INVITATION FOR QUOTATION

TEQIP-III/2018/bbek/Shopping/1 **10-Oct-2018**

Sub: Invitation for Quotations for supply of Goods

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,

Sr. No	Brief Description	Quantity	Delivery Period(In days)	Place of Delivery	Installation Requirement (if any)
1	ANILINE POINT APPARATUS - METHOD B	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	YES
2	CHARACTERISTICS OF P.I.D. CONTROLLER	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	YES
3	CLEAVELAND FLASH POINT APPARATUS -WITH DIGITAL TEMP.INDICATOR	1	30	Department of Chemical Engineering, BBEC, Kokrajhar	Yes
4	CLOUD AND POUR POINT APPARATUS - (REFRIGERATED) (-30 C)-	1	30	Department of Chemical Engineering, BBEC,	Yes

	(SINGLE)			Kokrajhar	
5	CONTROL VALVE CHARACTERISTICS	1	30	Department of Chemical Engineering, BBEC, Kokrajhar	Yes
6	Double Door Refrigerator	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
7	FREEZING POINT APPARATUS - WITH MOTORIZED STIRRER	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
8	HEAT TRANSFER IN FORCED CONVECTION	1	30	nt of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
9	KINEMATIC VISCOSITY BATH (ABOVE AMBIENT)-FOR 2	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
10	MELTING POINT APPARATUS-MODEL 935E	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
11	PETROLEUM DISTILLATION- SINGLE - WITH ENERGY	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
12	REID VAPOUR PRESSURE TEST APPARATUS	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes

13	SHELL & TUBE HEAT EXCHANGER	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
14	SINGLE TANK SYSTEM	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
15	SMOKE POINT APPARATUS	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
16	TIME CONSTANT OF MANOMETER	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
17	TWO TANK INTERACTING SYSTEM	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
18	TWO TANK NON-INTERACTING SYSTEM	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
19	ULTRASONIC BATH	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes
20	UNSTEADY STATE HEAT TRANSFER UNIT HEAT TRANSFER IN FORCED CONVECTION	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	Yes

21	Vacuum Pump	1	30	Department of Chemical Engineering, BBEC, Kokrajhar, Assam	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, initialing, 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.
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:

   Delivery and Installation - 80% of total cost

   Satisfactory Acceptance - 20% of total cost

10. All supplied items are under warranty of **12** months from the date of successful acceptance of items.
11. You are requested to provide your offer latest by **14:00** hours on **12-Nov-2018 .**
12. Detailed specifications of the items are at Annexure I.
13. Training Clause (if any) **YES**
14. Testing/Installation Clause (if any) **YES**
15. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.
16. Sealed quotation to be submitted/ delivered at the address mentioned below,
    Chandrapara Kokrajhar (BTAD) Assam-783370
17. We look forward to receiving your quotation and thank you for your interest in this project.

(Authorized Signatory)

Name & Designation

Annexure I

Sr. No	Item Name	Specifications
1	ANILINE POINT APPARATUS - METHOD B	Thermostatically controlled heating unit Motorized stirrer arrangement for stirring the liquids Energy regulator for heating control (Heater capacity : 750 Watts) Borosil make Thin film tube of 400 ml capacity for placing the sample Beaker Beaker cover assembly with bath stirrer and thermometer arrangement Clamps and support rods Supplied with ASTM 33C, ASTM 34C, ASTM 35C Thermometers
2	CHARACTERISTICS OF P.I.D. CONTROLLER	Stirred Tank : Material Stainless Steel, Capacity 2 Ltrs (approx.) Stirrer : Stainless Steel Impeller and shaft coupled with FHP Motor. Flow Measurement : By Rotameter (0-20 LPH), Eureka make Stop Watch : Electronic Heater : Nichrome wire heater. Control Panel comprises of : PID controller : 0-199.9°C Temperature Sensor : RTD PT-100 type With standard make On/off switch, Mains Indicator e
3	CLEAVELAND FLASH POINT APPARATUS -WITH DIGITAL TEMP.INDICATOR	This apparatus consists of the test cup, heating plate, test flame applicator, heater, supports as described in IP and in ASTM specifications. The complete apparatus is manufactured from Brass or Stainless Steel Material Heater is controlled by energy regulator and temperature displayed on Digital temperature indicator fitted to the apparatus. Suitable for operation on 220 Volts, 50 cycles AC mains supply.
4	CLOUD AND POUR POINT APPARATUS - (REFRIGERATED) (-30 C)- (SINGLE)	Insulation : PUF insulation Temperature : With minimum temperature of -30°C Temp. Accuracy : Within ± 1° C Temp. Resolution : 0.1° C Compartment size : 200 mm diameter x 175 mm Height Compressor : Emersion make compressor with CFC Free refrigerant Power supply : 230 V, single phase, 50 Hz Overall Height : 1045 mm approx Overall Width : 600 mm approx Overall Length : 450 mm approx

5	CONTROL VALVE CHARACTERISTICS	Control Valve : 3 Nos. Charactersticks : Linear, Equal(%) & Quick opening Type : Pneumatic Size : ½". Actuator : 15 Sq. Inch. Stroke : 14 mm. Input : 3-15 PSIG. Water Tank : Material Stainless Steel, capacity 25 litres Water Circulation : FHP Pump Champion/Standard make. Overhead Tank : Material Stainless Steel, Capacity 10 Ltrs. Flow Measurement : Rotameter. Pressure Head measurement: By Single column Manometer. Pressure Regulator : 0-2 kg/cm² Pressure Gauge : Bourdon type, 0-2 kg/cm² Piping : Size ½"
6	Double Door Refrigerator	Type Double Door Refrigerator Type Top Freezer Refrigerator Defrosting Type Frost Free Compressor Type Inverter Linear Capacity 284 L
7	FREEZING POINT APPARATUS - WITH MOTORIZED STIRRER	The entire instrument assembly Consists of unsilvered vacuum flask, jacketed sample tube, brass packing gland, Motorized stirrer, stopper, clamps and stand.
8	HEAT TRANSFER IN FORCED CONVECTION	Test section : Horizontal, externally heated, Diameter : 28 mm (approx.) Length : 400 mm (approx.) Blower : FHP of Standard make. Heater : Nichrome Wire. Air Flow Measurement : Variac : 0- 230 V, 2 AmpOrificemeter & Manometer. Control panel comprising of: Digital Voltmeter : 0-300 Volt. Digital Ammeter : 0-2 Amp. Digital Temp. Indicator : 0- 200°C, with multi-channel switch. Temperature Sensors : RTD PT-100 type- 6Nos. With standard make On off switch, Mains Indicator etc. An ENGLISH instruction manual consisting of experimental procedures, block diagram etc. will be provided along with the Apparatus The whole set-up is well designed and arranged on a rigid.
9	KINEMATIC VISCOSITY BATH (ABOVE AMBIENT)-FOR 2	Used for determination of kinematic and intrinsic viscosity of Petroleum products, Bitumen, emulsion and allied materials at constant temperatures in Accordance with ASTM D 445/IS:1206 and other equivalent methods Double walled, outer chamber made of CRC powder coated with toughened Glass window panel, inner chamber made of S.S, FHP motorized stirrer for uniform Temperature, Dual Display Microprocessor Based Digital

10	MELTING POINT APPARATUS-MODEL 935E	"Digital Melting Point Apparatus with resolution 0.1°C to measure melting point/ boiling point of solid and liquid samples. Temperature range up to 300ºC with 4 digit LED display."
11	PETROLEUM DISTILLATION- SINGLE - WITH ENERGY	This apparatus is used for determinations of distillation characterstics of petroleum products. The intrument consists of metal shield to support distillation Temperature range: room temperature to 500?; resolution 0.10.1?. Water bath uniform temperature range: 0 - 60? (compressor refrigeration) ; internal circulation. Recovery chamber thermostat range 3 - 40 ?. Distilling rate: 4 - 5ml/min Volume detection range: 0-101ml; resolution 0.1ml Temperature testing components: PT100 (original temperature sensors of German JUMO company). infrared radiated heating Power consumption: less than 4kw Refrigeration:refrigerated by compressor Ambient temperature: 15 - 40 ? Humidity: 30%~80%RH Power supply: 220±10%V AC 50Hz±2Hz Operation mode program start; simple operation (domestic exclusive technology).
12	REID VAPOUR PRESSURE TEST APPARATUS	vapour pressure of volatile non-viscous petroleum products except liquefied petroleum gases. The Vapour pressure bomb is made of brass heavily Chromium plated and consists of air chamber and gasoline chamber of definite dimension and volume ratio. A pressure gauge of required range is fitted above the air chamber Technical parameters 1. Power supply: AC 220V±10%, 50Hz; 2. Heating power of water bath: 1600 W; 3. Operation temperature of water bath: room temperature~90°C; 4. Temperature controlling accuracy: ±0.1°C; 5. Pressure meter accuracy: ±0.4%; 6. Ambient temperature: -10 ~ 35 °C; 7. Relative humidity: =85%; 8. Total power consumption: not more than 1700 W; 9. Dimensions (m): 0.55*0.52*1.02
13	SHELL & TUBE HEAT EXCHANGER	"System : Water to Water. (1 – 2 shell & tube type) Shell. : Material Stainless steel. Insulated with ceramic wool and cladded with aluminum foil. Dia. 220 mm, Length 500 mm (Approx.) 25% cut baffles at 100 mm distance 4 Nos. Tube :

		ID 13mm, OD 16mm approx., Length 500mm (24 Nos.) Water Flow Measurement : Rotameters (2Nos.) one each for cold & hot fluid. Hot Water Tank : Made of Stainless steel (Insulated with ceramic fibre wool) Hot Water Circulation : Magnetic Pump Heaters : Nichrome wire heater (2 Nos.) Control panel comprising of: Digital Temp. Controller : 0-199.9°C, (For Hot Water Tank) Digital Temp. Indicator : 0-199.9°C, with multi-channel switch Temperature Sensors : RTD PT-100 type-4Nos. With Standard make On/Off switch, Mains Indicator etc. An ENGLISH instruction manual consisting of experimental procedures, block diagram etc. will be provided along with the Apparatus The whole set-up is well designed and arranged on a rigid structure."
14	SINGLE TANK SYSTEM	"Process Tank : Material Stainless Steel, Circular, with level scale (1No.) Capacity 3.5 litres (approx.) Supply Tank : Material Stainless Steel, Capacity 20 litres (approx.) Overhead Tank : Material Stainless Steel, Capacity 5 litres (approx.) Water circulation : FHP Pump, Champion/Standard make. Piping : SS & PVC, size ¼" Flow measurement : By Rotameter The whole unit is assembled rigidly on a base plate."
15	SMOKE POINT APPARATUS	The apparatus consists essentially of four parts lamp body, candle socket, candle and tripod stand. The candle may be raised or lowered by a micrometer screw arrangement. The size of the flame may be measured on a blue scale with white markings 0 to 50 mm. 1.The instrument is composed of bottom case,oil conservator supporter,oil conservator,terrace, wick pipeline, ruler and smoke flue. 2.The oil conservator is composed by wick tube and air tube.The wick tube is tightened in the oil conservator.The oil conservator is installed in the smoke point lamp. 3.The route of the lifting device in the oil conservator is 0~10mm adjusted. convenient and flexible to operate. 4.The bottom case is composed of wick pipeline and ruler.The measuring range of the ruler is 0~50mm, easy to observe. 5.The instrument is designed rationally.Operation is safe and

		reliable and appearance is attractive.
16	TIME CONSTANT OF MANOMETER	Compressed air supply: 1 CFM at 2 bar. Floor area: 1.0 m x 1.0 m Manometer Fluid. Manometer : Material Borosilicate Glass, U tube type, Height 1.0 m. Pressure regulator : 0-2 kg/cm² Stop Watch : Electronic.
17	TWO TANK INTERACTING SYSTEM	Process Tank : Material Stainless Steel, Circular, with graduated level scale (2Nos.), Capacity 3.5 litres each (approx.) Supply Tank : Material Stainless Steel, Capacity 20 litres. Overhead tank : Material Stainless Steel, Capacity 5 litres. Water Circulation : FHP Pump, Champion/Standard make. Piping : SS/PVC, size ¼" Flow Measurement : By Rotameter.
18	TWO TANK NON-INTERACTING SYSTEM	Process Tank : Material Stainless Steel, Circular, with graduated level scale (2 Nos.), Capacity 3.5 litres (approx.) Supply Tank : Material Stainless Steel, Capacity 20 litres. Overhead tank : Material Stainless Steel, Capacity 5 litres. Water Circulation : FHP Pump, Champion/Standard make. Piping : SS & PVC, size ¼" Flow Measurement : By Rotameter. The whole unit is assembled rigidly on a base plate.
19	ULTRASONIC BATH	Ultrasonic cleaner : With stainless steel body & 3 liter tank capacity without heater. Timer controlled operations Ultrasonic Frequency 40KHz Tank Material Stainless Steel Tank Capacity 3L Time Setting 1-30mins Heating Temp 80?(Max) Power Supply AC 100 ~ 120V, 50 / 60Hz AC 220 ~ 240V, 50 / 60 Hz Ultrasonic power 80W Heating power 60W Tank Size 150*135*100mm (L x W x H) Unit Size 180*165*240mm (L x W x H) Inner package 230*232*298mm (L x W x H) N.W. 2.3kgs G.W/CTN (4 pcs) 2.8kgs
20	UNSTEADY STATE HEAT TRANSFER UNIT HEAT TRANSFER IN FORCED CONVECTION	Water Bath : Material- stainless steel Capacity-8 lit. (Approx.)Stirrer for Bath : Stainless Steel Impeller with shaft coupled to a FHP motor. Heater : Nichrome wire heater. Test Cylinder : One each of Stainless Steel & Brass. Control Panel comprises of: Digital Temp. Controller : 0-199.9°C, (For

		Water Bath) Digital Temp. Indicator : 0-199.9°C, Temperature Sensors : RTD PT-100 type With Standard make On/Off switch, Mains Indicator etc. An ENGLISH instruction manual consisting of experimental procedures, block diagram etc.
21	Vacuum Pump	Pumping Speed (L/min) 30 Ultimate Vacuum(Mbar) >0.085(150mbar) pressure(Psi) 40 Pump Head 1 Motor Power(w) 180 Size(L×W×H)(mm) 250×135×210 Weight 8 Diaphragm Material HNBR Noise(dB) <50 Function Vacuum & Pressure

FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Date: _____

To:

_____

_____

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: _____