may also be considered satisfactory provided the inside surfaces of the joints are smooth and flush. The lower ends of the hoppers shall be closed with tightly fitting hinged trap-doors having quick release catches. Metal plate 3 mm thick is suitable for the doors. The frame in which the hoppers and cylinder are mounted shall be of rigid construction and shall be firmly located. The cylinder and hoppers shall be easily detachable from the frame.</p>	1		
24	<p><b>Vee Bee Consistometer as per IS 1199: 1959 and 10510:1983 with -</b></p> <p>a) A vibrator table 380 mm long and 260 mm wide resting upon elastic supports</p> <p>b) A metal pot open at both ends</p> <p>c) A sheet metal cone, open at both ends- 30 cm high, bottom diameter 20 cm, and top diameter 10 cm</p> <p>d) A standard iron rod: The standard iron shall be of 20mm diameter and 500 mm in length.</p>	1		

25	<p><b>Flow Test:- Flow Table Apparatus with all accessories and flow mould as per IS 1199: 1959, electrically operated.</b></p> <p>The mould shall be made of a smooth metal casting in the form of the frustum of a cone with the following internal dimensions: A base 250 mm in diameter, upper surface 170 mm in diameter, and height 120 mm; the base and the top shall be open and at right angles to the axis of the cone. The mould shall be provided with handles.</p>	1		
26	<p><b>Rebound Hammer as per IS 13311 (Part II) : 1992 with calibration certificate.</b></p> <p>It consists of a spring controlled mass that slides on a plunger within a tubular housing and a testing anvil.</p>	2		
27	<p><b>Battery Operated UltraSonic Pulse Velocity Testing Machine as per IS 13311 (Part I) : 1992 and ASTM C597</b></p> <p>The apparatus for ultrasonic pulse velocity measurement shall consist of the following:</p> <p>a) Electrical pulse generator</p> <p>b) Transducer - one pair: Any suitable type of transducer operating within the frequency range of 20 kHz to 150 kHz may be used. Piezoelectric and magneto-strictive types of transducers may be used, the latter being more suitable for the lower part of the frequency range.</p> <p>c) Amplifier, and</p> <p>d) Electronic timing device: It shall be capable of measuring the time interval elapsing between the onset of a pulse generated at the transmitting transducer and the onset of its arrival at the receiving transducer. A direct reading digital display is more preferable.</p>	1		

28	<p><b>Electrically operated Digital Compression testing machine (capacity 2000 KN)as per IS 14858: 2000</b>  Loading Unit:  Electrically operated fully welded of steel cross head and machined steel base with solid support plates . The hydraulic jack of 2000 kN capacity shall be fixed on the base. The upper platen shall have a self-aligning action. The lower platen shall rest on the jack ram and positioned centrally with the help of a centering pin. Loading shall be accomplished by the upward movement of the lower platen. Both the lower and the upper platens shall be hardened, ground and polished. A dust cover shall be provided on the jack to prevent any dust going into the cylinder of the jack. Four spacers with locating pins shall be provided to be inserted in between the lower platen and the hydraulic jack to reduce the excessive gap between the two platens when small specimens along with brick platen are required to be tested.</p> <p>Motorized Pumping Unit :  Motorized pumping unit of 2000kN shall be housed in an elegant cabinet and is of two speed design driven by an electric motor. A connector shall be fixed to connect the motor to the mains through ON-OFF Push Button Switch . Release valve preferred to be provided on the top of the pump. A oil reservoir shall be fitted with oil filler plug cum dipstick , drain plug, and safety valve.</p>	1		
29	GI Tray 300x300 mm <sup>2</sup>	10		
30	GI Tray 450x600 mm <sup>2</sup>	5		
31	<b>Electric hot air oven:</b> Temperature range 40°C to 300°C. fitted with motorized air circulation system & inner chamber of stainless steel with digital controller cum indicator. Inner chamber size 600mmX600mmX900mm.	1		
32	<b>Platform type electronic weighing machine (Digital)</b> capacity -- 100kg L.C. – 10gm (0.01kg) Platform size – 400 x 400 mm with Tare facility, In-built Battery Backup and with calibration certificate	1		
33	<b>Electronic weighing machine (Digital)</b> capacity -- 10kg L.C. – 0.1gm with Tare facility, In-built Battery Backup and with calibration certificate	2		

34	<b>Electronic weighing machine (Digital)</b> capacity -- 1kg L.C. – 0.01gm with Tare facility, In-built Battery Backup and with calibration certificate	2		
35	Spring weighing machine (Digital) with calibration certificate capacity -- 20kg L.C. – 0.5gm	1		
36	Trowel as per IS 10086: 1982	10		
37	Wash Bottle 500 ml (plastic)	6		
	<b>Sub Total</b>			
	<b>Taxes (CST/VAT)</b>			
	<b>Environmental CESS 1%</b>			
	<b>Grand Total</b>			

We agree to supply the above goods/equipments in accordance with the technical specifications for a total contract price of Rs \_\_\_\_\_ (Pls specify the Item groups) \_\_\_\_\_ within the period specified in the Invitation for Quotations.

Date:

Signature and Seal of the Manufacturer/Bidder

Note:

1. Preference will be given to ISO 9001-2000 certified manufacture/supplier, who can ensure the manufacturing of the machine as per the required testing standards/tender specifications within the specified tolerance limit.
2. Bidders should provide copies of original Memorandum and Articles of Association, defining the constitution of legal status, place of registration and place of business of the company.

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**ANNEXURE-D****PROFORMA FOR DIRECT PAYMENT/TRANSFER TO BANK ACCOUNT BY NIT SIKKIM**

<b>Sno</b>	<b>Particulars</b>	<b>Information</b>
1	Firm (Beneficiary) Name	
2	Please enclose a cancelled cheque and copy of PAN card. Cancelled cheque & PAN card is to be submitted only once	
3	Complete Bank Account No. of the Firm [beneficiary]. [in case of change in bank account vendor should write to Account Office]	
4	Bank Name	
5	Bank Address	
6	IFSC Code no	
7	Mobile no (for SMS)	
8	Email ID (for information)	

We undertake that all information provided above is correct and NIT Sikkim will not be responsible in case of any error on the part of firm.

Note: This Performa shall be enclosed with price bid

**[Seal and Signature of the firm]**