

Ref.No: RGUKT/Proc/Mech.Eng/RAL/T14/E-2013, dated: 07.12.2013

BID DOCUMENT

Open Competitive Bid (OCB)

(e-Procurement)

For

**Supply and Installation of Equipments
To the Robotic Automation Lab of Mechanical
Engineering Department
at the three campuses of
Rajiv Gandhi University of Knowledge Technologies**

Proprietary & Confidential



**RAJIV GANDHI UNIVERSITY OF KNOWLEDGE
TECHNOLOGIES**

Ground Floor, Vindhya C4 Building,

IIT-H Campus, Gachibowli

HYDERABAD- 500 032

Phone: 040-23001830

Proprietary & Confidential

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News paper advertisement

E-Procurement Tender Notice

RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES



**Ground Floor, Vindhya C4 building, IIIT- H Campus,
Gachibowli, HYDERABAD- 500 032**

Phone: 040-23001830

Online tenders are hereby invited from reputed **manufacturer/ authorized representatives** for supply and installation of equipments for the following labs of Mechanical Engineering Department to the three RGUKT campuses located at Basar in Adilabad dist, Nuzvid in Krishna dist and R.K. Valley in YSR Kadapa dist, in AP.

- i. Metrology Lab
- ii. Manufacturing Process Lab
- iii. Applied Thermodynamics Lab I & II
- iv. Robotic Automation Lab

1. Tenderers can download the tender schedules from e-procurement Platform www.eprocurement.gov.in from 07.12.2013 onwards. Tenderers need to submit the bids separately for each lab online by uploading all the required documents through www.eprocurement.gov.in. **The last date for submission of tenders online is 26.12.2013 up to 05:00PM**

For further details regarding Tender Notification & Specifications please visit website: www.eprocurement.gov.in and www.rgukt.in

Date: 07.12.2013

**Sd/-
Registrar**

Time schedule of Tender related events
(Robotic Automation Lab)

Bid calling date	07.12.2013
Bid Document fee	Rs. 1,000/- (By way of DD from any Nationalized Bank)
Bid Documents Downloading Start date	07.12.2013
Bid Document Downloading End Date	25.12.2013 till 04:00PM
Pre Bid Meeting	16.12.2013 at 06:00PM
Last date for uploading documents online	26.12.2013 at 05:00 PM
Last date for Submission of documents (hard copies)	27.12.2013 at 04.00 PM
Technical Bid opening date/time	28.12.2013 at 05:00 PM.
Price Bid opening date/time	30.12.2013 02.00 PM onwards
Contact person	Registrar, RGUKT
Reference No.	RGUKT/Proc/Mech.Engg/RAL/T14/E-2013, dated 07.12.2013

Note: The dates stipulated above are firm and under no circumstances they will be relaxed unless otherwise extended by an official notification or happen to be Public Holidays. For the assistance in the online submission issues, the bidder may contact the help desk of M/s. Vayam Technologies (e-procurement) at their e-mail address: helpdesk.eproc@vayamtech.com

SECTION - I

INVITATION FOR BIDS

Reference: No: RGUKT/Proc/Mech.Engg/RAL/T14/E-2013, dated **07.12.2013**

Subject: Tender for supply and installation of equipments to the Robotic Automation Lab of Mechanical Engineering Department to the three campuses of RGUKT located at Basar (Adilabad Dist), Nuzvid (Krishna Dist) and RK Valley (Kadapa Dist) – Reg..

Sir/Madam,

- 1) Bids are invited on the e-procurement platform from the eligible manufacturers or their authorized distributors for supply and installation of equipments to the Robotic Automation Lab of Mechanical Engineering Department to three campuses of RGUKT located at Basar (Adilabad Dist), Nuzvid (Krishna Dist) and R K Valley (YSR Kadapa Dist). The details of bidding conditions and other terms can be downloaded from the electronic procurement platform of Government of Andhra Pradesh i.e. www.eprocurement.gov.in
- 2) Bidders would be required to register on the e-Procurement market place “www.eprocurement.gov.in” and submit their bids online. On registration with the e-Procurement market place they will be provided with a user id and password by the system through which they can submit their bids online.
- 3) The bidders need to scan and upload the required documents as per the Check list given. Such uploaded documents pertaining to technical bid need to be attached to the tender while submitting the bids on line. The attested copies of all these uploaded documents of technical bid, signed undertaking of tenderer should be submitted off line to Registrar, RGUKT, Hyderabad by 04.00 PM of 27.12.2013 The RGUKT will consider only the bids submitted through on-line copies of the paper based bids.
- 4)
 - a) The participating bidder/s will have to pay tender processing fee (non-refundable) for the amounts specified in the Schedule of Requirements, in the form of Demand Draft drawn from any Nationalized Bank, in favour of Registrar, RGUKT, Hyderabad. Payable at Hyderabad.
 - b) Further the bidder/shall furnish, as part of it bid, the Bid security for the amounts specified in the Section-II of Tender Document be paid in the form of an unconditional and irrevocable Bank Guarantee issued by any Nationalized

bank in the standard format as shown in the Tender Schedule or a crossed Demand Draft drawn in favour of Registrar, RGUKT, Hyderabad along with bids.

- c) Further all the participating bidders have to electronically pay a non-refundable transaction fee to M/s. APTS, the service provider through "Payment Gateway Service on E-Procurement platform", as per the Government Orders placed on the e-procurement website.
- d) RGUKT will not accept the tenders from blacklisted companies or undependable Suppliers whose past performance with RGUKT was found poor due to delayed and/or erratic supplies and those with frequent product failures, and also against whom there have been adverse reports of Sub-Standard Quality / Poor Service of Equipment supplies, as defined in the other parts of the Bidding document.

For any clarification and further details on the above tender please contact Telephone No: 040-23001830 or Contact in Person during office hours.

SECTION-II

STATEMENT OF IMPORTANT LIMITS/VALUES RELATED TO BID

Item	Description
EMD	Rs. 1,00,000/- by way of Demand Draft from any Nationalized Bank or by way of irrevocable bank guarantee from any Nationalized Bank only. DD/BG from other than Nationalized Banks will not be accepted.
Bid Validity Period	360 days from the date of opening of Financial bid
EMD Validity Period	90 days from the date of opening of Financial bid
Warranty Period	3 years Comprehensive Warranty
Variation in quantities/number of residents	± 40 %
Period for furnishing performance Security Deposit	Within 15 days from date of receipt of award
Delivery Schedule	Bidder shall deliver the goods in one single lot within 90 days from the date of award of the contract.
Performance security value	10% of contract value by way of irrevocable Bank Guarantee in case of imported equipment.
Performance security validity period	38 months from award of contract (including 30 days of installation period)
Period for signing the order Acceptance	Within 15 days from date of receipt of notification of award

PAYMENT TERMS	
On delivery at user site	<p>Payment for goods and services shall be made in Indian rupees or equivalent value in foreign currency.</p> <ol style="list-style-type: none"> 1. 80% of payment will be paid after installation, commissioning 2. Balance 20% will be paid after 3 months after obtaining the satisfactory certificate from the Director, RGUKT IITs 3. In case of equipment from foreign country LC will be opened for 100% and 90% of payment will be paid on delivery & submission of documents and remaining 10% will be paid after installation and commission.
Maximum Liquidated Damages for late deliveries	<p>For delays:- If the supplier fails to deliver any (or) all of the goods or perform the services within the time period specified in the contract the purchaser shall without prejudice to its other remedies under the contract deduct from the contract price as liquidated damages a sum equivalent to 0.25% of the contract value per day until actual delivery or performance up to a maximum deduction of 10% of the delayed goods or services contract price. Once the maximum deduction is reached, the purchaser may consider the termination of the contract duly forfeiting the performance security etc.,</p>
Placing work order	<ul style="list-style-type: none"> ➤ RGUKT will place order on identified successful bidder. ➤ All the payments shall be made directly by RGUKT to the successful bidder as per the tender terms and conditions. ➤ If decided RGUKT can split the order basing on the quoted price and service track record. The decision of RGUKT is final in this regard.
Transaction Fee	<p>Transaction fee: All the participating bidders who submit the bids have to pay an amount @ 0.03% of their final bid value online with a cap of Rs. 10,000/- for quoted value of purchase up to Rs.50 crores and Rs.25000/- if the purchase value is above Rs.50 crores & service tax applicable @ 12.36% as levied</p>

	by Govt. of India on transaction fee through online in favour of MD, APTS. The amount payable to APTS is non refundable.
Transaction Fee Payable to	The Managing Director, A.P. Technology Services Ltd., Hyderabad
Bid submission	Online. Bidders are requested to submit the bids after issue of minutes of the pre bid meeting duly considering the changes made if any, during the pre bid meeting. Bidders are totally responsible for incorporating/complying the changes/amendments issued if any during pre bid meeting in their bid.
Procedure for Bid Submission	Bids shall be submitted online on www.eprocurement.gov.in platform <ol style="list-style-type: none"> 1. The participating bidders in the tender should register themselves free of cost on e-procurement platform in the website www.eprocurement.gov.in 2. Bidders can log-in to e-procurement platform in Secure mode only by signing with the Digital certificates. 3. The bidders who are desirous of participating in e- procurement shall submit their technical bids, price bids as per the standard formats available at the e-market place. 4. The bidders should scan and upload the respective documents in PreQualification and Technical bid documentation including EMD. The bidders shall sign on all the statements, documents certificates uploaded by them, owning responsibility for their correctness/authenticity. 5. The hard copies of all the uploaded Technical / Price bid, to be attested by a Gazetted Officer or properly notarized. 6. The rates should be quoted in online only
Other conditions	1. After uploading the documents, the copies of

the uploaded technical bid documents, for evaluation and original Demand Drafts in respect of Bid Security and Bid document fee are to be submitted by the bidder to the "The Registrar, RGUKT, Vindhya-C4 Building, IIIT Campus, Gachibowli, Hyderabad-32", by **04:00PM on 27.12.2013.**

Failure to furnish any of the uploaded documents, certificates, will entitled in rejection of the bid. The RGUKT shall not hold any risk on account of postal delay. Similarly, if any of the certificates, documents, etc., furnished by the Bidder are found to be false / fabricated / bogus, the bidder will be disqualified, blacklisted, action will be initiated as deemed fit and the Bid Security will be forfeited.

2. RGUKT will not hold any risk and responsibility regulating non-visibility of the scanned and uploaded documents.
3. The Documents that are uploaded online on e-market place will only be considered for Bid Evaluation.
4. Important Notice to Contractors, Suppliers and Department users (i) In the endeavor to bring total automation of processes in e-Procurement, the Govt. has issued orders vide G.O.Ms.No. 13 dated. 5.7.2006 permitting integration of electronic Payment Gateway of ICICI/HDFC/Axis Banks with e-Procurement platform, which provides a facility to participating suppliers / contractors to electronically pay the transaction fee online using their credit cards.

SECTION-III

TENDER SCHEDULE

1. PREAMBLE:

The Registrar, Rajiv Gandhi University of Knowledge Technologies (RGUKT), Hyderabad invites tenders for supply and installation of equipments of Robotic Automation Lab of Mechanical Engineering Department to its three campuses located at Basar (Adilabad District), Nuzvid (Krishna District) and RK Valley (YSR Kadapa District), through e-procurement platform.

2. SCOPE OF WORK

Supply and installation of equipments of Robotic Automation Lab of Mechanical Engineering Department equipments to the three campuses of RGUKT located at Basar (Adilabad Dist), Nuzvid (Krishna Dist) and R K Valley (YSR Dist).

3. EARNEST MONEY DEPOSIT / SECURITY DEPOSIT:

3.1 The tender should be accompanied by Earnest Money Deposit (EMD) for **Rs. 1,00,000/-** by way of crossed Demand Draft/ Bank Guarantee issued/ drawn from any Nationalized Bank in favor of "Registrar, RGUKT" payable at Hyderabad. Tenders received without EMD will be summarily rejected.

3.2 Forfeiture of the EMD will be made in the following events:

3.2.1 Withdrawal of bid during the bid validity period.

3.2.2 In case of successful bidder, if the bidder fails to sign the contract in time or fails to submit performance guarantee.

4. PERFORMANCE SECURITY:

4.1 The successful bidder has to deposit 5% for indigenous equipments and 10% in case of imported equipment (foreign origin) of the total contract value as performance security deposit in the form of Bank Guarantee from any Nationalized Bank.

- 4.2 The Performance Security Deposit / Bank Guarantee of successful bidder will be retained for the period of contract in force and will be returned after expiry of contract, after deducting the outstanding liabilities if any.
- 4.3 The Performance Security Deposit / Bank Guarantee shall not carry any interest.

5 ELIGIBILITY CRITERIA

- 5.1 This bid is open to all firms within India who are eligible to do business under relevant Indian laws as in force at the time of bidding, subject to meeting the pre-qualification criterion. They should provide list of customers of previous supply of similar/ same items to IITs, NIT's or Central Universities or any Academic Institute of National repute with contact details. Copies of orders received from the reputed firms on bidding firm need to be submitted.
- 5.2 The bidder should have servicing facility or work shop with in India so the provision of service is possible at a short notice and without incurrance of delay.
- 5.3 The Bidding firm should have minimum turnover as follows:

Bid Value offered against the tender call	Last financial year's business turnover
Up to 25 lakhs	50 lakhs
More than 25 lakhs	1 crore

The bidder should have adequate experience in supply of such materials as required in the tender. Bidder should furnish proof of having supplied such materials as required in the tender in the previous financial year ending 31st March 2012 as mentioned above. A certificate indicating the Turn Over value details (in Rupees) of subject material, during the financial year 2012-13 (for the year ending 31.03.2013) from a Firm of Chartered Accountants must be enclosed (in original) as a proof for Turnover. The Turn Over of the subject Material must be separately indicated in the certificate.

- 5.4 The bidder should furnish satisfactory performance certificate from the parties concerned to whom bulk supplies were effected, in case such supplies were made. RGUKT may contact any such parties to elicit details.
- 5.5 Bidder should be registered under VAT Act/CST Act with the relevant State Sales Tax Authorities. He should furnish along with the bid document, the relevant VAT/CST Registration Document and PAN / TAN Card copies.
- 5.6 All bidders shall also include the following information and documents with their tenders (in the Technical bid cover)
- 5.6.1 Copies of original documents defining the constitution or legal status, place of registration, and principal place of business of the bidding firm/entity; written power of attorney of the signatory of the Bid to commit the Bidder.
- 5.6.2 Machinery/equipment owned by the bidder and number of employees.
- 5.6.3 Latest Income Tax returns and **VAT/ CST** Returns filed.
- 5.6.4 List of Present Clientele with contact addresses & telephone numbers.
- 5.7 All the certificates furnished along with technical bids should be attested by a Gazetted Officer, counter signed by bidder along with their seal.

The bidders must submit all relevant documentary evidence to support their claim for eligibility in placing bid. **The tenders received without the above documents will be rejected.**

6. INSTRUCTIONS TO BIDDERS

- 6.1 Tenders with over writings, alterations etc., will not be admitted unless they are attested by the bidder. Where there is a discrepancy between the amount (Rupees) in figures and words, the price, which is least of the two, will prevail.
- 6.2 Bid should be strictly in conformity with the Terms and Conditions mentioned in the tender schedule.
- 6.3 Bidders are expected to examine all the terms and instructions mentioned in the tender schedule and prepare their proposals accordingly. Failure to provide all requisite information will be at the bidders' own risk and may result in the rejection of the tender.
- 6.4 All assertions made in connection with the tender are to be supported / substantiated by relevant documents. The Registrar, RGUKT reserves

the right to verify the credentials of the bidder as per the eligibility criteria.

- 6.5 The Registrar, RGUKT will notify the bidder whose tender has been accepted.
- 6.6 The successful bidder shall execute an agreement with RGUKT on Non-judicial stamp paper worth Rs.100.00 agreeing to all the conditions of the contract 15 days upon intimation of acceptance of Tender. The successful bidder has to submit performance security guarantee after taking Letter of Intent but before having contract agreement. Failure on enter into an agreement within the stipulated time will result in forfeiture of the EMD.

The Registrar, RGUKT reserves the right to issue instructions / modifications at any point of time before award of contract.

7. METHOD OF SUBMISSION:

Bids shall be submitted online on www.eprocurement.gov.in Platform.

- 7.1. The participating bidders in the tender should register themselves free of cost on e-procurement platform in the website www.eprocurement.gov.in
- 7.2. Bidders can log-in to e-procurement platform in Secure mode only by signing with the Digital certificates.
- 7.3. The bidders who are desirous of participating in e-procurement shall submit their technical bids, price bids as per the standard formats available at the e-market place.
- 7.4. The bidders shall sign on all the statements, documents certificates uploaded by them, owning responsibility for their correctness/authenticity.
- 7.5. The bidders should scan and upload the respective documents in Technical Documentation as per the check list.
- 7.6. After uploading the documents, the copies of the uploaded technical bid documents, and original Demand Drafts in respect of Bid

Security and Bid document fee are to be submitted by the bidder to the “The Registrar, RGUKT, Vindhya-C4 Building, IIIT Campus, Gachibowli, Hyderabad-32”, by **4:00PM on 27.12.2013.**

- 7.7. Failure to furnish any of the uploaded documents, certificates, will entitled in rejection of the bid. The RGUKT shall not hold any risk on account of postal delay. Similarly, if any of the certificates, documents, etc., furnished by the Bidder are found to be false / fabricated / bogus, the bidder will be disqualified, blacklisted, action will be initiated as deemed fit and the Bid Security will be forfeited.
- 7.8. RGUKT will not hold any risk and responsibility regulating non-visibility of the scanned and uploaded documents.
- 7.9. The Documents that are uploaded online on e-market place will only be considered for Bid Evaluation.
- 7.10. Important Notice to Contractors, Suppliers and Department users (i) In the endeavor to bring total automation of processes in e-Procurement, the Govt.has issued orders vide G.O.Ms.No. 13 dated. 5.7.2006 permitting integration of electronic Payment Gateway of ICICI/HDFC/Axis Banks with e-Procurement platform, which provides a facility to participating suppliers / contractors to electronically pay the transaction fee online using their credit cards.

In case of consortium either the prime bidder or the consortium partner can purchase the bid document. The bid can be filed either with user ID of prime bidder or consortium partner.
- 7.11. The rates should be quoted online only.

8 EVALUATION PROCEDURE:

- 7.1 The Tenders will be opened on **28.12.2013** at 05:00 PM by the Registrar, RGUKT or his authorized representative in the presence of the bidders or their authorized representative who may be present at that time.
- 7.2 The Technical Bids will be opened on **28.12.2013** at 05:00 PM The tenders will be evaluated so as to ascertain the capability of the bidders to provide the material with in the period mentioned above and also to

assess whether the bidder satisfies the eligibility criteria as detailed in Clause 5 above.

- 7.3 The rejection of the bidder on technical grounds will be based on the failure to meet eligibility requirements.
- 7.4 The committee may reject a bid for non conformance of the specifications.
- 7.5 Price Bid of only those bidders, who have fulfilled the eligibility criteria specified in Clause '5', 8.2 and 8.4 above, will be considered and who does not fulfill the eligibility criteria will not be considered and their tender rejected.
- 7.6 Any claims or disputes raised by the unsuccessful bidders in respect of selection process and non-allotment of award will have no legal validity and will not be enforceable against the RGUKT. No further correspondence will be entertained regarding the disqualification.
- 7.7 The Registrar, RGUKT reserves the right to accept or reject any / or all the tenders without assigning any reasons whatsoever. The Registrar, RGUKT also reserves the right to cancel the selection process for award of the contract at any time. The decision of the Registrar, RGUKT is final and binding.

9. PENALTY CONDITIONS :

- 9.1. 0.25% will be deducted from total value of the order for each day of delayed supply, and maximum of 10% will be deducted, if delay continues beyond 10% the contract is liable for termination. If contract is terminated the bidder forfeits the performance security Deposit etc.,

(NOTE: Delivery and installation must be made in a single lot within the delivery date agreed at the time of award of contract)

- 9.2. If the contract is terminated, as per clause 9.1 above the performance security will be en-cashed by Registrar, RGUKT and the bidder forfeits it.

- 9.3. In case after random check of equipment of the supplied lot, if it is found to be non conforming to the technical specifications then entire lot of such equipment will be rejected. In this case the Registrar, RGUKT shall encash the performance security deposit. The bidder shall have no claim to any payment towards the transaction.

10.VALIDITY OF THE CONTRACT

The contract quoted bid price shall remain valid for a period of 365 days from the date of issue of purchase order.

11.GENERAL TERMS & CONDITIONS

- 12.1. The supply, installation and Commissioning of equipments of Robotic Automation Lab of Mechanical Engineering Department shall be at the three IIITs under the RGUKT located at
1. Basar, Adilabad District
 2. Nuzvid, Krishna District
 3. R K Valley (Idupulapaya), Kadapa District

- 12.2. Goods are to be supplied as per the specification and quantity. Details are annexed to this bid document.

12.3. Delivery and distribution:

General Clause: The goods need to be supplied (in case of equipment need to be installed and commissioned) within the stipulated time agreed upon in the contract.

If no such clause exists in the contract, this period may treated as 90 days from the signing on Supply Agreement Form.

Bidder shall deliver the goods in one lot within 90 days from the date of award of the contract.

- 12.4. All goods/ equipment supply shall carry a comprehensive warranty period of 3 years. Within the warranty period, in case of any damage to the

supplied material like breakage, wear and tear, Electronics defects etc, it will be the responsibility of the supplier to trouble shoot, rectify and restore functioning or replace the damaged material within 7 working days.

- 12.5. A random sample of any item will be picked from the lot of items delivered by the bidder to the three campuses of RGUKT. This sample will be subjected to tests, if necessary at labs anywhere in the country to ensure compliance to specifications. If the result indicates non conformance, the entire lot will be rejected and the contract will stand terminated without any liability on the part of RGUKT. In addition, this event shall lead to the forfeiture of the performance security amount.

13.DISPUTES:

All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during or after completion of contract will be settled at Hyderabad only, amicably in a spirit of co – operation and the RGUKT's decision shall be final on all such matters and shall be binding on the Bidder.

14. DISCLAIMER:

14.1. Even though adequate care has been taken in the preparation of this Tender Schedule the Bidder should satisfy himself that the Schedule is complete in all respects.

14.2. Neither RGUKT nor its employees make any representation or warranty as to the accuracy, reliability or completeness of the information in this tender schedule and it is not possible for the RGUKT to consider the investment objective, financial situation and particular needs of each party who reads or uses the Tender Schedule. Certain prospective Bidders may have a better knowledge of the scope of work than others. Each prospective Bidder should conduct his or her own investigations and analysis and check the

accuracy, reliability and completeness of the information in the Tender schedule and obtain independent advice from appropriate sources.

14.3. Registrar, RGUKT reserves the right to reject any or all the Bids submitted in response to this request for Proposal at any stage without assigning any reasons whatsoever.

14.4. Registrar, RGUKT reserves the right to change any or all of the provisions of this tender Proposal.

15. REJECTION OF TENDERS:

15.1. The Registrar, RGUKT reserves the right to cancel the tender process and reject all tenders at any time prior to the award of contract without thereby incurring any liability as against the affected bidder or any obligations to inform the affected bidder of the grounds of acceptance or rejection.

15.2. No bidder is entitled to withdraw his or her offer after submission. In case of such withdrawal, the EMD deposited along with the tender schedule shall stand forfeited.

15.3. For breach of any of the conditions prescribed in the tender or as specified by the RGUKT from time to time, the EMD is liable to be forfeited. Decision of the Registrar, RGUKT in this regard is final and binding on bidders.

16. Requirement :

The following Robotic Automation Lab equipments are required in the specifications mentioned here under for all the three Campuses of RGUKT located at Basar (Adilabad District), Nuzvid (Krishna District), RK Valley (YSR District)

Robotic Automation Lab

S/No.	Item	Quantity per each campus	Quantity required for three campuses
1.	6-Axis Robot	1	3
2.	3D Printer	1	3
3.	CNC Vertical Machining Center	1	3
4.	Rotary Servo unit with Inverted Pendulum	1	3

Specification of equipment:

1. 6-Axis Robot:

Technical Specifications:	
No. of axes	6
Reach	1400 mm or above
Payload	4 to 5 kg maximum on wrist
Position repeatability	+/- 0.05 mm
Robot mounting	Any angle
Controllers	Compact/Single cabinet or panel mounted
Power Specification for Controller	Rate power supply 400 V Rated power consumption Stand by 300W or less Production 1000W or less Peak 5000W or less
Movement of each axis should be given by the vendor Sixth joint should have 360 degree rotation on either side Electrical connection should be wall mounted Servo controlled with Point to point (P.T.P) control and continuous path Programming software should have online / offline version Physical dimensions of the robot should be provided by the vendor	
Warranty and AMC	<ul style="list-style-type: none"> • Warranty for three years from the date of installation and commissioning • Offer for 3 years AMC after the warranty period clearly indicating the scope of AMC
Packaging, insurance and transport	<ul style="list-style-type: none"> • As per standard terms (seaworthy packing etc.) • The supplier will ensure

	transportation of the machine up to the point of installation
Inspection, installation, commissioning and training	<ul style="list-style-type: none"> • All the essential requirements ensuring ready to use set up at three different campuses of RGUKT • Commissioning as per the test charts both for geometric and cutting performances • Standard training at three different campuses of RGUKT • One set of maintenance and operating manuals in English • Manuals of third party items such as controller etc. • Parameters back up in a CD
Other conditions	<ul style="list-style-type: none"> • The bidder must be OEM or representative of the foreign concern in India and should have ISO certification for quality standards • List of clients in last five years (IITs, NITs, national laboratories, government organizations) in addition to clients nearby Hyderabad to be provided • Provision for pre-dispatch inspection if required. • Separate prices should be shown for (a) basic equipment (b) essential accessories (c) optional accessories (d) normal spares particularly of the items which are likely to sustain damage or failure in use. • For imported items, price may be quoted on both FOB and CIF basis

2. 3D Printer

Sl.No.	Description	Specifications
1	Technology	Additive Manufacturing Machine/ Rapid prototyping system based on genuine FDM Technology capable of producing Physical Models & assemblies to check fitment, form, ergonomics, visualization & jigs and fixtures in ABS material.
2	Process	<ul style="list-style-type: none"> • Process has to be clean and which can be installed in a design office/Academic lab setup. • The process has to be safe and should not emit harmful radiation, hazardous lasers or toxic fumes. • Operator intervention to be minimal and has to be unattended. • The material feed has to be automated and software capable of tracking the material consumption and have a live status update during the build .
3	Build Size	200 x 200 x 150 mm minimum
4	Materials	<p>ABS Thermoplastic which is Strong, durable, high temperature resistant. Material should be an ideal material for conceptual modelling, functional prototyping, manufacturing tools, and end-use-parts.</p> <p>Temporary Support material removal thru water soluble technology with automated process and should not have undesired holes or manual techniques to remove trapped material in hollow part builds. The support cleaning equipment should be of OEM make and has to be supplied along with the Rapid Prototyping Machine</p>
5	Thermal Property of Model Material	Model Material should be capable of withstanding temperature of 90 to 100 deg. C or more.
6	Shelf Life of Material	Materials to have a shelf life of at least 36 months from the date of supply.
7	Layer thickness	0.25 mm or better
8	Software	<p>Software should be capable of :</p> <p style="margin-left: 40px;">a. <i>Automatic pre-processing with slicing</i></p> <p style="margin-left: 40px;">b. <i>Support generation</i></p>

		<i>c. Part packing and nesting</i>
9	Necessary requirements of Parts built	<ul style="list-style-type: none"> • Parts to be durable enough for fit form and functional testing. • Should be capable of producing complex assemblies. • Capability to have metal inserts or electronics part like RFID, Chips, Magnets, Sensors etc within the build to cater to functional requirements
10	Facility Requirements	<ul style="list-style-type: none"> • Machine compatible of working in Office/ Academic laboratory environment setup. • The system should be non-laser based and not emit any hazardous radiation. • Vendors to quote for all the accessories for handling the machine and also quote for automated and hands free feed for the raw materials. • Vendors must also indicate the approx. cost of other mandatory facility requirements like vibration free flooring, anti- static environment etc.
11	Disposal of waste, if any	<ul style="list-style-type: none"> • The wastage (if any) has to be non- hazardous and should not require any special procedures / treatments and the wastage has to be cleared by the environmental board. • The materials has to be eco-friendly and completely recyclable as per the local governing norms.
12	Network Connectivity	TCP/IP 10/100 base T Connection Ethernet Protocol
13	Workstation Compatibility	Windows XP/7/8
14	Operator	Easy to use and hands free to the maximum possibility.
15	Warranty	Completely comprehensive Warranty for 12 months. During the warranty period, should there be a failure of any parts, these parts have to be replaced free of cost. The comprehensive warranty should cover all the parts of the machine including electrical, electronic and mechanical systems/components.

3. CNC Vertical Machining Center

Technical Specifications		
S.No	Feature	Requirements
1	Description	3-axis vertical machining centre in a ready to use condition including appropriate accessories, software and control system for machining regular in addition to hard materials; fitted with additional switching functions and capability to access to the some of the system variables like axial and radial loads. It also should have a provision to extend for 4 or 5-axis machine in future.
2	Traverses	Minimum: 600mm x 430mm x 500mm (X x Y x Z)
3	Table	Size 900 X 450 mm Load capacity: 500 kg or higher Clamping surface with T-grooves
4	Feed	Feed rate: 10m/min or higher Rapid Traverse: 24m/min or higher
5	Spindle	Power: 5.5/7.5 kW or better Speed: 8,000 rpm or higher Quote for 7.5/11 kW higher power and speed, chiller unit as an option,
6	Accuracy	Positioning: $\pm 5 \mu\text{m}$ or better Repeatability: $\pm 3 \mu\text{m}$ or better
7	Controller	Any one of the following controllers: <ul style="list-style-type: none"> • Fanuc 0i MD (or better) • Seimens 828D (or better) • Heidenhain iTNC 530 (or better) Suppliers with multiple controller capability can quote the price of each configuration separately. The controller should be equipped with: <ul style="list-style-type: none"> • Electronic hand wheel • Colour LCD screen • File transfer options through RS 232, USB ports and Ethernet • Macro programming capability along with access to system parameters and variables like axial and radial loads • 4 additional switching functions (complete with the M codes and relays and switches)
8	Automatic tool changer	Minimum number of pockets: 20 Max. tool Diameter: 80mm Max. tool Diameter with free neighboring spaces: 120mm Max. tool length: 250mm Max. tool weight: 6 kg
9	Coolant	<ul style="list-style-type: none"> • Support for flood, mist and MQL coolant supply. • Fitted with flushing gun • In filled and ready to use condition at the time of installation

10	Lubrication	<ul style="list-style-type: none"> • Automatic centralized lubrication for guide ways and bearings of the spindle, gears etc. • In filled and ready to use condition at the time of installation
11	Chip disposal	Chip conveyor with built in coolant tank and swarf tray
12	Power supply	AC 415V 50Hz 3-phase
13	Additional/optional features	<ul style="list-style-type: none"> • Automatic door closing mechanism • Touch probe along with the required interfaces and software • Tool breakage detection and tool (dia and length) measurement systems • The bidder should include in the quote the list of recommended: <ul style="list-style-type: none"> a) Machine accessories including machine vice, riser base plate, clamping devices etc. b) holders including set of collets c) Cutting tools including face mills, end mills, slot mills, drill bits etc. d) It should have the provision to interface with CAM software.
14	Warranty and AMC	<ul style="list-style-type: none"> • Warranty for three years from the date of installation and commissioning • Offer for 3 years AMC after the warranty period clearly indicating the scope of AMC
15	Packaging, insurance and transport	<ul style="list-style-type: none"> • As per standard terms (seaworthy packing etc.) • The supplier will ensure transportation of the machine up to the point of installation
16	Inspection, installation, commissioning and training	<ul style="list-style-type: none"> • All the essential requirements ensuring ready to use set up at three different campuses of RGUKT • Commissioning as per the test charts both for geometric and cutting performances • Standard training at three different campuses of RGUKT • One set of maintenance and operating manuals in English • Manuals of third party items such as controller etc. • Parameters back up in a CD
17	Other conditions	<ul style="list-style-type: none"> • The bidder must be OEM or representative of the foreign concern in India and should have ISO certification for quality standards • List of clients in last five years (IITs, NITs, national laboratories, government organizations) in addition to clients nearby Hyderabad to be provided • Provision for pre-dispatch inspection if required. • Separate prices should be shown for (a) basic equipment (b) essential accessories (c) optional accessories (d) normal spares particularly of the items which are likely to sustain

		<p>damage or failure in use.</p> <ul style="list-style-type: none"> • For imported items, price may be quoted on both FOB and CIF basis
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4. Rotary Servo unit with Inverted Pendulum: **Technical Specifications:**

- The series of servo plants should be ideally suited to introduce fundamental control concepts and theories on an easy-to-use and intuitive platform.
- The plant shall consist of a DC motor in a solid aluminum frame. The motor is equipped with a gearbox that drives external gears. All Servo models are equipped with a potentiometer to measure the output/load angular position.
- Additional sensors shall be available include high-resolution optical encoders and tachometers.

Inverted pendulum

- The Rotary Inverted Pendulum module should offer the student an opportunity to balance a vertical rod by manipulating the angle at the base.
- This system should be a classical pendulum problem only now the trajectory is circular. This module should also configurable in different configurations.
- The module shall be used as a classical inverted pendulum; a gantry crane or in the self-erecting inverted pendulum
- The system should be manufactured of precisely machined aluminum with ball bearing joints and an encoder to sense the joint angle. It shall be designed for use with either the linear motion or rotary motion series of inverted pendulum experiments.

Rotary servo unit with inverted pendulum:

- Plant Dimensions shall not exceed : Maximum 18 x 18 x 18 cm³
- Plant Weight : below 2 kg
- Rated Voltage : below 10 Volts
- Maximum Continuous Current : 1.5 A
- Maximum Speed : 8000 r.p.m.
- Operating Temperature : -50 to +100 °C
- Potentiometer Bias Power : ±12 Volts
- Potentiometer Measurement Range : ±5 Volts
- Tachometer Bias Power : ±12 Volts
- Tachometer Measurement Range : ±5 Volts
- Tachometer Sensitivity : 0.5 mV/rpm to 2mV/rpm
- Encoder Resolution (E – option) : 4000 Counts/ Rev and above, 0.9 Deg/Count and

below

Inverted pendulum

- Encoder Resolution (EHR – option) : 10000 Counts / Rev and below,
0.036 Deg /Count and above
- Coupled Arm Length : minimum 20 cm
- Effective Short Rod Length : minimum 35 cm
- Effective Short Rod mass : below 150 gms
- Pendulum Link mass : below 300 gms
- Potentiometer Bias Power should be within : ± 12 Volts
- Potentiometer Measurement Range within : ± 5 Volts

Key Features

- The system shall be fully compatible with MATLAB/Simulink & LabVIEW and any native proprietary software.
- It shall be a modular design (components are easily interchangeable) with high quality DC servo motor and gearbox and high resolution optical encoders to sense position
- High Quality Aluminum chassis with precision crafted parts and High Resolution Encoders to sense rod angle
- The system shall have Continuous turn potentiometer to sense position and tachometer to sense motor speed
- It should be robust machined aluminum casing with stainless steel gears
- Provide with Fully documented system models & parameters provided for MATLAB, Simulink & Maple
- It shall have Variable loads and gear ratios
- Shall have Variable Pendulum Rod lengths and mass
- Possible to do 3 Distinct Configurations / Experiments
- The system shall contains Fully documented system models & parameters
- The module should be a Fast and easy attachment to the servo plant
- Open architecture design
- Optional provision of slipping for continuous measurement from instrumented modules.

Curriculum Topics

- Position & Speed Control
- Disturbance Rejection
- Tracking Control & Regulation
- PID Controller Design
- Lead / Lag Compensation
- State-Feedback
- System Modeling & Simulation
- Frequency Analysis
- Phase & Gain Margin
- Root Locus Design
- Nyquist Stability

- Real-Time Control
- Discrete Time Sampling
- System Identification
- Multivariable Control Design

Suitable linear voltage controlled power amplifier should be supplied along with the system. The system should have 8 channel or above USB Data acquisition system with I/O.

- Software
 - ▶ Target Support: Any native interface software.
 - ▶ API : C, C++, ActiveX, .NET (VB, C#, C++ and others), LabVIEW, MATLAB, any native interface software.
 - ▶ Drivers: MS Win XP, MS Win Vista, MS Win 7, Win 8 or application specific.

The system should be supplied with **Rapid Control Prototyping Software** in line with below features as below

- The software shall support for Simulink® external mode, including Scopes, Floating Scopes, Displays, To Workspace, online parameter tuning, etc.
- Multi-processor support under Microsoft Windows® XP, Windows Vista and Windows 7 or better for improved sampling rates and performance
- Log data to MAT-file and M-files
- Run Multithreaded and Multirate models
- Support for multiple targets (OS's and chipsets), such as Windows® XP, Windows Vista and Windows 7 (soft real-time) and QNX (hard real-time)
- Flexible and extensible communications framework enabling distributed control, device interfacing, teleoperation and general interprocess communication between models and local or remote applications
- Support for asynchronous threads in Simulink® models - ideal for asynchronous communications, etc.
- Protocols natively supported include TCP/IP, UDP, serial, shared memory, named pipes, ARCNET, and more
- Support for model referencing, allowing object-oriented model design and incremental compilation and linking for accelerating the development of large models
- Support for third-party devices

General terms and conditions to be followed by the suppliers/manufacturers

1. Any supplier / manufacturer is eligible to quote the rates for items partially or completely to which tenders are called for
2. While quoting the prices, it should be combined with prices of the accessories insisted in the specifications

3. Where ever additional accessories are essential to be quoted , however, allowed to do so by quoting separately
4. supplier / manufacturer should provide the clear data of utility requirement list
5. supplier / manufacturer should provide the instruction manual for both the experimental setups and instruments
6. supplier / manufacturer should provide the sample data & calculations and standard results for comparison in case of experimental setups

Financial Bid

Price Schedule for Goods offered

Please quote amounts in numerals and words at each place.

Sl. No	Name of the Equipment	Total Qty	Unit Price (In Rs) Without Taxes & Duties	Taxes & Duties on Unit Price	Unit Price (In Rs) With Taxes and Duties T(4+5)	Total Price (In Rs) (3*6)
1	2	3	4	5	6	7
1.	6-Axis Robot	3				
2.	3D Printer	3				
3.	CNC Vertical Machining Center	3				
4.	Rotary Servo unit with Inverted Pendulum	3				

(Signature of Bidder)

Note: Please quote for imported equipments in Foreign Currency only. The exchange rate as on date of opening of the price bid will be applied and the comparative statement will be drawn in Indian Rupees. Wherever quoted in Indian Rupees such price will be considered for comparison.

ANNEXURE-1

RGUKT. Ref. No: *RGUKT/Proc/Mech.Engg/RAL/T14/E-2013*

Bid Security(EMD) form

(To be issued by a Nationalized Bank in India and having at least one branch in Hyderabad)

Whereas.....(here in after called “ the Bidder”) has submitted its bid
Dated.....(Date). For the execution of(here in after called “the Bid”)

KNOW ALL MEN By these present that WE.....ofhaving our

Registered office at(hereinafter called the “Bank”) are bound unto
the Rajiv Gandhi University of Knowledge Technologies,. (hereinafter called “The RGUKT”) in
the sum offor which payment well and truly to be made to the said RGUKT itself,
its successors and assignees by these presents.

The conditions of these obligations are:

1. If the bidder withdraws its bid during the period of bid validity or
2. If the bidder, having been notified of the acceptance of its bid by the RGUKT during the period of bid validity
 - 1) Fails or refuses to execute the contract form if required; or
 - 2) Fails or refuses to furnish the performance security, in accordance with the bid requirement;

We undertake to pay the RGUKT up to the above amount upon receipt of its first written demand, without the RGUKT having to substantiate its demand, provided that in its demand the RGUKT will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions. This guarantee will remain in force up to and including 45 days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

Place: Signature of the Bank

Date: and seal.

ANNEXURE-II

RGUKT Ref. No: *RGUKT/Proc/Mech.Engg/RAL/T14/E-2013*

PERFORMANCE SECURITY FORM

(To be issued by a Nationalized Bank in India and having at least one branch in Hyderabad)

To :.....(Address of RGUKT)

WHEREAS..... (Name of Vendor) hereinafter called “the Vendor” has undertaken, in pursuance of

Contract No.....Dated,.....(Date), to supply.....called “the Contract” AND WHEREAS it has been stipulated by you in the said Contract, that the Vendor shall furnish you with a Bank guarantee by a Nationalized bank for the sum specified therein as security for compliance with the supplier’s performance Obligations in accordance with the Contract.

WHEREAS we have agreed to give the Vendor a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Vendor, up to a total of Rs.....and we undertake to pay you, upon your first written demand declaring the Vendor to be in default under Rs..... (Amount of Guarantee) as aforesaid without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until theday of (Date)

Place:

Signature of Guarantors and Seal

Date:

ANNEXURE-III

SUPPLY AGREEMENT FORM

THIS AGREEMENT made the day of..... (Year).Between the Rajiv Gandhi University of Knowledge Technologies (hereinafter “the RGUKT”) of one part and..... (Name of Vendor) of..... (City and Country of Vendor) (Hereinafter “the Vendor”) of the other part:

WHEREAS the RGUKT is desirous that certain items as described in the bid document and briefly outlined below, should be provided by the Vendor.

Date of tender call:

Title of the project:

Brief outline of the work:

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

In this agreement words and expression shall have the same meanings as are respectively assigned to them in the bid document referred to.

The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.

1. bid documents
2. clarifications issued by RGUKT if any,
3. RGUKT notification of award.

In consideration of the payments to be made by the RGUKT to the Vendor as hereinafter mentioned, the Vendor hereby covenants with the RGUKT to provide the **items and to replace defective items during the warranty period** therein in conformity, in all respects, with the provisions of the contract.

The RGUKT hereby covenants to pay the Vendor in consideration of the provision of the items and **to replace defective items during the warranty period** therein, the contract price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

Brief particulars of the items which shall be provided by the Vendor are as under:

Items	Quantity	Unit price (Inclusive of all taxes and duties)	Total Amount	Remarks

The Bidder further notes and accepts that:-

- Bidder shall deliver the goods in one single lot within 90 days for indigenous as well as imported equipments also from the date of award of the contract.

Payment terms	
On delivery at user site	<p>Payment for goods and services shall be made in Indian rupees as follows.</p> <ol style="list-style-type: none"> 1. 80% of payment will be paid after installation, and demonstrating of satisfactory functioning on site. 2. Balance 20% will be paid after 3 months after obtaining the satisfactory certificate from the Director, RGUKT IIIT. 3. In case of equipment from foreign country LC will be opened for 100% and 90% of payment will be paid on delivery & submission of documents and remaining 10% will be paid after installation and commission.
Maximum Damages for late deliveries	<p>For delays:- If the supplier fails to deliver any or all of the goods or perform the services within the time period specified in the contract the purchaser shall without prejudice to its other remedies under the contract deduct from the contract price as liquidated damages a sum equivalent to 0.25% of the contract value per day until actual delivery or performance up to a maximum deduction of 10% of the delayed goods or services contract price. Once the maximum deduction is reached, the purchaser may consider the termination of the contract duly forfeiting the performance security etc.,</p>

In addition if the contract is cancelled, the performance security will be en-cashed and forfeited.

- In case, after random sampling of the supplied lot, it is found that there is any non conformance to specifications, the performance guarantee will be en-cashed and forfeited and the bidder will have no claim to any payments. The entire lot will be rejected.
- The supply and distribution of Items supplied shall be done at all the three RGUKT campuses located at

- Basar, Adilabad District
 - Nuzvid, Krishna District
 - R K Valley (Idupulapaya), Kadapa District
- There shall be a warranty period of 3 years and within the warranty period, in case of any damage to the supplied material like breakage, wear and tear, Electrical defects etc., it will be the responsibility of the supplier to make working the damaged material.
- A random sample of any size will be picked from the lot of items delivered by the bidder to the three IITs under the RGUKT. This sample will be subjected to tests, if necessary at labs anywhere in the country to ensure compliance to specifications. If the result indicates non conformance, the entire lot will be rejected and the contract will stand cancelled without any liability on the part of RGUKT. In addition, this event shall lead to the forfeiture of the performance security amount.
 - All disputes and differences of any kind whatsoever arising out or in connection with contract, whether during or after completion of contract will be settled amicably in a spirit of co – operation and the RGUKT decision shall be final on all such matters and shall be binding on the bidder.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year above written.

Signed, and delivered by

Signed, and delivered by

For the Vendor.

For. Rajiv Gandhi University

Vendor's common seal:

of Knowledge Technologies

Place

RGUKT common seal:

Date:

Place:

Date:

In the presence of:.....

BID LETTER FORM

From:

(Registered name and address of the bidder)

To

Rajiv Gandhi University of Knowledge Technologies,

Ground floor, Vindhya C4 Building,
IIIT-H Campuses, Gachibowli,
Hyderabad-500032.

Sir,

Having examined the bidding documents and amendments there on, we the undersigned, offer to supply and deliver the Robotic Automation Lab (and other related materials) as the case may be, in conformity with the terms and conditions of the bidding document and amendments thereon in response to your tender call dated.....

We undertake to supply the above mentioned materials, as assigned to us in conformity with the said bidding documents, for an estimated sum of Rs (Total bid amount in words and figures) which may vary in accordance with the schedule of prices attached herewith and coverage options made by RGUKT or its user organization.

If our bid is accepted, we undertake to:

- a. supply the materials according to the time schedule specified in the bid document,
- b. Obtain the performance guarantee from a scheduled bank in accordance with bid requirements for the due performance of the contract, and
- c. Agree to abide by the bid conditions, which remain binding upon us during the entire bid validity period and the bid may be accepted any time before the expiration of that period.
- d. We understand that you are not bound to accept the lowest or any bid you may receive, nor to give any reason for the rejection of any bid, and that you will not defray any expenses incurred by us in bidding.

Place:

Bidder's Signature

Date:

Seal.

BIDDER INFORMATION

1	Name of the organization	
2	Year of establishment	
3	Registered Office Address	
4	Phone No.	
5	Fax No.	
6	Email	
7	Total No. of branch offices in AP	
8	Whether Manufacturer	Yes/No
9	Details of EMD furnished	
10	Details of certificates enclosed.	

Turn over details of item/product - 2012-13

S.No	Item name	Nos. sold	Amount (Rs in Lakhs)

List of Major Customers - 2012-13

S. No	Customer Full Address	Year of supply	Item Name	Turn Over (Rs. in Lakhs)

CHECK LIST

Important:

The Bidder must ensure that the following details in the check list are furnished along with the bid document. The bidder must also carefully go through all the contents of the BID Document and any additional information/documents, required more than the items listed in the check list below, also shall have to be furnished. Non-furnishing of any required information/document as per the Tender Document will lead to rejection of the bid.

SL. NO	PARTICULARS	PAGE NUMBER
1	Bidder Information	
2	Tender processing fee of rs.1000/- by way of DD from any nationalized bank	
3	EMD (DD/BG) from a Nationalized Bank	
4	Proof of having supplied materials during the FY12-13	
5	Certificates issued by the firm of FY's regarding turnover of the subject material	
6	Copy of ISO certification	
7	Satisfactory performance certificate from parties	
8	Constitution/legal status of the firm	
9	Copy of registration certificate	
10	Latest income tax returns filed	
11	VAT/CST registration	
12	Latest VAT/CST returns	
13	Power of attorney, wherever applicable	
14	List of machinery/equipment of the bidder	
15	Number of employees	
16	List of customers of previous supply of similar/ same items to IITs, NIT's or central universities or any academic institute of national repute institutions	
17	List of servicing facility centers or work shop with in India	
18	List of present clientele with contact addresses & telephone numbers	
19	The hard copies of all uploaded technical bid documents should be attested by the Gazetted officer and counter sign by bidder with seal	
20	All other information/documents that are required in bid documents	

NOTE: All pages of the bid documents must be serially numbered and signed.