राजकीय इंजीनियरिंग कालेज बॉंदा

(पूर्ववर्ती डा0 भीमराव अम्बेडकर इंजीनियरिंग कालेज आफ इन्फारमेशन टेक्नोलाजी बॉंदा)

TENDER NOTICE No : GEC-1/2016 -02

Tender Document

FOR

Supply & Installation of Equipments/Machines for Laboratories in the Department of Electrical Engineering

AT

Government Engineering College, Banda

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)

Banda Chitrakoot Road

Banda – 210201

(U.P.)

Tender	**Supply & Installation of Equipments/Machines for Laboratories in the Department of Electrical Engineering**
Name of the firm with Full Address and Contact Numbers	
Cost of Tender Document	Rs. 1145/- (Non-Refundable with VAT)
Date of Commencement of Sale	02 March 2016 (Wednesday) (Tender document may be downloaded at www.braecit.ac.in)
Last Date of Submission of Tender Documents	17 March 2016 (Thursday) upto 12.00 Noon
Opening of Tender Documents: Date, Time and Place	17 March 2016 (Thursday) at 12.30 PM Conference Hall, Government Engineering College, Atarra, Banda-210201 (U.P.) Bidder/Authorized Representative of Bidders may attend the bid opening proceedings on above mentioned date.
Earnest Money Deposit (EMD)	As per the schedule/package given in the tender document
Bid Shall Contain	1. All documents in support of Terms & Conditions and Eligibility criteria. 2. Bidders Proforma 3. Cost of Tender by way of Demand Draft only. 4. EMD by way of Demand Draft only.

Tender Issued By[1] :

Signature and Seal of Bidder

[1] The Tender Document may be downloaded from web site http:// www.braecit.ac.in

Government Engineering College

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)

Banda – 210201 (U.P)

A. General Information to Bidders :

[a] Government Engineering College, Banda (Formerly Dr. B R Ambedkar Engineering College of Information Technology, Banda) was established in the year 2010 by the Government of Uttar Pradesh. The college currently offers four year B.Tech program in three disciplines, namely, Mechanical Engineering, Electrical Engineering and Information Technology with intake of Sixty (60) each.

[b] The campus of Government Engineering College, Banda is situated on Banda-Chitrakoot Road, approx 25 Km from Banda and 04 Km from town Atarra.

[c] Various laboratories in the Department of Electrical Engineering have already been established. Few new laboratories as per the curriculum of Dr. APJ Abdul Kalam Technical University, Lucknow need to established soon. A list of these laboratories along-with list of equipments required in each laboratory along with their specifications is given in the tender document.

[d] ***Tenders are being invited for supply and installation of equipments/machines to establish various laboratories. Each laboratory will be treated as one package/unit. It is expected that a firm selected for the establishment of a laboratory shall supply all equipments of that laboratory. The firm will also complete the work of installation/mounting and commissioning of these equipments/machines. This include concrete foundation work (in case of heavy machines), electrical safety/electricity wiring in the laboratory premises to make these equipment's functional.***

[e] Location/Halls for these laboratories have been identified within the main building. All rooms/halls are well finished with electric supply and tile floors.

B. Detail of Laboratories (Package)

Sl. No	Package	Name of Laboratory	Department	Earnest Money (in Rs)
1.	Package-1	Advance Electrical Engineering Lab	Electrical Engineering	Rs 20000=00

C. Submission of the Bid :

1. Sealed and separate tenders in two parts i.e. **Tender Bid-I** and **Tender Bid-II** are invited for **Supply and Installation of Equipments/Machines in the Laboratories of Department of Electrical Engineering at Government Engineering College, Banda** along with earnest money amounting to the value mentioned with each package in the tender document in form of demand draft only. Both envelopes should be kept in one big envelope. The tenders should reach to the undersigned on or before by **17 March 2016 (Thursday)** at **12.00 Noon.**
2. Tenders should be submitted either in person or by post in sealed envelopes on which name of package/unit, tender number and date along with name and address of the firm must be written.
3. **TENDER BID-I** (Technical) shall contain (i) Tender cost (non refundable) (ii) Earnest Money (iii) Proof of PAN and TIN registration document (iv) Standing of the firm (v) Major supplies executed in recent past (vi) Authorized dealer certificate from OEM & Commercial terms and conditions.
4. **TENDER BID-II** (Financial) shall contain rate schedule only. The rates must be quoted in both figures and words. Any overwriting and/or cutting must be duly attested failing which tenders are likely to be rejected.
5. **Tender Cost of Rs 1145=00 (with VAT) and Earnest money** amounting to the **value given in the tender document for each package** in the form of separate Demand Drafts drawn in favour of *Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi*, should also submitted with the tender.
6. Envelopes containing "**TENDER BID-I" and "TENDER BID-II"** should be sealed in two separate envelopes by writing **"TENDER BID-I" and "TENDER BID-II"** appropriately**.**

7. Earnest money and Cost of Tender in the form of Bank Drafts must be placed in a separate sealed envelope by writing "**Earnest Money**" on top of the envelope.
8. All the envelopes as above must be kept and sealed in a big envelop. The Package number/ name of package, enquiry/tender no and the opening date should invariably be mentioned on the top of big envelope.
9. Sealed tenders should be sent to the Director, Government Engineering College, Atarra, Banda-210201(U.P.) so as to reach there latest by **17 March 2016 (Thursday)** at **12.00 Noon**. The sealed tenders may also be dropped in the box kept at office of Registrar at College campus at Government Engineering College campus at Atarra, Banda.
10. Tender shall be opened in the Conference Room at Government Engineering College, Atarra, Banda-210201 on **17 March 2016 (Thursday)** at **12.30 PM**. The firm/supplier may send their authorized representative (letter of authorization is must) for participation during bid opening.
11. The firm/supplier bidding for any package(laboratory) must supply all the equipments listed in that laboratory. The Bid of the firm NOT quoting for supply of ALL equipments of that Laboratory will be rejected.

D. Terms and Conditions for Submission of Tenders

1. Sealed quotations/tenders should be sent to Director, Government Engineering College, Atarra, Banda-210201 so as to reach there latest by **17 March 2016 (Thursday)** at **12.00 Noon**
2. Our enquiry/tender no and the opening date should invariably mentioned on the top of envelope alongwith name of user department. Earnest money and cost of tender must be placed in a separate sealed envelope by writing "Earnest Money" on top of the envelope.
3. Firms will have to attach the list of customers to whom they have supplied similar items in previous year along with performance reports. Total turnover of the firm must be atleast 30 Lacs per year in the last consecutive years. A certificate to these effects should be issued from the sales tax department.
4. The descriptive and illustrative literature of the quoted item in original must accompany with the tender.
5. Tenders received after the closing date and stipulated time shall not be considered and the institute shall not be responsible for any postal delay.
6. Tender should be valid atleast for a period of 04 months. (04 Months from opening date of tender).

7. The rates must be quoted in both figures and words. Any overwriting and/or cutting must be duly attested, failing with quotations/tenders are likely to be rejected.
8. Our terms of payments are strictly after receipt of material and check at our institute regarding the quality and working experience.
9. The rates should be quoted for store, Government Engineering College, Atarra, Banda-210201 inclusive of all taxes/excise duty/fright/package/forwarding expenses/insurance etc.
10. Firm shall be solely responsible for defective supplies and losses caused to college on account of defective supply.
11. Quotation/ Tender brought personally should be dropped into into tender box.
12. Suppliers must be registered with sales/trade tax department and they should mention state registration no.
13. Quantity of items may increase or decrease or may be cancelled upto any extent.
14. No sales tax form “C” or “D” etc for concessional rate shall be provided by the institute.
15. All tender must be accompanied by Bid security as mentioned in the tender document in the form of demand draft / Bankers Cheque drawn in favour of Director, Dr B R Ambedkar Engineering College of Information Technology payble at Jhansi.
16. Quotations deviating from above terms and conditions shall be rejected straight way without assigning any reason thereof.
17. Security bid will be forfeited if the equipment’s are not supplied in given time.
18. If required, the firms have to supply the sample of the items.
19. If certain equipment/material needs to be checked/tested at site of the firm, all expenditure (including TA/DA) of our expert members shall be borned by the firm concerned.
20. Penalty : The firm, which is not able to supply the equipment’s/materials mentioned in purchase order by the due date , shal be liable to pay a penalty equal to 0.10 % of the value of purchase order per day. However this can be waived of by the Director under special circumstances.
21. Ninenty percent of contract price shall be paid to the supplier within 30 days after the delivery / commissioning / testing and completion of the work. The remaining 10% of contract price shall be paid to the supplier within 30 days after the date of acceptance certificate issued by purchaser representative for the satisfactory working.
22. Director has every right to extend the due date if so required but all the quotations/tenders will be opened together.
23. Deduction of TDS/Trade Tax as per Govt Rules.
24. The College may reject any or all quotations/tenders without assigning any reasons.

25. The firm must provide original Guarantee/Warrantee card as issued by the manufacturer, as the case may be.
26. All tender must be accompanied by EMD and Cost of Tender as mentioned in the tender document in the form of demand draft / Bankers Cheque drawn in favour of Director, Dr B R Ambedkar Engineering College of Information Technology payble at Jhansi.
27. Quotations deviating from the terms and conditions shall be rejected straight way without assigning any reason thereof.
28. Director, Government Engineering College, Atarra, Banda-210201 has every right to extend the due date, if so required, but all the quotations/tenders will be opened together.
29. The Government Engineering College, Atarra, Banda-210201 may reject any or all quotations/tenders without assigning any reasons.

For
Government Engineering College,
Atarra,Banda-210201

Government Engineering College

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)

Banda – 210201 (U.P)

TENDER BID-I : Package-1

Tender	Supply and Installation of Equipments/Machines in Laboratories in the Department of Electrical Engineering **Advanced Electrical Engineering Lab**
Name of the firm with Full Address and Contact Numbers	
FOR	**Government Engineering College, Atarra, Banda.** (Located on Banda-Chitrakoot Road, approx 25 Km from Banda and 04 Km from town Atarra)
Cost of Tender Document	DD No : Amount : Bank : Date : (DD must be drawn in favour of **Director, Dr. B R Ambedkar Engineering College of Information Technology** payable at **Jhansi)**.
Earnest Money Deposit (EMD)	DD No : Amount : Bank : Date (DD must be drawn in favour of **Director, Dr. B R Ambedkar Engineering College of Information Technology** payable at **Jhansi)**.
PAN/TIN/TAN No	Attach Proof
Original Equipment Manufacturers/Authorization Letter from Manufacturers for sales/service and technical support.	Attach Proof
Turn Over in the last THREE Financial Years (in Rs)	Attach Proof
Details of Similar Work Executed during last THREE years	Attach Proof

(Date and Signature of Authorized Signatory with Seal on each page)

TENDER BID-II : Package-1

Package No	Laboratory Name	Cost of all Equipments	VAT (In Rs)	Cost Of Installation, Mounting, Commissioning of Equipments	VAT (In Rs)	Total Cost (Rs)
Package-1	**Advanced Electrical Engineering Lab**					

(Date and Signature of Authorized Signatory with Seal on each page)

Annexure

Department of Electrical Engineering

Specification/ Quantity of Equipments/Machines

PACKAGE-1 (Advanced Electrical Engineering Lab)

S.No.	Equipment/Item Name	Specification	Unit Required
1	Study of four quadrant separately excited dc motor drive. DSP based chopper controller with dc motor with proximity sensor, Digital RPM motor (Complete Setup)	Microcontroller Specs: digital Signal Controller, 16 bits, Fixed point, DSPIC30F series, IGBT bridge for power circuit, isolation, Push button switched to change the mode and PWM duty cycle, Four quadrant operation, Four PWM pulse outputs available on the front panel for connecting Oscilloscope, IGBT bridge module with isolated supply for High side and Low Side IGBT firing, Output Current: 1.0 Amp., Input Frequency/Voltage fluctuation: +/-10%	01
2	PLC Trainer Programmable logic controller trainer (MAIN PLC UNIT), Control Panel, Software, communication cables (Complete Setup)	With 10 digital input, 6 digital output (relay outputs), 2 inbuilt analog inputs (0-10 V), Expansion module:- with 2 analog current input (4-20ma), Expansion module:- with 2 analog current output (4-20 ma), Communication ports:- RS-232/485 using serial cable with PC,Inbuilt Ethernet port 10/100 MBPS, supports BOOTP and DHCP, Inbuilt LCD display, Small keypad for parameter selection, Universal power input:- 110 V AC to 240 V AC, EEPROM and Battery backup for DATA and PROGRAM MEMORY, LARGE INBUILT MEMORY 8k, Supports 4 No. HIGH SPEED COUNTERS upto 40KHz, Memory expansion slot, Vibration proof upto 5g, Inbuilt web server. Inbuilt Transformers and Power supplies required for Digital panel meter in the kit, Supplies for various Switches provided inbuilt, supplies for outputs +5V – 2 Nos, +15V - 2 Nos, +12V – 5 Nos, +18V extra power supply for connecting any transmitter from outside, Inbuilt 1 No of DPM + 2 variable power supplies for testing Inbuilt analog inputs, 1 No. inbuilt current source (4-20 Ma) for testing analog current inputs from the expansion module. RS LINX 500 MICROLITE SOFTWARE with the PLC kit,	01

		EDIT offline and ONLINE monitoring. Vast range such as TIMERS, COUNTERS, NO, NC, MATHERMATICALFUNCTIONS,SEQUENTIAL FUNCTIONS, LATCH UNLATCH, PROGRAM FLOW FUNCTIONS)	
3	To study buck boost converter for load voltage control using microcontroller (Complete Setup)	Buck-Boost converter with 1HP PMDC motor with loading arrangement, Closed loop speed control in buck mode only, Speed measurement facility, Microcontroller based firing circuit.	01
4	Induction generator setup. AC squirrel cage induction motor, Control Panel. (Complete Setup)	3 Phase, 2 HP, 415V, T.E.F.C., horizontal foot mounted, class 'B' insulation, Type: DC shunt motor screen protected horizontal foot mounted, Capacity: 3 HP, Cooling: Fan cooled, Volts: 230 V. DC, Regulation: Through Regulator, Insulation: Class 'B' Fitted on ENGRAVED BAKELITE sheet enclosed in almirah type ms box suitable for table mounting consisting of AC & DC Starter, MI Ammeter & Voltmeter, Capacitor bank.	01
5	To study the parallel operation of three phase alternator, (i) Using dark lamp method (ii) Using bright lamp method M G Set: Dc shunt motor/3 phase alternator. (Complete Setup)	Type: DC shunt wound, screen protected. Horizontal foot mounted, with inter poles and 3 points DC starter, having No volt and overload release coils, Capacity: 3 HP, RPM: 1500 (controlled variation) Volts: 230 Insulation: Class 'B' Alternator: Type: 3 ph 4 wire screen protected, horizontal foot mounted, fan cooled, separately excited, Capacity: 2 KVA, RPM: 1500 for max output and frequency of 50 Hz, Volts: 415V, Insulation: Class 'B', Frequency: 50 Hz, Exciter: Type: Static type through slip rings.	01
6	Numerical Type over current relay study trainer/test kit (Complete Setup)	This test set up shall consist of:- Numerical type over current relay: Auxiliary supply 230 VAC, 50 Hz, Current injection source: Continuously variable type, Experiment setup for study of performance and operation of static 3-phase over current relay with arrangement for creating over current and earth fault conditions in all the three phases and other items like CT, time totalizing equipment, tripping arrangement for circuit and other necessary instruments.	01
7	Numerical type over voltage, under voltage relay study trainer/test kit. (Complete Setup)	This set up shall consist of:- Numerical type over voltage/under voltage relay: Voltage input 0-230V, Auxiliary supply 230 VAC, 50 Hz, Voltage injection source: Voltage range 0-230V AC (continuously variable), Experiment setup for study of performance and operation of static Numerical Over/Under Voltage relay with arrangement for creating over and under voltage conditions and other items like time totalizing equipment, tripping arrangement for circuit and other necessary instruments.	01
8	Numerical type over/under frequency relay study trainer/test kit (Complete Setup)	This set up shall consist of:- Numerical type over/under relay: Auxiliary supply 230 VAC, 50 Hz, Variable Frequency voltage source: continuously variable	01

		type Single Phase, Voltmeter, timer with start & Stop facility, Push Button for timer start & stop, 1-Phase variable Frequency source, DP Switch.	
9	Numerical type reverse power relay study trainer/test kit (Complete Setup)	This set up shall consist of:- Numerical type reverse power relay: Auxiliary supply 230 VAC, 50 Hz	01
10	Negative sequence current relay (Numerical type) test set up (Complete Setup)	This set up shall consist of:- Numerical type negative sequence current relay, One three phase 1 KVA Autotransformer with primary and secondary termination provided for three phase AC source, Three phase lamp load with selector switches for creating unbalance.	01
11	AC Motor protection relay test set up To study the three phase AC motor protection using numerical type AC motor protection relay (Complete Setup)	This set up shall be designed to study the three phase AC motor protection using numerical type AC motor protection relay, Three phase AC motor set up 415 V, 3-phase, 50 Hz, 3 HP squirrel cage induction machine with spring balance load set up, Switchgear and Metering panel with required MCCB/ACB, Three Nos. 5A autotransformer for creation of 3 phase unbalance supply voltage, AC Motor protection relay (Numerical Type).	01
12	Transformer Protection Test set up To study the various protection scheme of three phase transformer like differential protection, earth fault protection, overcurrent protection, overload protection (Complete Setup)	This set up shall be consist of: Three phase fault simulating transformer (Typical rating 2 KVA), Metering Panel with MCB, Contractor, Static relay MBCH-12, ALSTOM AREVA make and other measuring instruments etc., One three phase lamp load.	01
13	Three Phase fault analysis study trainer to simulate 3 Phase balanced faults and unsymmetrical faults (L-G, L-L, L-L-G, Single conductor open, Double conductor open fault) (Complete Setup)	It shall be consist of:- 215 V, 3 phase synchronous generator (up to 3 KVA) coupled with 220 Volt, 1500 rpm, (up to 3.7 KW) DC shunt motor, Variable DC source for shunt motor and generator, Transmission line simulated by inductance and resistance enclosed in control panel along with other equipments/devices.	01
14	Cut section model of 3-Phase squirrel cage induction motor (Complete Setup)	Cut out model of 3 phase squirrel cage induction motor, consisting of quarter cut section, including shaft of the enclosed cover to show the constructional details of the motor, Ratings: AC Squirrel cage induction motor, 1 HP, 3 Phase, 415 V, 50 Hz class 'B' Insulation, DOL Starter,	01
15	Cut section model of DC motor shunt/Compound wound (Complete Setup)	Cut model of D.C. Motor Shunt/compound wound, consist of Quarter cut section of the enclosed Cover to show the constructional details of the Motor. The Motor is fitted on an appropriate size of m.s. channel frame. Dc motor,1 Hp, 1500 RPM, 230 V, Insulation class 'B', DC starter suitable for above	01
16	Cut section model of transformer (3 Phase-Core Type) (Complete Setup)	Cut Model of a 3 Phase, core type distribution transformer, consisting of a provision of showing the construction and working of various parts, Transformer 3 Phase 1 KVA, 440/220 V, 50 Hz, natural air cooled.	01
17	Cut section model of transformer (Single Phase-Shell Type) (Complete Setup)	Cut model of single phase, Shell type transformer, consisting of a provision of showing the construction and working of various parts, Transformer 1 KVA, 230/115V, 50 Hz, natural air cooled.	01

18	Cut section model of alternator (3-Phase) (Complete Setup)	Cut section model of 3-Phase alternator, consisting of Quarter cut section, including Shaft of the enclosed cover to show the constructional details of the Alternator, such as Armature, poles and their winding details, shaft with Sliprings, Alternator 1 KVA, 3 phase, 415V, 4 wire, Star connected.	01
19	Cut section model of slipring induction motor 3-phase (Phase Wound) (Complete Setup)	Cut model of three phase Sliprings induction motor, consisting of Quarter cut section of the enclosed cover to show the constructional details of the wound Rotor and Startor, Sliprings, Silicon Steel Lamination are used for Stator and Armature Core (Wound Rotor) assembly. Ratings: (i) Slipring Induction Motor 2 HP., 3 Phase, 415 V, 1440 RPM, 50 Hz. (ii) Rotor Resistance Starter.	01
20	Cut section model of Synchronous machine(3-Phase) (Complete Setup)	Cut section model of 3 phase Synchronous Machine consist of quarter cut section of yoke, So as to show the constructional details of stationary wound armature fixed to body (yoke) and the rotating field poles (dove-tailed type) with damper winding and caging for Auto Induction Start which rests on ball bearing fitted end plates. Ratings: (i) Synchronous Machine 1 KVA, 3 Phase, 415 V, 4 Pole, 1500 RPM, 50 Hz, Star connected. (ii) DOL Starter.	01
21	Electrical Machine Trainer: (Complete Setup)	Suitable for demonstrating the construction and functioning of different types of DC Machines and AC Machines (Single Phase and 3 Phase) should be complete with friction brake dynamometer, instrument panel and power supply units.	01