



INSTITUTE OF TECHNOLOGY, KORBA (C.G.)

BALCO - URGARING ROAD, VILL- JHAGARHA,
POST - RISDI, KORBA, DISTRICT- KORBA (C.G.)
PHONE NO. 098939-05053, 094241-44099, 99814-43708
E-mail: korbait@rediffmail.com, Website: www.itkorba.com

Tender No. ITK/ Pur/2016/1960....

Korba, Dated: 24/09/2016


NOTICE INVITING TENDER


Institute of Technology, Korba, Chhattisgarh invites sealed tender from eligible bidders (Manufactures, or their authorized dealers) for procurement of Laboratory Equipments, Materials, Library Books, Services i.e 1.Civil Engg Lab Equipments 2.Civil Maintenance Work 3. EEE Lab Equipments 4. Electrical Maintenance Work 5.Computer Lab Equipments/ Software 6.Mechanical Lab Equipments 7. Science & Humanities Lab (Physics & Chemistry) 8.Library Books 9.Hostel Related Materials & Utensils 10. Canteen of I.T. Korba (C.G.)

The tender form (Complete set of bidding documents including details of item with quantity for purchase) is available on the website www.itkorba.com from...24/9/16..

A complete set of bidding documents may be purchased by any interested eligible bidder.

The sealed tender should reach Office of the Principal, Institute of Technology, Korba, Balco-Urga Ring Road, Village-Jhagarha, Post-Risdi, Korba, District-Korba (C.G.) 495683 on or before 25/10/2016 by 17.00 hours and will be opened on 26/10/2016 at 12.00 hours. Any bid received after the deadline for submission of bids as prescribed above will be rejected and returned to the bidder. The undersigned has all the rights pertaining to the tender. For any information please contact the I.T. Korba (C.G.).


Principal
Institute of Technology
Korba (C.G.)





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PHONE NO: 098939-05053, 094241-44099, 99814-43708
E-mail: korbait@rediffmail.com, Website: www.itkorba.com

Tender No. ITK/PUR/ PUR/2016/1960

Korba, Dated: 24/09/2016

Last date of selling tender document: 25/10/2016 at 15:00 hrs
Last date of submission of sealed tender document: 25/10/2016 at 17:00 hrs
Date of opening of technical bid of tender document: 26/10/2016 at 12:00 hrs
Tender Document Fee (for each Department/Category) Rs.1,000.00

TERMS & CONDITION OF THE TENDER

Tender documents/Qualification requirements should be submitted in Main envelope as give below:

Tender details:-

1. The tender contains 11 categories/departments i.e 1.Civil Engg Lab Equipments 2.Civil Maintenance Work 3. EEE Lab Equipments 4. Electrical Maintenance Work 5.Computer Lab Equipments/ Software 6.Mechanical Lab Equipments 7. Science & Humanities Lab(Physics, Chemistry) 8.Library Books 9.Hostel Related Materials & Utensils 10. Canteen.

Sr .No	Category/ Department	Approx Cost(Rs) in lakh	Remark
1	Civil Engg Lab Equipments	69.0	Separate tender document fee and separate EMD department wise to be submitted along with the tender document
2	Civil Maintenance Work	6.5	
3	EEE Lab Equipments	44.54	
4	Electrical Maintenance Work	2.0	
5	Computer Lab Equipments/ Software	68.0	
6	Mechanical Lab Equipments	40.0	
7	Science & Humanities Lab	0.3505	
8	Library Books	15.0	
9	Hostel Related Materials & Utensils	3.06	
10	Canteen	----	

If the bidder is interested to apply for more than one category/department then they must apply for each and every category separately i.e they should submit separate tender cost, emd amount, tender bid form etc for each and every category. In case if the firm has quoted for more than one department/section but submitted only one tender fee then the specifications submitted for the first department/section will be considered and the remaining specifications will be ignored Each part of the tender contains two stage bidding: Technical and Commercial bids.

2. In addition to the terms & conditions mentioned below, there are special terms & conditions applied for the category of Library Books & Services.

Tender Document Procurement:-

3. Tender document can be obtained by the prospective tenderer on payment of Rs.1000/-(Rs.One thousand only) through demand draft only in favour of "Principal Institute of Technology, Korba" payable at Korba in person from the college or can be downloaded from our website www.itkorba.com. The DD of Rs.1000/- (Rs. One thousand only) or copy of receipt through e-payment as tender document fee must be submitted with downloaded tender document. The Tender

J. A. G.

[Signature]

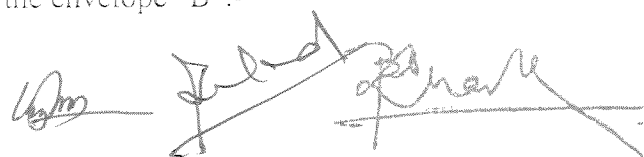
[Signature]

form is non transferable. Any department laboratory items/software/material etc may be quoted only by those firms who have registered TIN in that particular area for sale.

Tender Submission details:-

4. Tender documents should be submitted separately for technical bidding (only the technical specification) and commercial bidding .The sealed tender should be clearly marked as technical bid and commercial bid on the top of the envelope. for each category/department of the tender. The envelope should be marked with the category/department number for which it meant.
5. Tender should be submitted in Duplicate. They should be tagged separately and marked as original and duplicate. Complete tender document must be duly signed, stamped, paged & indexed by the bidder. Unsigned or unpagged bids shall be straightway rejected.
6. Tender document will be prepared in following manner-
 - a. Main envelop "A"- Contains following two envelops "B" & "C".
 - b. Technical Bid envelop "B"- Contains Technical Bid with hard and soft copy (CD). Annexure I. Following should be kept in envelope "B" along with all mentioned documents as per clause 7 of this tender document.
 - I. Technical Bid (Annexure I) with catalogue and brochure.
 - II. Firm registration TAN/PAN/TIN/Turn Over and experience
 - III. Income Tax Clearance
Sales Tax Clearance
CST/VAT Clearance
 - IV Tender Document Fee Receipt/DD/Proof of e-payment
 - V EMD/DD
 - VI Form A(Annexure III A) and Section XII(Annexure-IV) as per Tender Document
 - c. Financial bid "C"- Contains financial bid for the tender with hard and soft copy(CD). Annexure II.
 - d. On the top of each envelope of Commercial bid, bidder should clearly mention Tender No., Due Date, Category/department, and Item Name with seal & sign of bidder.
 - e. Item no. and page no. of the tender form should be arranged strictly in chronological order.
 - f. There should be no alternations/corrections made in the quoted rates. Rates should always be in figures and words.
 - g. Tender should be valid for at least twelve months from the date of opening the commercial bid of the tender. The price should be firm without variations of any kind.
 - h. Bidders should compulsorily quote the minimum delivery period required for the supply of items if the tender is awarded.
7. Following documents should be kept inside the envelope "B":-





- a. Covering letter for submission of bid which should indicate- Index for all the submitted documents for the tender all particulars of bidders via address, phone no., e-mail, name of the authorized person(s), TIN/TAN/ Service Tax No. etc. for correspondence. Category/department, Item & Name for which bid is submitted, etc.
 - b. Completely filled Form - "A" with signature & seal of authorized person which includes Earnest Money/ Bid security details - @ 5% of total tendered value. Tender received without form "A" duly signed (As token of acceptance of tender conditions by the tenderer) will not be accepted (Annexure-III a).
 - c. The contents of the form "A" should not be changed or amended otherwise will not be acceptable by this office.
 - d. Demand Draft/ copy of e-Pay Receipt for earnest money/ bid security. Bank Guarantee will not be accepted against EMD amount in any condition.
 - e. Valid certificates related to TIN / TAN / Service Tax No. etc. issued by competent Govt. authority pertaining to tender.
 - f. Undertaking for "After Sales Services" on the letter head of bidder.
 - g. Affidavit in prescribed format as given in Annexure-V on non judicial stamp paper of Rs. 50/- certified by Notary.
 - h. Manufacturer's Company Profile showing its product range, turn over, web-address and certifications like ISO/ ISI etc. along with the documentary proof of such certificates if company/ products bear such certificate.
 - i. All relevant particulars, illustrative catalogue/ brochures etc. which should indicate the products technical specifications for all packages which is submitted in the bid.
 - j. Filled Manufacturer's Authorization Form as given in SECTION XII (Annexure-IV) for all the quoted items.
 - k. The bidder should submit the Manufacturer's Make/ Brand name being used for marketing and registration no. of Commercial Tax Department.
 - l. Category/department, Item wise Commercial Bid in prescribed format (i.e. Annexure-II) should be submitted (Separately for each item) in individual envelope along with the soft copy in CD (MS- Excel).
8. The fact that the tenderer has signed the form "A" will mean that the tenderer has completely accepted Terms & Conditions of the tender and that the tenderer agrees to abide by these Terms & Conditions of the tender. No deviation from

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Terms & Conditions of the tender will be accepted under any circumstances. The Terms & Conditions of the tender and clause usually printed on the party's tenders or bills will not be binding on this department.

Tender opening details:-

9. Complete Tender Documents will be opened on the prescribed date and time in the presence of Purchase Committee/ related department members and Bidders (who choose to attend) / representatives who choose to attend. The Bidders / representatives willing to attend the bid opening event should submit authorization to attend and shall sign in a register evidencing their attendance.
10. Commercial bid opening dates will be finalized after opening of technical bids and shall be informed to the technically qualified tenderers separately.
11. Commercial bids of those tenders, which are found technically suitable, will only be opened and considered for the items technically approved.

EMD Details:-

12. The bid should be accompanied by Earnest Money/ bid security @ 5% of total tendered value (for all quoted materials/ services) as part of the bid, in the form of Demand Draft of Schedule Bank/ copy of receipt by internet. Payment/ Draft should be in favour of "Principal, Institute of Technology, Korba" payable at Korba, Chhattisgarh. The EMD has to be deposited department wise and then laboratory wise to avoid ambiguity in future. Earnest Money submitted in any other form will not be accepted and the tender will be rejected. Unsuccessful bidder's earnest money will be discharged/ returned as promptly as possible.
13. The EMD will be treated as security deposit in case of selected tenders. EMD/Security deposit will be forfeited in case of breach of agreement of supply by the tenderer (supplier). If purchase order is issued, the Security Deposit will only be returned after warranty period of supply (which will be as per point No.28 mentioned in terms & conditions of this Tender document), if the machine/ equipment/ material/ services will found satisfactory at that time.
14. The supplier can quote part or full tender requirements of the department (applicable to all tender categories except Library/ services) and proportionately the EMD may be submitted as mentioned in respective laboratory/department.
15. If any document given by the bidder is found fake/manipulated, then the entire EMD deposited by the bidder in the tender will be forfeited without assigning any reason and such bidder will not be entitled for future biddings.

Award of Tender:-

16. Contracts will be awarded only for those items which have minimum 3(Three) valid rates.
17. Contracts for procurement will be awarded as per the priority and availability of budget. Suppliers have to deliver the specified items within stipulated time. One time extension for two months may be granted on request for one month at 2% penalty.

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18. The undersigned reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time without assigning any reason prior to contract award, without thereby incurring any liability to the affected bidder(s).
19. The undersigned reserves the right at the time of Contract award to increase or decrease the quantity of goods originally specified without any change in unit price or other terms and conditions.
20. As per State Government policy, Vendors registered within the State will be given advantage in price bid limited to the applicable VAT compared to the price quoted by the vendors registered outside CG State.

Supply & Payment Terms & Conditions:-

21. The rates quoted by the bidder must be inclusive of all the charges (like – transportation, installation charges, delivery charges, inspection charges, training charges, charges for services, excise duty, customs duty etc.) except VAT. The VAT should be mentioned separately. Loading/ Unloading charges shall be borne by the supplier.
22. The tender matter including prices should be typed neat- corrections/ overtyping in prices will not be accepted. However if correction/ overtyping is there, it should be attested by the tenderer with signature, date and their seal. Hand written and Xerox tender will not be accepted.
23. If the Supplier fails to deliver any or all of the Goods or to perform the services within the stipulated delivery period(s) specified in the Contract, then Principal, Institute of Technology, Korba (C.G.) shall, without prejudice to its other remedies under the Contract, forfeit the Bid Security and the order is liable to cancel.
24. If the supplier/ dealer fails to supply the items as per the specifications, items will not be received by the consignee and supplier/ dealer has to take them back on his/ her own cost. The supplier / dealer may supply the items of higher specifications (due to manufacturing obligations) if accepted by consignee after examination and testing.
25. The undersigned may get, the items supplied by the successful tenderer, inspected on receipt of the same by such person or persons he deems fit or may reject the items as in his opinion do not come up to the specification. The decision of the under signed will be final in such cases.
26. The one time extension (if application received within specified time) may be granted at the discretion of the undersigned. The liquidated damage at a rate of 2% per month of the contract price of the full cost of the tool/equipment/machine is liable to be charged for the extension of the delivery period(which includes the date of demonstration). Exemption in penalty may be given in a particular case of default by the institute side for the period of delay. Once the maximum (two months) is reached, the Purchaser may consider termination of the Contract. Equipment received after the delivery period or dispatched after the delivery period mentioned in the order will also be subjected to this liquidated damage or termination of contract. Power to extend delivery period would remain reserved with Principal, Institute of Technology, Korba (C.G.).

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27. 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. All items will come under warranty of two years which will cover free servicing/spares if any.
28. 80% payment will be released after the safe receipt of goods, as per the specifications given in purchase order & and after ensuring successful installation, commissioning and performance of supplied items etc. Bills will be submitted in triplicate for payment. 5 % of the payment will be released at every six month interval till two years subjected to successful training/demo of the equipment/software to staff/students and satisfactory report by users.
29. Items should strictly comply the standards/norms as prescribed in BIS specifications.
30. The tenderer will have to submit samples on demand before the technical team at the purchaser end, in the prescribed time limit. In case the samples are not produced in the prescribed time it shall be open to the undersigned to forfeit Earnest Money Deposited by the tenderers.
31. Prices shall be quoted in Indian Rupees only. All quoted rates should be for new and unused items unless and otherwise specified so.

Other Terms & Conditions:-

32. Request for the supply of any details regarding quotation or comparative chart or any other enquiry in respect of the tenders received will not be entertained. Exact and earliest possible time of delivery should be indicated in the tender against each item. Other things, being equal, the tenders who give earliest delivery period will be preferred while comparing the rates. The delivery period given in the order will be the date of receipt of the equipment in the institute and not the date of dispatch of the equipment by the supplier.
33. Either a manufacturer or their authorized dealer can bid for the items. For each of the quoted items, appropriate documentary evidence for being a Manufacturer or their authorized dealer (Manufacturer's Authorization Form given in SECTION XII as Annexure-IV) must be submitted necessarily. In absence of above the bid will be treated non- responsive & likely may be rejected.
34. Vague expression such as "complete with standard accessories" or "as per your specification" will not be accepted. The tenderers must specifically indicate all specification of the items and should mention clearly what item will be supplied under "accessories" with the Equipment/ Machinery in price schedule enclosed as Annexure-I. Any ambiguity or vagueness in tender for item concerned will be liable for rejection.
35. The bids will be examined to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are in order.
36. Samples sent by the party and the approved samples will be adjusted in regular supply and in the case of rejection, they will be returned back to the party at his cost.
37. The rejected items will be returned on the tenderer's cost.
38. All the equipments shall be suitably protected, coated, covered or boxed and crated to prevent damage or deterioration during transit/ handling and storage at site till the time of installation/ commissioning. While packing all the materials.


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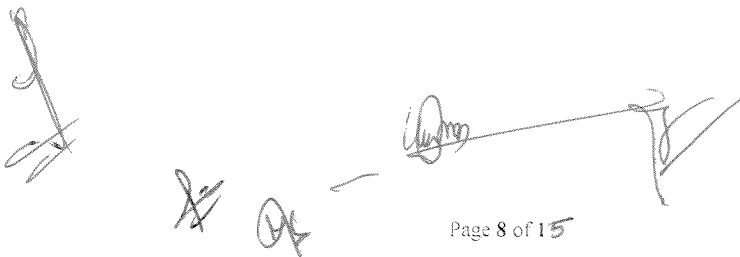
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the limitations from the point of view of availability of railway wagon sizes. in India should be taken into account. The contractor shall be responsible for any loss or damage during transportation, handling and storage due to improper packing.

39. It must be noted that normally all correspondence and transactions will be made only with the parties whose tenders have been accepted and not with anybody else.
40. At any time prior to the deadline for submission of bids, the Purchaser may modify the bidding documents by amendment. All prospective bidders who have purchased the bidding documents will be notified of the amendment by uploading in the website www.itkorba.com or by E-mail, letter or by fax and will be binding on them.
41. No offer should be made for imported item for which import license has to be arranged by the undersigned. The entire imported item will have to be delivered in the institute and payment will be made in Rupees only.
42. Quality and price of the product will be the decisive factors for the award of tender. Merely quoting the lowest price without desired quality may lead to the consideration of next suitable tenderer.
43. Other terms and condition (if not specified in this tender document) will be as per C.G. State Government store purchase rule. Any dispute arising out of this tender or supply of any other matter will fall under the civil jurisdiction of Korba district only.


Principal
Institute of Technology
Korba (C.G.)



TECHNICAL SPECIFICATION SCHEDULE

Department/Section.....,
 Laboratory Name/Work.....
 Name of Bidder.....

Item serial no	Item Code	Specification of items, which bidder offers	Name of Accessories with specification (if any)	Make/ Brand of item	Manufacturer's Name	Catalogue/ Brochure Page No. (as indexed by you)	Mention the deviations from the required specifications (if any)	Whether higher of lower side (if higher specifications or shortfall if any)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Note:-

- Specifications quoted should strictly comply the asked ones. However with valid justification the higher/lower specifications may be quoted (Column 8). Consideration of such deviated specifications will be purely at the discretion of the concerned department & Principal I.T.Korba.
- Vendor has to specify if the specifications quoted by him are extra and more modernized than the asked ones (Column 9)
- Specifications of the item which bidder offers as per the catalogue / brochure / Technical details etc. will be considered for comparison and selection. Incomplete details will not be considered for comparison.

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FORM - A

(To be signed and returned along with the tender)

I/We (Full name).....

Address.....

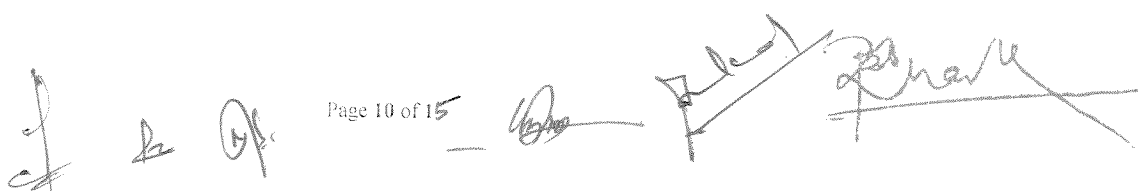
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have read the Term and Condition of the tender for the supply of various stores as per your tender notice for supply _____ for _____ Chhattisgarh due on _____ and I/We fully accept the Term and Condition of the Bid supplier to me / us with the Bidding Documents.

I/We also undertake to permit the inspection our accounts and records and other documents related to the bid submission and contract performance and to have them audited by auditors appointed by the society.

It is further noted that if any manipulation is found at any stage, the tender / Contract / Supply order shall be rejected and the Principal, I. T. Korba, Chhattisgarh may take any action against me/ us, as she/ he deems appropriate.

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Details of Earnest Money/ bid security in the form DD/BG @ 5% of the total tender value for which bid is submitted) :

(a) DD/BG No.-----

(b) Values `-----

(c) Name of Bank-----

Date:-----

Signature
(Name & full Address of the firm)

[Handwritten marks and signatures]

On Non Judicial Stamp Paper of Rs. 50/-

निविदाकर्ता द्वारा निविदा प्रपत्र के साथ दिये जाने वाला

शपथ-पत्र

निविदाकर्ता फर्म मेसर्सकी ओर से मुझे/हमें अधिकृत किया गया है और मैं/हम निम्नलिखित कथन शपथपूर्वक करता हूँ/करते हैं कि :-

1. मैंने/हमने निविदा की सारी शर्तें ध्यानपूर्वक पढ़ी हैं और उनसे सहमत हैं तथा उन्हें मानने के लिये वचनबद्ध हैं।
2. मेरे/हमारे द्वारा संलग्न किये गये सभी दस्तावेज सही है और उनमें किसी प्रकार की कांट-छांट नहीं किया गया है एवं गलत जानकारी नहीं दी गई है।
3. मेरे/हमारे द्वारा कमर्शियल बिड में सामग्रियों के लिये जो स्पेशिफिकेशन दिया गया है और उनके सपोर्ट में जो भी संबधित दस्तावेज, कैटलॉग/ब्रोशर्स आदि संलग्न किये गये हैं उनमें लिखा विवरण निर्माता द्वारा जारी किया गया है एवं मूल रूप में हैं और उनमें कोई फेरबदल या कांट-छांट नहीं किया गया है।
4. मेरे/हमारे द्वारा निर्माता से मुझे/हमें जारी आर्थोराइजेशन प्रमाण पत्र जो कि बिड के साथ संलग्न किये गये हैं वे सही एवं मूल रूप में हैं और उनमें कोई फेरबदल नहीं किया गया है।
5. यदि हमें क्रय आदेश आपूर्ति का अवसर दिया जाता है तो, मैं/हम दिये गये क्रयादेशानुसार सामग्रियों को निर्धारित समय सीमा में स्पेशिफिकेशन के अनुसार सप्लाय करने के लिये बाध्य हैं। देर होने या सामग्रियों के स्पेशिफिकेशन में अन्तर होने पर मुझे/हमें दिये गये क्रयादेश को निरस्त किया जा सकता है एवं संस्था को होने वाले नुकसान की भरपाई मेरे/हमारे द्वारा की जायेगी।
6. मेरे/हमारे द्वारा दी गई जानकारी असत्य पाये जाने पर मुझे/हमें एवं हमारी फर्म को निविदा में भाग लेने से वंचित किया जा सकता है।

दिनांक

हस्ताक्षर :

नाम :

धारित पद :

फर्म का नाम :

EARNEST MONEY / BID SECURITY FORM

To:
The Principal,
Institute of Technology,
Korba (C.G.)

WHEREAS.....(Name of Supplier) hereinafter called "the bidder" has undertaken, in pursuance of Tender No.....Date..... to bid in the said tender.

AND WHEREAS it has been stipulated by you in the said Tender notification that the Supplier shall furnish you with a Bank Guarantee by a schedule bank for the sum specified therein as Earnest Money/ Bid Security for compliance with the Bidders obligations in accordance with the Tender terms and conditions.

AND WHEREAS we have agreed to give the Bidder a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Bidder, up to a total of.....(Amount of the Guarantee in words and figures) and we undertake to pay , upon your first written demand declaring the bidder to be in default under the Terms and Condition and without cavil or argument, any sum of sums within the limit of(Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specification therein.

This guarantee is valid until-----day of-----20----

Signature and Seal of Guarantors

.....
.....
.....

Date.....20.....

Address.....

.....

.....

.....
(Signature of the Bank)

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SECTION XII

MANUFACTURERS' AUTHORIZATION FORM*

No. _____ Dated _____

To
Principal,
Institute of Technology,
Korba (C.G.)

Dear Sir:

Tender no _____ Dated _____

We.....who are established and reputable manufacturers of (name and description of goods offered) having factories at(address of factory) do hereby authorize M/s(Name and address of Agent) to submit a bid, and sign the contract with you for the goods manufactured by us against the above IFB.

No company or firm or individual other than M/s.....are authorized to bid, and conclude the contract for the above goods manufactured by us, against this specific Tender. (This para should be deleted in simple items where manufacturers sell the product through different stockiest.)

Yours faithfully,

(Name)
(Name of manufacturers)

Note: This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to legally bind the manufacturer. It should be included by the Bidder in its bid.* Modify this format suitably in case where manufacturer's warranty and guarantee are not applicable for the items for which bids are invited

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Note:- Give bid price item-wise in the following Performa only. Any deviation will not be accepted.

PRICE SCHEDULE

Department/Section....., Laboratory Name.....
Name of Bidder.....

(Amount in ₹)

Item serial no.	Item Code	Specification of items, which bidder offers	Name of Accessories with specification (if any)	Make/ Brand of item	Manufacturer's Name	Catalogue/ Brochure Page No. (as indexed by you)	Quantity of item as per tender with unit (8)	Cost per unit (Inclusive of all charges except VAT (9))	VAT (%)	Total value item wise (col 8 + col 9 + col 10)	Total Value in col 8 + col 9 + col 11)
Total (in words)											

Note:-

- The bidding prices shall be for F.O.R. Destination.
- Rates should be inclusive of all charges (such as charges for inspection / Demonstration / Installation/ Commissioning/ Transportation/ Excise / Custom / Services charges etc. except VAT. VAT should be mentioned separately.
- Conditional rates will not be accepted.
- Comparison will be done item wise on the basis of total values as mentioned in column 11.
- Rates will be finalized for purchase on the basis of individual items having 03 valid rates.
- Specifications of the item which bidder offers as per the catalogue / brochure / Technical details etc. will be considered for comparison and selection. Incomplete details will not be considered for comparison.
- Price schedule give in other form will not be accepted and bid will be rejected.

INSTITUTE OF TECHNOLOGY, KORBA (C. G.)
DEPARTMENT OF MECHANICAL ENGINEERING
Labwise approximate cost of tender and EMD details

S. No.	Name of Deptt	Name of Lab	Approx cost of Tender (Rs. In Lakh)	EMD Required	
1	Mechanical Engineering	1. Workshop	i.) Machine shop & carpentry Shop	13.00	Rs. 0.65 Lakh
			ii.) Welding Shop	7.00	Rs. 0.35 Lakh
		2. Robotics Lab.	10.00	Rs. 0.50 Lakh	
		3. CNC Lab.	10.00	Rs. 0.50 Lakh	
		Total			Rs. 40.00

Hal
24/09/16.

Prabir
24/09

M. Chatterjee
24/9/16

INSTITUTE OF TECHNOLOGY, KORBA (C. G.)
DEPARTMENT OF MECHANICAL ENGINEERING
SCHEDULE OF REQUIRMENT

Name of Lab - Workshop (Machine Shop)

S. No.	Name of Equipment	Details of Specification	Code	Qty.	Price (Inclusive of all Taxes)
01.	Center Lathe 'A'	All geared Drive, Machine Length : 1830 mm, ABC : 865 mm, Height of Center : 215 mm, Swing Over Bed : 425 mm, Bed Width : 279 mm, Weight : 675 Kg Swing in Gap-725mm/29", Swing over Cross Slide-350mm/ 14", Hole through Spindle-80mm, No. Spindle Speeds- 16, 35-2000, Whitworth Threads- 32, 4-60, Metric Threads-32,0.5-60, Cross Slide Travel 400mm/ 16", Top Slide Travel-175mm/7", Power-3 HP, Collet attachment with one Collet, One Spanner Set, One Allen Key Set, Oil Can etc. Accessories at extra Cost : Tools Cost Knee Tool Holder, Boring Tool Holder, Centering & Facing Plunge type, Drill chuck with Sleeve Multi tool Holder, Parallel Shank Drill Sleeve MT-1 /MT-2 (Each Price). <i>Note - All dimensions mentioned above are minimum required dimensions. Manufacturer/Vendor can quote same or nearest matching higher dimentions to fulfil the laboratory purpose.</i>	WS_CL_01	02	
02.	Center Lathe 'B'	All cone pully/ V-Belt Drive, Machine Length : 1600 mm, ABC : 635 mm, Height of Center : 215 mm, Swing Over Bed : 425 mm, Bed Width : 279 mm, Weight : 650 Kg, Swing in Gap-800mm, Swing over Cross Slide-290mm, Hole through Spindle-52mm, No. Spindle Speeds- 8, 25-475, Whitworth Threads- 19,2-24TPI, Metric Threads-13,1-6mm, Cross Slide Travel 300mm, Top Slide Travel-150mm, Power- 2 HP., Collet attachment with one Collet, One Spanner Set, One Allen Key Set, Oil Can etc. Accessories at extra Cost : Tools Cost Knee Tool Holder, Boring Tool Holder, Centering & Facing Plunge type, Drill chuck with Sleeve Multi tool Holder, Parallel Shank Drill Sleeve MT-1 /MT-2 (Each Price) <i>Note - All dimensions mentioned above are minimum required dimensions. Manufacturer/Vendor can quote same or nearest matching higher dimentions to fulfil the laboratory purpose.</i>	WS_CL_02	03	

Note : 1. For all above machines please quote your rates with free warranty for two years from the date of successful installation and demonstration, which includes free servicing, trouble shooting occurred and free replacement of any parts/spares within the warranty period.

2. For training/demonstartion to staff and student point no. 28 of 'terms and condition' of tender document will be followed.

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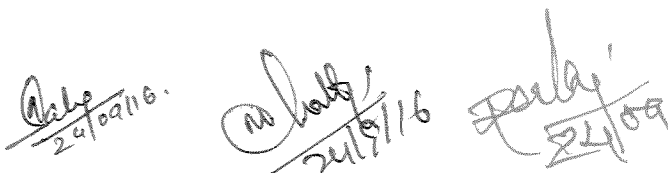
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Name of Lab - Workshop (Machine Shop)

S. No.	Name of Equipment	Details of Specification	Code	Qty.	Price (Inclusive of all Taxes)
03.	Universal Milling Machine	<p>SPECIFICATIONS Working Surface mm 1050 x 250, Number of T-Slots 3, Width of T-Slots 15 mm, Pitch of T-Slots 62 mm, Maximum Distance from Spindle Centre to Underside of Over Support 125 mm</p> <p>MOVEMENTS Longitudinal Movement of the Table by Lever / Screw 600 mm Cross Movement of the Table by Screw 230 mm Vertical Movement of the Table by Screw 450 mm</p> <p>MILLING SPINDLE Spindle Bore 17 mm, Inside Taper ISO - 40, Arbor 25.4 mm</p> <p>REVOLUTION OF MILLING SPINDLE Number of Spindle Speed 6, Range of Spindle Speed 50, 85, 110, 240, 350, 525 RPM, Number of Feeds 3 Feeds (0.9, 1.4, 2.25 Per Minute)</p> <p>ELECTRICAL Main Drive Electric Motor 2 HP, 1440 RPM, 440 V. 3 Phase Coolant Motor 0.11 KW, 2700 RPM</p> <p>Optional Features 1. Protection kit. 2. Dividing head, 3. Rotary table, 4. Slotting attachment, 5. Vertical attachment (Universal type), 6. Rack cutting attachment, 7. Digital read out (DRO).</p> <p>Accessories at extra cost :- • Vertical Milling Attachment • Dividing Head Centre 137 mm • 3 jaw True chuck with flange fitted. • Milling machine vice size 125 mm with swivel base • Rotary Milling table • (Tools for Gear Cutting Operation) Involute Gear cutter • (Tools for Vertical Operation) Collet Adaptor with Collet Size 3/8" • (Tools for Vertical Operation) End Mill Cutter Size 3/8"</p> <p>Note - All dimensions mentioned above are minimum required dimensions. Manufacturer/Vendor can quote same or nearest matching higher dimensions to fulfil the laboratory purpose.</p>	WS_UM_01	01	
04.	Shaper Machine 'A'	<p>Model : 18 inch (All Geared Drive), Length of Ram Stroke (mm) : 457 mm, Length of Ram (mm) : 940 mm, Feed Length of Tool Slide : 152.0, Max. & Min. Distance from Table to Ram (mm) : 330 x 50 mm</p> <p>Max. Table Travel Horizontal (mm) : 457 mm</p> <p>Length & Width of Table Top (mm) : 482 x 330 mm</p> <p>Range of Ram Speed in All Geared : 4</p> <p>Electric Motor (3Ø) : 2 HP (960 RPM)</p> <p>Tool Holder Admits Tools : 25x20</p> <p>Weight of Machine (Kg) : 1300.0 Kg</p> <p>Optional Features 1. Key cutting attachment. 2. Hydraulic trace attachment. 3. Automatic tool lifting. 4. Tool slide auto feed. 5. Auto up-down for work table.</p> <p>Note - All dimensions mentioned above are minimum required dimensions. Manufacturer/Vendor can quote same or nearest matching higher dimensions to fulfil the laboratory purpose.</p>	WS_SP_02	01	

Note : 1. For all above machines please quote your rates with free warranty for two years from the date of successful installation and demonstration, which includes free servicing, trouble shooting occurred and free replacement of any parts/spares within the warranty period.

2. For training/demonstration to staff and student point no. 28 of 'terms and condition' of tender document will be followed.



Name of Lab - Workshop (Machine Shop)

S. No.	Name of Equipment	Details of Specification	Code	Qty.	Price (Inclusive of all Taxes)
05.	Shaper Machine 'B'	<p>Machine size : 12" (All Cone Pulley/ V Belt Drive) Maximum stroke : 14" Length of Ram : 26" Max. dist. of Table to Ram : 9", Min. dist. of table to Ram : 1/2", Max. vertical travel to tool slide : 5", Length & width of table top. : 12" x 9" Length & width of table slide : 24" x 10", Length of cross slide : 24" Width of Ram : 8.1/2", No of speeds : 4 Main Motor Power : 1 HP, Machine size : 12" Maximum stroke : 14", Length of Ram : 26", Max. dist. of Table to Ram : 9", Min. dist. of table to Ram : 1/2", Max. vertical travel to tool slide : 5", Length & width of table top. : 12" x 9", Length & width of table slide : 24" x 10", Length of cross slide : 24" Width of Ram : 8.1/2", No of speeds : 4 Main Motor Power : 1 HP Optional Features 1. Key cutting attachment. 2. Hydraulic trace attachment. 3. Automatic tool lifting. 4. Tool slide auto feed. 5. Auto up-down for work table. Note - All dimensions mentioned above are minimum required dimensions. Manufacturer/Vendor can quote same or nearest matching higher dimentions to fulfil the laboratory purpose.</p>	WS_SP_01	01	

Name of Lab - Workshop (Carpentry Shop)

S. No.	Name of Equipment	Details of Specification	Code	Qty.	Price (Inclusive of all Taxes)
1	Wooden Lathe	<p>Length of Bed 4 1/2', Height of Centre 6 1/2", Width of Bed-7", Admit between Centre-30", Spindle Bore-3, No. of Spindle Speed-3, Face Chuck Dia -8", R.P.M.- 3000/1500/750, Power -1 HP, manufactured by highly reputed company Note - All dimensions mentioned above are minimum required dimensions. Manufacturer/Vendor can quote same or nearest matching higher dimentions to fulfil the laboratory purpose.</p>	WS_WL_01	1	

Note : 1. For all above machines please quote your rates with free warranty for two years from the date of successful installation and demonstration, which includes free servicing, trouble shooting occurred and free replacement of any parts/spares within the warranty period.

2. For training/demonstartion to staff and student point no. 28 of 'terms and condition' of tender document will be followed.


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INSTITUTE OF TECHNOLOGY, KORBA (C. G.)

DEPARTMENT OF MECHANICAL ENGINEERING

SCHEDULE OF REQUIREMENT

Name of Lab - Workshop (Welding Shop)

S. No	Name of Equipment	Details of Specification	Code	Qty.	Price (Inclusive of all Taxes)
1	MIG Welding Machine	suitable for outdoor duty application 1. Supply voltage: 415 Volts $\pm 10\%$ AC, 3 Phase, 50 Hz 2. Rating at 60% duty cycle: 20 kVA 3. Primary Current at the Rated Output at 415 V supply: 30A 4. Open circuit voltage: 55 Volts DC 5. Max .continuous hand welding current at 60% duty cycle: 400 Amps. DC 6. Type of welding voltage current regulator: Step-less 7. Insulation: 'H' 8. Cooling: Forced Air Cooled 9. Wire feeder Unit: Servo wire feeder with servo drive control motor. Feed Mechanism of Double roll quick change-over type. Wire size: Mild Steel : 0.8 to 1.2 mm, Stainless Steel : 0.8 to 1.2 mm, Aluminium : 0.8 to 1.2 mm 10. Welding Torch: MIG Torch fitted with 3.0 m flexible & light to handle cable hose and connector. Provision for Torch neck swiveling and locking to suit positional welding & welding in difficult areas. 11. Pressure regulator & flow meter-1 set 12. Co2 heater with core assembly-1 set 13. Cables and Hoses: Interconnecting cable/hose assembly (15.0 m long) between Power Source and Wire Feeder Unit. All Cables will be made of Copper 14. Accessories: a. Any other accessories as recommended by vendor for better efficiency and maximum utilization. b. Tool Kit consisting of Nozzle Cleaner, Alley keys, Plier for cutting wire etc.	WS_WLD_01	1	
2	Spot Welding Machine	Prim ary Voltage to be suitable for 415 Volt, 3 phase, 3 wire, 50 Hz, AC Supply rating @ 50 % duty cycle: 25 KVA Secondary Short Circuit Current: 13 KA Welding range : 3 mm Arm spacing : 20-30 cm Cooling: water Cooling Control : Electronic Timer 5-50 cycle & 1-10 Sec	WS_WLD_02	1	

Note : 1. For all above machines please quote your rates with free warranty for two years from the date of successful installation and demonstration, which includes free servicing, trouble shooting occurred and free replacement of any parts/spares within the warranty period.

2. For training/demonstartion to staff and student point no. 28 of 'terms and condition' of tender document will be followed.

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3	AC ARC Welding Machine	Suitable for outdoor duty application 3-phase AC ARC Welding Machine 1. Supply Voltage : 415 Volts ± 10%AC, 3 phase, 50 hertz. 2. Rating at 60% duty cycle. 3. Primary Current at the Rated Output at 415 V supply : 30 Amps. 4. Open Circuit Voltage : 55 Volts DC. 5. Maximum Continuous Hand Welding Current at 60% duty Cycle : 400 Amps,DC. 6. Type of Welding Voltage Current Regulator :Step-less. 7. Insulation 'H'. 8. Cooling : Forced Air Cooled	WS_WLD_03	1	
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Name of Lab - Robotics Lab.

S. No	Name of Equipment	Details of Specification	Code	Qty.	Price (Inclusive of all Taxes)
1	5 Axis Robotics Arm System	5- Axis Robotic System 5 - Servo Motors: Futaba/Hitech motor with a torque of 16Kgcm at 6 Volts. Acrylic Design with Hand Crafted Base Atmega 16/32 Based Circuit board with 6 PWM Motor Output and Computer Control Circuit. Technical Specifications • Degree of Freedom: 5 • Payload Capacity (Fully Extended): 500 g • Maximum Reach (Fully Extended): 400 - 500mm • Envelope: Hemispherical • Rated Motors Speed (Adjustable): 0-0.3 mis • Joint speed (Adjustable): 0-60 rpm • Hardware interface: USS/Serial • Shoulder Base Spin: 180° • Shoulder Pitch: 180° • Elbow Pitch: 180° • Wrist Roll Spin: 180° • Wrist Pitch: 180° • Gripper Opening (Max): 50mm	ME_RB_01	1	
2	Hex Crawler Robot, Mechatronics Robot	Hex Crawler Robot : ATmega 16/32 Based Circuit Board with 14 PWM Motor Controlling Output and 3 Analog /Digital Input Board. Complete Hand Crafted Acrylic Base Design and some parts with Aluminium Hex Crawler Parts. 12- Servo Motors: Futaba/Hitech motors with 16 kgcm at 6 Volts. Robot, Li Po/Li Mh 11 .6/12 V 3000 mAh Rechargeable Battery Pack, Machatronics Technical Specification Robot • Mobility: Six Leg • Degree of Freedom: 12 • Payload Capacity: 2 KG • Mode: Autonomous and Wireless Control System • Rated Motors Speed: 0-0.3 mis • Leg Spin: 180°	ME_RB_02	1	

Note : 1. For all above machines please quote your rates with free warranty for two years from the date of successful installation and demonstration, which includes free servicing, trouble shooting occurred and free replacement of any parts/spares within the warranty period.

2. For training/demonstartion to staff and student point no. 28 of 'terms and condition' of tender document will be followed.

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3	Ultra Sonic Range Finder	Ultra Sonic Range Finder: ATmega 16/32 Based Circuit Board with 4 DC Motor Drives and 2 PWM Motor Controlling and 3 Analog/ Digital in put. Wireless Control Drives. Acrylic hand Crafed Base 8 AA Size Rechargeable / Normal Cell Board. Technical Specifications <ul style="list-style-type: none"> • Mobility: Four Wheel Differential Drive • Degree of Freedom: 2 onwheels • Mode: Autonomous and Wireless Control System • Motor Speed: 150-200 RPM • Sensor: Range Finding Sonar Sensor w ith range of (0 - 4000 mm) 	ME_RB_03	1	
4	Pick and Place Robot	Pick and Place Robot: AT MEGA 16/32 Based Circuit Board with output 4 DC motordrives and 4 PWM Motor Controlling. Wireless control drives. Acrylic Hand Crafted base. 7 ah lead acid battery with charging unit. Technical Specificatiions Mobility: 4 Wheel Differential Drive, Articulated Arm, Degree of freedom : 4, payload capacity(Full Extended) : 300g, Maximum reach(full Extended) : 300-400mm, Wireless control of Arm Motor, Complete 360 Rational arm base, Gripper Opening(MAX): 50 mm	ME_RB_04	1	
5	Wooden Model to Study of Robotic Arm Configuration	Various ARM Configuration(wooden models), Cartesian coordinate Configuration. Polar Configuration. Joint Arm Configuration	ME_RB_05	1	

Note 1. Please quote separate rate in percentage of cost of equipment for item no 2 of Robotics lab 'Hex Crawler Robot' for annual maintenance contract for 03 (three) years after expiry warranty period.

Note : 1. For all above machines please quote your rates with free warranty for two years from the date of successful installation and demonstration, which includes free servicing, trouble shooting occurred and free replacement of any parts/spares within the warranty period.

2. For training/demonstartion to staff and student point no. 28 of 'terms and condition' of tender document will be followed.

Raj
24/02/16

M. K. S.
24/9/16

P. K. S.
24/9/16

INSTITUTE OF TECHNOLOGY, KORBA (C. G.)

DEPARTMENT OF MECHANICAL ENGINEERING

SCHEDULE OF REQUIREMENT

Name of Lab - CNC Lab.

S. No.	Name of Equipment	Details of Specification	Code	Qty.	Price (Inclusive of all Taxes)
1	CNC Lathe Machine	Complete package for machine CNC-Ready including two stepper motor mounts on the lathe. Swing over bed 3.50" (90 mm) Swing over carriage 1.75" (45 mm) Distance between centers 8.00" (200 mm) Hole through spindle .405" (10 mm) Spindle nose thread 3/4"- 16 T. P.I. Spindle nose taper #1 Morse Travel of crossslide 4.25" (110 mm) Tailstock spindle taper #0 Morse Protractor graduations 0° to 45° by 5° Handwheel graduations .001" (.01 mm) Length overall 24" (610 mm) Width overall 7.5" (190 mm) Height overall 6" (150 mm) Shipping weight 24 lb. (10.9 kg) Motor 90 volt DC with electronic speed control that accepts any incoming current from 100V AC to 240 VAC, 50 Hz or 60 Hz. Click here for motor specifications. Spindle speed range 70-2800 RPM continuously variable by electronic speed control Computer with all necessary accessories system Preloaded with software and operating system.	ME_CNC_01	1	
2	CNC Mill Machine	Complete Package for machine CNC-Ready including three stepper motor mounts on the mill. Mill includes X/Y leadscrew oiler. Max clearance, table to spindle 9.00" (229 mm) Throat (without headstock spacer block) - Adjustable Travel, "X" Axis - 8.68" (229 mm) (9" w/ stop screw removed) Travel, "Y" Axis - 7.00" (178 mm) Travel, "Z" Axis 5.38" (137 mm) Hole through spindle .405 (10 mm) Spindle nose thread 3/4-16 T. P.I. Spindle taper #1 Morse Handwheel graduations- .001" (.01 mm) Width overall 15.00 (381 mm) Depth overall 22.25" (565 mm) Height overall 23.38" (568 mm) Table size 2.75" x 13.00" (70 x 330 mm) Shipping weight 38 lb. (17.2 kg) Movements in addition to X-, Y- and Z-axes Headstock rotation 90° left right, column rotation (90° L/R), column pivot (front/back), column swing (90° L/R) and 5.5" column travel (in/out) Headstock rotation 90° left right Motor/Speed Control 90 Volts DC with electronic speed control (Accepts 100 VAC to 240 VAC, 50 - 60 Hz input and converts automatically to 90 VDC) Spindle speed range 70 to 2800 RPM continuously variable with electronic speed control Computer with all necessary accessories computer system Preloaded with software and operating system.	ME_CNC_02	1	

Note : 1. For all above machines please quote your rates with free warranty for two years from the date of successful installation and demonstration, which includes free servicing, trouble shooting occurred and free replacement of any parts/spares within the warranty period.

2. For training/demonstration to staff and student point no. 28 of 'terms and condition' of tender document will be followed.

3. Please quote separate rate in percentage of cost of equipment for item no 1 & 2 of CNC Lab 'CNC Lathe and CNC Milling' machines for annual maintenance contract for 03 (three) years after expiry warranty period.

Raj
24/09/16

M. K. S.
24/9/16

Pankaj
24/09