



राष्ट्रीय प्रौद्योगिकी संस्थान सिक्किम
NATIONAL INSTITUTE OF TECHNOLOGY SIKKIM
(An Institution of National Importance Under MHRD, Govt. of India)

INVITATION LETTER

Package Code: TEQIP-III/2019/ntst/97

Current Date: 25-Apr-2019

Package Name: NITS/TEQIP-III/CE/04

Method: Shopping Goods

Sub: INVITATION LETTER FOR NITS/TEQIP-III/CE/04

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure-I:

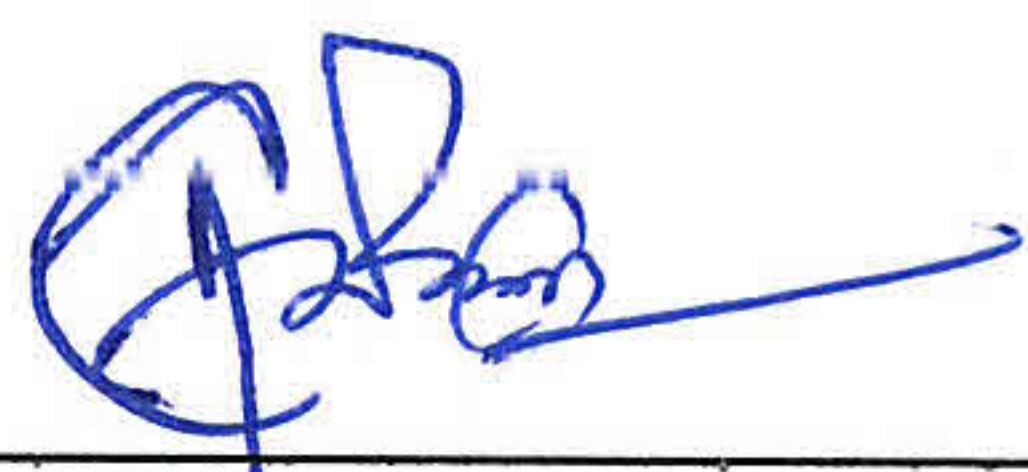
S. No.	Item Name	Quantity	Place of Delivery	Installation Requirement (If any)
1	Equipment for Transportation Engineering Lab	1	NIT Sikkim	YES

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme [TEQIP]-Phase III** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.

3. Quotation:

- 3.1. The contract shall be for the full quantity as described above.
 - 3.2. Corrections, if any, shall be made by crossing out, initialling, dating and re writing.
 - 3.3. All duties and other levies payable by the supplier under the contract shall be included in the unit Price.
 - 3.4. Applicable taxes shall be quoted separately for all items.
 - 3.5. The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
 - 3.6. The Prices should be quoted in Indian Rupees only.
4. Each bidder shall submit only one quotation.
5. Quotation shall remain valid for a period not less than **45** days after the last date of quotation submission.
6. Evaluation of Quotations: The Purchaser will evaluate and compare the quotations determined to be Substantially responsive i.e. which:
- 6.1. are properly signed; and
 - 6.2. Confirm to the terms and conditions, and specifications.

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7. The Quotations would be evaluated for all items together.
 8. Award of contract The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.
 - 8.1. Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of Contract.
 - 8.2. The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be Incorporated in the purchase order.
 9. Payment shall be made in Indian Rupees as follows:
Satisfactory Delivery & Installation - 10% of total cost
Satisfactory Acceptance - 90% of total cost
 10. Liquidated Damages will be applied as per the below:
Liquidated Damages Per Day Min % : 0
Liquidated Damages Max % : 10
 11. All supplied items are under warranty of **24 Months** from the date of successful acceptance of items and AMC/Others is NA.
 12. You are requested to provide your offer latest by **17:30 hours on 31-May-2019**.
 13. Detailed specifications of the items are at **Annexure-I**.
 14. Training Clause (if any) **YES**
 15. Testing/Installation Clause (if any) **YES**
 16. Performance Security shall be applicable: **0%**
 17. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.
 18. Sealed quotation to be submitted/ delivered at the address mentioned below:
National Institute of Technology Sikkim,
Barfung Block, Ravangla, South Sikkim
Pin Code-737139.
 19. We look forward to receiving your quotation and thank you for your interest in this project.



Dr. Achintesh N. Biswas
Nodal Officer (Procurement)
Nodal Officer (Procurement)
TEQIP-III
National Institute of Technology Sikkim

ANNEXURE-I

S. No.	Name of the Item	Quantity	Specification
1.	LOS-ANGELES ABRASION Testing Machine	1	<p>Los Angeles Abrasion testing machine with Counter</p> <p>Ref. Standards - IS:10070</p> <p>Machine consisting of hollow steel cylinder arranged for rotating about its axis in a horizontal position closed at both ends, having an inside diameter of 700 mm and an inside length of 500 mm. Steel wall thickness:-12mm thick, Filler plate thickness:-12mm+thickness of gasket. Stud staff made of mild steel, cover for opening made of mild steel(240X6mm). Shelf made of mild steel wide:-90+/- 2mm, Thick 25+/-1mm, 500mm long, ball bearing heavy duty having 50mm bore. Drive should be by means of a chain running over a sprocket on the stub shaft and a sprocket on the shaft of a gear box coupled to a motor (1hp, 3 phase, 1 440 rpm). A clutch shall be provided. A revolution counter shall be provided to indicate the number of revolutions. The rate of rotation of the cylinder shall be 30-33 rpm.</p> <p>Frame Stiffness:-Approx. 100kn/mm</p> <p>Material of Construction: Special quality low carbon mild steel (Carbon-16%-17%)</p> <p>Paint quality:-Powder coating 70-80 micron thick</p> <p>Counter sensor must be non-contact type.</p> <p>Abrasive Charge - The abrasive charge shall consist of 12 cast iron spheres 48 +/- 2 mm in diameter and each weighing between 390 and 455 g and a total of 12 numbers of spheres weighing 5 000 +/- 25 g shall be supplied</p>
2.	Marshal Stability Testing Machine	1	<p>Marshall Apparatus</p> <p>50kN Single speed , New Model for 4" dia sample table top model</p> <p>Ref. Standards - ASTM D1559 BS:598-197, EN-12697-34</p> <p>Material of Construction: Special quality low carbon mild steel (Carbon-16%-17%)</p> <p>Frame Stiffness:-Approx. 100kn/mm</p> <p>Paint quality:-Powder coating 70-80 micron thick.</p> <p>Maximum Vertical Clearance = 470mm (Platen Down, Cross-head up)</p> <p>Minimum Vertical Clearance = 250mm (Platen up, Cross-head down)</p> <p>Horizontal Clearance = 265mm</p> <p>Platen Diameter = 133mm with Hardness of material(platen): 60 RHC</p> <p>Platen Travel = 25mm</p> <p>Platen Speed = 50.8mm/min</p>

S. No.	Name of the Item	Quantity	Specification
			<p>Rated Power = 375W Dimension (I x w x h) = 550×400×870mm Weight = 60kg Marshall Load Frame Cap 50kN Speed- 50.8mm/min 1 No. Breaking Head Stability Mould 1 No. Compaction Mould Steel, cylindrical 3 Nos. Base Plate 3 Nos. Extension Collar 3 Nos. Compaction Pedestal, 1 No. Manual Operation, comprising a Steel Plate capped on a wooden post. A Mould Clamp is fitted to the top of the plate Compaction Hammer 2 Nos. for use with Compaction Pedestal and Mould, weight 4.5 kg with a free fall of 457 mm Load Transfer Bar 1 No. Sample Eject for 4" dia Sample 1 No. Dial Gauge 25mm travel, 0.01mm least count 1 No. Proving Ring capacity 25 kN. 1 No. Thermal insulation Gloves: 5 nos. Filter Paper 4" dia. : 200 nos.</p>
3.	Thin Film Oven /Loss on heating Oven	1	<p>Thin Film Oven /Loss on heating Oven</p> <p>Oven – A double-walled chamber, rectangular in form, interior dimensions not being less than 292 mm in height from the top of the heating element to the top of the chamber and not less than 298 mm in width and depth. Perforated Metal Shelf - A perforated metal shelf approximately 250 mm in diameter Thermometer - with temperature range 155 to 170°C Container - of metal or glass, cylindrical in shape with a flat bottom and with internal diameter 55 mm and internal depth 35 mm. Thermal insulation Gloves: 2 nos.</p>
4.	Cannon Manning cum Cannon Fenske Viscometer bath with Vaccum Pump	1	<p>Cannon Manning cum Cannon Fenske Viscometer bath with Vaccum Pump</p> <p>Cannon Manning cum Cannon Fenske Viscometer bath with Vaccum Pump (with 12,13 direct flow & 6,7 Reverse flow Tubes), New Design</p> <ul style="list-style-type: none"> ▪Constant Temperature Bath – A suitable bath for immersion of at least 6 vacuum capillary viscometer tubes with a digital temperature controller. The accuracy of the temperature in the bath should be +/- 0.1 C throughout the bath. ▪Silicone Bath Oil suitable up to 150 C , ▪Vacuum System – Capable of maintaining a vacuum within +/- 0.05 cm of the desired level up

S. No.	Name of the Item	Quantity	Specification
			<p>to and including 30 cm of mercury. The system shall consist of vacuum pump, moisture trap, vacuum regulator, manometer with electronic controller, bleed valve, all interconnecting tubing/piping, and any other accessories as needed to complete the vacuum system.</p> <p>Thermometer for Bath – Thermometer of IP-5C of a range from -2 to 300°C as per specification/Thermometer of IP-64C of a range from -20 to 102°C (0.2° resolution) ▪Timing Device – A stop watch or stop clock capable of reading up to ½ second.(Inbuilt Digital System)</p> <p>Tubes :- 1) Cannon Manning Vacuum Viscometer Tube, Size 6, with Manufacturer Certificate(Reverse Flow)</p> <p>2) Cannon Manning Vacuum Viscometer Tube, Size 7, with Manufacturer Certificate(Reverse Flow)</p> <p>3) Cannon Manning Vacuum Viscometer Tube, Size 12,with Manufacturer Certificate(Direct flow)</p> <p>4) Cannon Manning Vacuum Viscometer Tube, Size 13,with Manufacturer Certificate(Direct flow)</p> <p>5) Cannon Fenske Routine Viscometer Tube, size 350, with Manufacturer Certificate(Direct Flow)</p> <p>6) Cannon Fenske Routine Viscometer Tube, size 400, with Manufacturer Certificate(Direct Flow)</p> <p>7) Canon Fenske Opaque, Reverse Flow Type Viscometer Tube, Size 350, Manufacturer Certificate 8) Canon Fenske Opaque, Reverse Flow Type Viscometer Tube, Size 400, Manufacturer Certificate.</p>
5.	Universal Penetrometer with Penetration Cone & Bitumen Penetration Kit	3	<p>Universal Penetrometer with Penetration Cone & Bitumen Penetration Kit</p> <p>Universal Penetrometer with The unit is compact with in-built timer to control duration of penetration preset in factory to 5 seconds. The instrument is provided levelling screws. Consisting of Penetration Needle, Transfer Dish made of copper Aluminium Sample Containers, Set of two.</p> <p>Penetration Cone</p> <p>Bitumen Penetration Kit</p>
6.	Riffle Sample Divider, 14 Slots Riffle Sample Divider, 16 Slots	1	<p>Riffle Sample Divider, 14 Slots Slot width: ¾” (19 mm) Funnel: 7×14” (17×35 cm) Material: Stainless Steel</p> <p>Riffle Sample Divider, 16 Slots Slot width:1” (25 mm) Funnel: 10 × 20” (25 × 50 cm) Material: Stainless Steel</p>

S. No.	Name of the Item	Quantity	Specification
7.	Density Basket & Buoyancy Balance	1	Density Basket & Buoyancy Balance Density Basket Buoyancy Balance, Balance -A balance or scale of capacity not less than 3 kg (Balance—15 kg x 0.5g) Suitable for operation on 220 V, 50 Hz, Single phase, AC supply. to 0-5 g and of such a type and shape as to permit the basket containing the sample to be suspended from the beam and weighed in water
8.	Flash Point (Closed) Pensky-Martens Apparatus (without NPL Certificate) Flash Point (Open) and Fire Point, Pensky-Martens Apparatus Thermometer IP 15C Range 5°C to +110°C Thermometer IP 16C Range 90°C to +370°C	2	Flash Point (Closed) Pensky-Martens Apparatus (without NPL Certificate) Flash Point (Open) and Fire Point, Pensky-Martens Apparatus Thermometer IP 15C Range 5°C to +110°C Thermometer IP 16C Range 90°C to +370°C
9.	Saybolt Viscometer with Various ASTM Thermometer.	1	Saybolt Viscometer with Various ASTM Thermometer. Saybolt Viscometer, new model with two cups-digital, Ref. Standards - ASTM D88, D 244, AASHTO T 72 For the empirical measurement of Saybolt Viscosity of petroleum products at specified temperatures between 70°F and 210 F. This is also used for determining the Saybolt Furol viscosity of bituminous materials at temperatures of 250, 275, 300, 350, 400 and 450°F. It comprises one each of Cylindrical Oil Cup, Universal Tip, Furol Tip, Bath fitted with immersion heater mounted on a stand, Dimmerstat for temperature control, Stirrer with shield. Apparatus is supplied complete with insulated handle and thermometer support, receiving flask, withdrawal tube, filter funnel, thermometer support for cup and circular spirit level. Suitable for operation on 220 V, 50 Hz, Single Phase ASTM Thermometer Type 17F, Range 66° F to 80° F ASTM Thermometer Type 18F, Range 94° F to 108° F ASTM Thermometer Type 19F, Range 120° F to 134° F ASTM Thermometer Type 20F, Range 134° F to 148° F ASTM Thermometer Type 21F, Range 174° F to

S. No.	Name of the Item	Quantity	Specification
			188° F ASTM Thermometer Type 22F, Range 204° F to 218° F ASTM Thermometer Type 77F, Range 245° F to 265° F ASTM Thermometer Type 78F, Range 295° F to 315° F
10.	Standard Tar Viscometer, 10mm cup and ball valve with various Thermometer	1	Standard Tar Viscometer, 10mm cup and ball valve with various Thermometer Standard Tar Viscometer, 10mm cup and ball valve with Thermometer IP 8C, Range 0°C to 45°C and Thermometer IP 9C, Range 40°C to 85°C with Electrical Heating with Immersion Heating Elements and Dimmerstat for controlling the temperature. Complete with 10 mm Cup and Valve. Thermometer IP 8C, Range 0°C to 45°C Thermometer IP 9C, Range 40°C to 85°C Thermometer IP 10C, Range 76°C to 122°C
11.	Standard Tar Viscometer, 4mm cup and ball valve with various Thermometer	1	Standard Tar Viscometer, 4mm cup and ball valve with various Thermometer Standard Tar Viscometer, 4mm cup and ball valve with Thermometer IP 8C, Range 0°C to 45°C and Thermometer IP 9C, Range 40°C to 85°C with Electrical Heating with Immersion Heating Elements and Dimmerstat for controlling the temperature. Complete with 4 mm Cup and Valve. Thermometer IP 8C, Range 0°C to 45°C Thermometer IP 9C, Range 40°C to 85°C Thermometer IP 10C, Range 76°C to 122°C
12.	Marsh Cone Viscometer SS with Stand, Plastic Measuring Cup, 1000 ml, Thermometer 0-50°C, Stopwatch	1	Marsh Cone Viscometer SS with Stand, Plastic Measuring Cup, 1000 ml, Thermometer 0-50°C, Stopwatch
13.	Ring and Ball Apparatus with Thermometer IP 60C & Thermometer IP 61C	3	Ring and Ball Apparatus with Thermometer IP 60C & Thermometer IP 61C Ref. Standards: IS: 1205 Should have a magnetic stirrer with heating facility and digital display of temperature Should consist of Steel Balls of 9.5mm dia, Tapered Rings, Ring Holder and Electric Heater (Hot Plate) It should have Heat adjustment knob Suitable for operation on 220V, 50Hz, Single Phase, AC Supply Thermometer IP 60C Thermometer IP 61C

14.	Centrifuge Extractor, Capacity 1500g Electrically Operated with Filter Paper Discs, Set of 25 numbers	1	<p>Centrifuge Extractor, Capacity 1500g Electrically Operated with Filter Paper Discs, Set of 25 numbers</p> <p>The asphalt centrifuge extractor conform to the explosion-proof standards for the safety of operating personnel.</p> <p>Required features: a removable aluminum bowl assembly, which quickly lifts out of the sealed housing for efficient specimen handling;a simple control knob adjusts bowl speed up to 3600 rpm; an electric brake to stop the centrifuge in seconds when extraction is complete; a heavy cast-aluminum bowl cover latch for secure placing with an integral solvent dispensing cup for easy pouring of the solvent into the bowl.</p> <p>Power: 1/8hp DC motor.</p> <p>Extractors are supplied complete with 25 filter discs. Replacement filter discs (100-packs).</p> <p>Dimensions: 1500g unit: 12" x 20" x 22" (305 x 508 x 559mm)</p>
15.	Ductility Testing Machine with Digital Temp Indicator	1	<p>Ductility Testing Machine with Digital Temp Indicator</p> <p>Ductility Testing Machine with Digital Temp Indicator, Designed to test three specimens simultaneously. The machine consists of a carriage moving over a lead screw. An electric motor driven reduction gear unit ensures smooth constant speed and continuous operation. The entire assembly is mounted with water bath completely encased in metal bound hardwood. It is equipped with an electric pump circulator and heater. The temperature is controlled by digital temperature controller. Two rates of travel i.e. 5 cm/min and 1cm/min are provided. Suitable for operation on 220 V, 50 Hz, Single Phase, AC supply. Ductility Mould, with Base Plate ...3 Nos</p>
16.	Benkelman Beam with Digital Dial Gauge in Wooden Carrying Case (as per IRC:81)	2	<p>Benkelman Beam with Digital Dial Gauge in Wooden Carrying Case (as per IRC:81)</p> <p>Benkelman Beam with Digital Dial Gauge in Wooden Carrying Case (as per IRC:81)</p> <p>Lightweight aluminum construction Unique Telescopic Design and Simplified field setup Compact Design Balanced beam Arrangement to measure road flexure Capable of measuring the deflection of flexible pavements under moving wheel loads accurately Should consist of a reference beam, two-part probe beam and rear zero adjust and should operate on a simple lever arm principle Complete with the digital dial gauge 0.001 x 25mm Travel</p>
17.	Pavement Dynamic Cone Penetrometer	2	<p>Pavement Dynamic Cone Penetrometer</p> <p>Capacity (kg): 8 kg drop weight</p> <p>Material: Mild Steel</p> <p>Cone: 60 degree</p> <p>Diameter: 20 mm</p>

18.	Asphalt Mixer, 5 Lt	2	Asphalt Mixer, 5 Lt Mixer Bol capacity:-5 Ltrs, Mixing Capacity:-3-4 Kgs, Temp Range:-room temp to 140Deg +5Deg,Speed of Blade revolution:-0-80 Rpm, Speed of Blade Rotation:-0-180Rpm,Heater capacity:-1KW,Testing Environment:-10-40Deg C & 80 %RH, Power Supply 220V,Single phase, AC supply
19.	Skid Resistance Tester	1	Skid Resistance Tester Power: Hydraulic; Pendulum Weight: 1500 g \pm 30 g; Sliding Length on the Road Surface: 126 mm \pm 1 mm
20.	Film Stripping Device	2	Film Stripping Device Film Stripping Device, is used to measure the resistance of bituminous mixtures to stripping of asphalt from aggregate particles. It is generally used to evaluate mineral aggregates & to judge the adhesion of the Bituminous materials. The device consists of a disk on which 4 bottles are mounted. The disc rotates at a speed of approx. 100 rpm. The sample, usually the aggregate fraction which passes a 9.525 mm sieve but is retained on a No. 8 sieve, is placed in the bottles & agitated for 15 minutes. The percentage of aggregate stripped can be visually estimated. The device is provided with a preset counter. Suitable for operation on 220 V, 50Hz, Single Phase,AC supply.
21.	Asphalt Mixer Theoretical Density Meter	1	Asphalt Mixer Theoretical Density Meter Asphalt Mixer Theoretical Density Meter, Ref. Standard: ASTM D2041-03 This machine is used for determination of theoretical density of asphalt mixer by vacuum method for applications such as asphalt mixer design, road condition investigation, calculation of porosity and compactness inthe road construction quality management. The equipment has a main body fitted with vacuum gauge, two vacuum containers, vibratory table and control panel. The vibratory table operates on manual and automatic mode to release the entrapped air from the asphalt sample.Suitable for operation on 220V, 50Hz, 1phase, AC supply. vacuum range : 0-100 kpa Vibration loading : 10kg No of sample : Two
22.	Mastic Asphalt Tester	1	Mastic Asphalt Tester Ref. Standard BS 5284 & IS 1195 Water Bath: 440 x 350 x 180mm Mould Size: 150 mm dia. x 25 mm depth Heating power: 1 kW Temperature range: room temp to 85 \pm 0.1°C Accuracy of penetration: 0.01 mm

23.	Marshall Test Water-bath	1	Marshall Test Water-bath A water-bath with microprocessor-based digital controller for precise temperature control throughout their temperature range up to 82°C with at an accuracy of +/-0.1% of input span. Dual digital display for showing the set point and process temperature. It must be fully insulated to help maintain constant temperatures. The capacity should be such that it can accommodate 16 Nos. of 4" diameter or 9 Nos. of 6" diameter Marshall Specimens at a time. Volume is 29.40 Ltrs and dimensions are 19.5" W × 11.5" D × 8" H (495.3 × 292.1 × 203.2 mm). It must include a stainless steel shelf which supports specimens while allowing 2" of free circulating water above and below specimens. A magnetic stirring bar to induce water flow within the bath and ensure a uniform temperature is maintained. All exposed areas should be stainless steel and the front control panel must be both water and corrosion resistant. The dual digital display shows the set point and the process temperature at a glance.
24.	Laboratory Hot Air Oven	1	Laboratory Hot Air Oven Hot Air Oven Electrically Operated and Digitally Controlled, Stainless Steel internal chamber and External Body made of Mild Steel Sheet (Powder Coated Paint) or Stainless Steel Sheet with glass-wool insulation between the chambers. Temperature Controlled by Digital Temperature Controller from ambient to 250°C maintaining a sensitivity of 1°C having automatic cut off. Size of Internal Chamber (in mm): 450 × 600 × 900; Capacity: 243 Ltrs. ; Heater Wattage: 2.5 kW; No. of Shelves: 3. Thermal insulation Gloves: 5 nos.
25.	Laboratory Hot Plate	3	Laboratory Hot Plate Heating Plate: Cast Iron; Controller: Energy Regulator; Power Supply: 220 / 230 Volts, 50 Hz; Temperature: up to 250 °C; Size (Dimension): 6 × 6 inches and 8.5 × 8.5 inches. Optional: Overhead stirrer, PID Controller, Stainless steel heating plate, Digital temperature display, Support stand.
26.	Electronic weighing machine (Digital) with NABL certificate. (10 kg)	3	Electronic weighing machine (Digital) with NABL certificate. Capacity - 10kg L.C. – 0.1gm with Tare facility, In-built Battery Backup.

27.	Electronic weighing machine (Digital) with NABL certificate. (1 kg)	3	Electronic weighing machine (Digital) with NABL certificate. Capacity - 1kg L.C. – 0.01gm with Tare facility, In-built Battery Backup.
28.	Density Bottle (50 ml Capacity)	10	Density Bottle (50 ml Capacity)

FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Date:

To,

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Sl.No.	Description of goods\ (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex-Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs.

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. (Amount in figures)
(Rupees amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of months shall apply to the offered items and we also confirm to agree with
terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name:

Address:

Contact No.: