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Ghani Khan Choudhury Institute of Engineering & Technology

(Centrally funded Institute and Established by Ministry of H.R.D., Govt. of India.)

Office: GKCIET, Vill & Post: Kotwali, Dist: Malda, Pin- 732144, West Bengal

BID REFERENCE: GKCIET/375

date: 22/07/2015

To

Dear Sir,

SUB : Invitation for quotations for supply and installation of Instruments/ Equipment for Department of Mechanical Engineering as specified in **annexure-II**.

1. You are invited to submit your most competitive quotation for the listed items of instruments/equipment as per **Annexure-II**. **For each item, please quote separately in separate envelope superscripted with ITEM Name**. Price bid form as per Annexure-I must be filled with complete numerical values. Please note that each item will include sub-items. **No separate quotations are required for sub-items**.
2. Each bidder shall submit **only one quotation for each item**. Manufacturer/authorized dealers of reputed brands of high technical quality with adequate after-sales support facilities are eligible to apply. The bidder must have supplied similar good to reputed organization to their full satisfaction and furnish a list of the same.
3. **Bid Price (Annexure-I)**
 - a) The contract shall be for the full quantity as described above. Corrections, if any, shall be made by crossing out, initialling, dating and re writing.
 - b) All duties, taxes and other levies payable by the contractor under the contract shall be included in the total price **F.O.R. GKCIET, Malda**.
 - c) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
 - d) The bid price must be quoted in **Indian Rupees**.
4. **The bid submitted by the bidder must comprise the following:**
 - (a) Detailed technical specifications, conforming to the given specifications (vide Annexure – I), and literature /drawings /manuals of the goods/services to be supplied
 - (b) Authorized dealership certificate from the original manufacturer
 - (c) Credentials and list of organizations where the bidder supplied similar items
 - (d) Warranty period (1 year comprehensive on-site)
 - (e) Valid sales-tax / VAT clearance certificate
 - (f) Price bid as per Annexure-I
 - (g) Each setup in annexure II will have related manual and testing certificate.
5. **Validity of Quotation**

Quotation shall remain valid for a period not less than 60 days after the deadline date specified for submission.
6. **Evaluation of Quotations**

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e.

- (a) which are properly signed and
- (b) Conform to the terms and conditions, and specifications.

7. Award of contract

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive, technologically acceptable and who has offered the lowest evaluated quotation price.

- 7.1 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.
- 7.2 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.
- 8. Delivery shall be made at **GKCIET, Malda at free of cost.**
- 9. Payment shall be made immediately within 30 days after satisfactory installation, commissioning and acceptance of the good.
- 10. Comprehensive onsite warranty shall be applicable to the supplied goods for a period of **12 months** from the date of installation.
- 11. The Institute is **exempted from payment of custom and excise duty** on items mentioned below:
 - a) Scientific and technical instruments, apparatus, equipment (including computers)
 - b) Accessories, spare parts and consumables thereof
 - c) Computer software, CD-ROM, recorded magnetic tapes, microfilms, and microchips.
- 12. The successful bidder must submit before the release of payment a valid bank guarantee (**Annexure-A**) on any nationalized bank of 10% of the order value towards **Performance Security** during the warranty period. Else, 90% of the payment will be released retaining 10% of the order value towards Performance Security during the warranty period.
- 13. **Liquidated Damage** will be applicable at the rate of 0.5% per week. The purchaser has the right to cancel the purchase order when LD accumulates to 10 %.
- 14. A bank draft or bank guarantee (**Annexure-B**) worth 2% of the quoted value payable to "**Accounts Officer, GKCIET, Malda**" at Malda will be enclosed with the bid by the bidder towards the **Earnest Money Deposit (EMD)**. The EMD shall remain valid for a period of **105 days**.
- 15. Settlement of any dispute will be made under the jurisdiction of Malda Court.
- 16. You are requested to provide your offer latest by 15 hours on **12/08/2015**
- 17. The purchaser will open the bids at 15.30 hours on **12/08/2015** in the seminar room of GKCIET, Malda, TTC campus
- 18. The bid document must be signed and sealed and enclosed with the bid as a token of acceptance of all terms and conditions in the bid document by the bidder.
- 19. The items must be delivered within **60 days** from the date of placement of purchase order at the respective department.
- 20. Comprehensive onsite warranty for **12 months** from the date of satisfactory installation shall be applicable for offered goods.
- 21. All other terms and conditions of GFR 2005 of the Government of India will be applicable.
- 22. **Place of Delivery: GKCIET, Malda.**
- 23. **Installation / commissioning / demonstration requirement: Installation, commissioning, complete demonstration and successful running GKCIET, Malda**
- 24. **Tender document may purchase or download by demand draft in favour of "Accounts officer, GKCIET, Malda" payable at Malda.**

I look forward to receiving your quotations and thank you for your interest in this project.

The bid must be addressed to:

**The Chairman,
Purchase / E-Tender / Store committee
GKCIET, TTC complex, Maliha, Malda**

Whereas
.....(hereinafter called the "tenderer").....
has submitted their offer dated
for the supply of.....
.....(hereinafter called the "tender").....
against the purchaser's tender enquiry No.
KNOW ALL MEN by these presents that WE
ofhaving our registered office at
.....are bound unto.....
(hereinafter called the "Purchaser")
in the sum of
for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns
by these presents. Sealed with the Common Seal of the said Bank thisday of20

THE CONDITIONS OF THIS OBLIGATION ARE:

- (1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.

- (2) If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:-
 - a) If the tenderer fails to furnish the Performance Security for the due performance of the contract.
 - b) Fails or refuses to accept/execute the contract.

WE undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force upto and including 45 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the authorized officer of the Bank)
Name and designation of the officer
Seal, name & address of the Bank and address of the Branch

MODEL BANK GUARANTEE FORMAT FOR PERFORMANCE SECURITY

To
The Chairman,
Purchase / E-Tender / Store committee
GKCIET, TTC complex, Maliha, Malda

WHEREAS
(name and address of the supplier) (hereinafter called "the supplier") has undertaken, in pursuance of contract no dated to supply (description of goods and services) (herein after called "the contract").

AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

NOW THEREFORE we hereby, affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of
(amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until the day of, 20

(Signature of the authorized officer of the Bank)
Name and designation of the officer
Seal, name & address of the Bank and address of the Branch

Mechanical Lab 1

Item 1

Sl. No.	Name of the Lab	Name of the Equipment	Specification	Quantity
01.	Refrigeration & Air Conditioning Lab	Vapour Absorption Test Rig (Mixer Of Ammonia, Water & Hydrogen)	<p>DESCRIPTION: The equipment will consist of a Vapour Absorption type Refrigerator (Electrolux type) mounted on a portable table with metal panel. The fluid (refrigerant) utilized is mixture of ammonia (NH₃), water & hydrogen contained in a suitable sealed circuit & is externally heated by a resistance type electric heater.</p> <p>SYSTEM</p> <p>COMPONENTS: Refrigeration cabinet with Absorber, Condenser, Generator, Evaporator & electric heater.</p> <p>Measuring Instruments:</p> <p>i) Digital Temperature Indicator : -30 to 199.9 deg.c.</p> <p>ii) Digital voltmeter : 0 to 300 vac</p> <p>iii) Digital ammeter : 0 to 10 ac/ amps</p> <p>iv) Thermocouple selector switch : ON / OFF switches</p> <p>v) Thermocouples : K type fitted at difference locations</p>	1 no.
02.	Thermodynamics Lab	Shell And Tube Heat Exchanger Apparatus	<p>DESCRIPTION:This laboratory scale working model equipment housed on M.S. Square Tube Frame along with instrumentation panel used to determine the overall heat transfer co-efficient and heat exchanger effectiveness.</p> <p>COMPONENTS:</p> <p>SHELL</p> <p>Length : 600 mm including end caps</p> <p>Diameter : 300 mm</p> <p>Material: MS</p> <p>Thickness : 6 mm</p> <p>Baffles: 25% cut 100 mm distance x 4 nos.</p> <p>Insulation: Asbestos cloth</p> <p>TUBES</p> <p>Length: 500 mm</p> <p>Diameter: 10 mm id x 16 mm od</p> <p>Material : copper</p> <p>No. of Tubes : 24 Nos</p> <p>HOT WATER SYSTEM</p> <p>Geyser : 2 nos</p> <p>Capacity : 3 KW</p> <p>Power supply : 230 VAC</p> <p>ROTAMETER FOR MEASUREMENT</p> <p>Range : 0 – 60 cc/sec.</p> <p>Material: Acrylic</p> <p>DIGITAL TEMPERATURE INDICATOR</p> <p>Range: Ambient to 199.9 deg.c.</p> <p>THERMOCOUPLES</p> <p>Length : 1 mtr</p> <p>Type: Cr.Al</p>	1 no.
03.	Thermodynamics Lab	Cut Section Model Of Four	DESCRIPTION: The engine and gearbox	1 no.

		Stroke Single Cylinder Engine Assembly (Hero Honda):	assembly, sectioning of maximum parts and accessories like Cylinder, Cylinder Head, Valve ports, Gear box, housing, Oil sump, etc will be carried out to show the internal constructional details such as Piston, Piston rings, Valves, cam, connecting rod, etc. the model will be mounted on stand. The above model will be painted with SplDuco painting, Electroplating of hardware's will be carried out.	
04.	Thermodynamics Lab	Cut Section Model Of Two Stroke Single Cylinder Engine (Working)	DESCRIPTION: This model is made out of used BAJAJ engine, suitably sectioned to show the internal construction of the engine, gear box, clutch and rear wheel mechanism and the model is fitted on a sturdy iron frame. The complete internal details can be demonstrated by operating the kicker lever to show the working of the piston, sparks from the spark plugs can also be shown.	1 no.
05.	Heat & Mass Transfer Lab	Heat Transfer From Pin Fin	DESCRIPTION: BLOWER Capacity : 350 watts/1.5cumts/m TEST SECTION Diameter : 12 mm Length : 150 mm Material : Brass DUCT Size : 100 x 150 x 500 mm Material : MS with Powder Coating MEASURING INSTRUMENTS Digital Voltmeter, Range : 0 to 300V Digital Ammeter, Range : 0 to 10 Amps Digital Temp.indicator with selector switch : Ambient to 199.9 deg.c. THERMOCOUPLES Type : Cr.Al. Length : 1 mtr. VARIAC Range : 2 amps U TUBE MANOMETER: 01 No.	1 no.
06.	Heat & Mass Transfer Lab	Thermal Conductivity Of Metal Bar	DESCRIPTION: METAL BAR Diameter : 20 mm Length : 430 mm Material : Brass CYLINDRICAL SHELL Diameter : 150 cm Material : MS COOLING WATER CHAMBER Diameter : 75 mm Length : 100 mm MEASURING INSTRUMENTS Digital Voltmeter – Range : 0	1 no.

			<p>to 300 V Digital Ammeter – Range : 0 to 5 Amps Digital Temp.indicator with Selector switch – Range : Ambient to 199.9 deg.c THERMOCOUPLE Type : Cr Al Length : 1 mtr VARIAC Range : 02 Amps MAIN FRAME : MS Square Tube 16 gauge PANEL : MS with Powder Coating</p>	
07.	Heat & Mass Transfer Lab	Heat Transfer Through Composite Wall	<p>DESCRIPION:This laboratory scale working model housed on a MS square tube frame and powder coated metal panel with instrumentation 1) To study the heat transfer co-efficient for the composite wall and to compare the same with that calculated from equations. MILD STEEL, ASBESTOS AND COPPER SLABS Thickness : 150 OD 6 mm thick MEASURING INSTRUMENTS Digital Voltmeter, Range : 0 to 300V Digital Ammeter,Range : 0 to 5 Amps Digital Temp.indicator with : Ambient to 199.9 deg.c. selector switch THERMOCOUPLES Type : Cr.Al. Length : 1 mtr. DIMMERSTAT : 1 no. Range: Suitable</p>	1 no.
08.	Kinematics Of Machines Lab	Slip And Creep Measurement Apparatus	<p>DESCRIPTION: A compact compound gear train. ➤ Variable speed D.C. motor 1 hp/1500 rpm capacity. ➤ Driving pulley ➤ Driven pulley ➤ Rope brake arrangement ➤ Spring balance ➤ Flat belt ➤ Belt tightening arrangement ➤ Input and out put Torque. Control panel ➤ 2-channel digital speed indicator. ➤ Speed controller. ➤ Speed transducer ➤ Digital stroboscope</p>	1 no.
09.	Kinematics Of Machines Lab	Motorised Epicyclic Gear Train Apparatus	<p>DESCRIPTION: External type Epicyclic Gear Train ➤ Bearing blocks for input and output Shafts. ➤ A Gear train with holding drum. Internal type Epicyclic Gear Train ➤ A compact gear train. ➤ Variable speed D.C. motor. ➤ Rope brake arrangement to measure</p>	1 no.

			<p>output</p> <ul style="list-style-type: none"> ➤ Torque and Holding Torque. <p>Control panel</p> <ul style="list-style-type: none"> ➤ Digital RPM Indicator. ➤ Speed controller. 	
10.	Kinematics Of Machines Lab	Cam Analysis Apparatus	<p>DESCRIPRION:</p> <p>Cam:</p> <p>Eccentric type – 1 NO</p> <p>Tangent type – 1 NO</p> <p>Circular arc type – 1 NO</p> <p>Follower:</p> <p>Flat faced type – 1 NO</p> <p>Knife edge type – 1 NO</p> <p>Roller type – 1 NO</p> <p>Cam and Followers are hardened upto 45 HRC to reduce wear of surfaces.</p> <p>Weights:</p> <p>500gms – 1 NO</p> <p>1000gms – 1 NO</p> <p>Motor: Variable speed D.C. motor 1/4 H.P. 0-1500 rpm with speed control unit.</p> <p>Dial gauge of standard make.</p> <p>Digital rpm indicator for speed measurement.</p>	1 no.
11.	Dynamics Of Machines Lab	Static And Dynamic Balancing Apparatus (Balancing Of Revolving Masses Apparatus)	<p>DESCRIPTION: Precision shaft, mounted in ball bearing to a sturdy frame and chains hang the frame. Slotted adjustable hangers - four nos. Drive motor of FHP capacity with variable speed control unit. Scale for measurement of angular and longitudinal position of weights. Cord and container with steel balls for relative weight measurement.</p>	1 no.
12.	Dynamics Of Machines Lab	Universal Governor Apparatus	<p>DESCRIPTION: Governor Mechanism:</p> <p>Four different type of governor mechanism with spring and weights.</p> <ul style="list-style-type: none"> ➤ Watt Governor. ➤ Porter Governor. ➤ Hartnell Governor. ➤ Proell Governor. <p>System to give spindle speed 100 to 500 rpm.</p> <p>Drive Unit: D.C. motor, 1/4 H.P., 1500 rpm.</p> <p>Speed control unit working on 230 V. A.C. supply with 0-200 V. D.C. output.</p> <p>Scale and pointer to measure governor lift.</p> <p>Digital rpm indicator to measure spindle speed</p>	1 no.



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SHORT TENDER NOTICE

Sealed tenders are invited by GKCIET, Malda from bona-fide suppliers / agencies for supply of Lab Equipment's / Machinerics / Accessories. The last date of submitting quotation on **12/08/2015** up to **3 pm**. Quotation will be opened on **12/08/2015** at **3.30 pm**. Interested bona-fide suppliers / agencies may apply to " The Chairman, Purchase / E-Tender / Store committee, GKCIET, TTC complex, Maliha, Malda. For details, visit our website: [http// www.gkci.ac.in](http://www.gkci.ac.in)

Sd/-
AR/GKCIET,Malda