



جامعة عليا

Aliah University

(A UGC & AICTE approved autonomous Institution under the Dept of MA&ME, GoWB)
IIA/27, New Town, Rajarhat, Kolkata – 700 160, West Bengal

Web: www.aliah.ac.in

NOTICE INVITING TENDER

Ref No **034/AU/REG/NIT/18-19**

Date: 13/06/2019

Sub: Sealed Tenders are invited from the bonafide and resourceful Contractors/Service Providers/Agents/Wholesalers/Suppliers for Supply and Installation of NETSIM software, Single user, Academic version for Department of Mechanical Engineering, Aliah University New Town Campus. (Second Call against NIT No. 047/AU/REG/NIT/18-19)

Aliah University, Kolkata a Premier Educational Institute under the Dept of MA&ME, GoWB, invites **Sealed Tenders are invited from the bonafide and resourceful Contractors/Service Providers/Agents/Wholesalers/Suppliers for Supply and Installation of NETSIM software, Single user, Academic version for Department of Mechanical Engineering, Aliah University New Town Campus (Second Call against NIT No. 047/AU/REG/NIT/18-19)**. The tentative quantity of the required items along with technical configuration of each items are mentioned at Annexure separately. Aliah University is looking for interested bidders who have experience in supplying of above type of materials. NIT document will be downloaded from Website of Aliah University, <http://www.aliah.ac.in>. Tender must be submitted on or before **21/06/2019 at 03 P.M** at the Office of the Registrar, Aliah University, IIA/27, New Town, Kolkata-700160, West Bengal, India by Speed-post/registered Post/by hand. Incomplete applications or applications received after the last date of submission will not be considered. **The sealed envelope must be with super scribing the Name, e-mail, Contact No. of Tenderer, NIT Reference Number and Purpose of NIT.** Interested bidders are requested to provide **their Quotes following the format in Annexure- II** in their official letter heads along with signed **Compliance Statement and Price Bid (Annexure- III)**. They must read and accept Terms and **Conditions and scope of work** of this NIT as per **Annexure- I**. For any information in this regard please visit Dept of Mechanical Engineering, Aliah University, New Town Campus. Information may also seek from the following e-mails to registrar@aliah.ac.in; storeandpurchase.au@gmail.com and the emails will be forwarded to the respective Department

Sl.	Schedule	Date & Time
1	Date of uploading of NIT (Publishing Date) at Aliah University Website	17/06/2019 at 02 P.M
2	Bid submission start date	18/06/2019 at 12 P.M
3	Bid Submission closing	25/06/2019 at 3 P.M
4	Techno Commercial Bid opening date O/o The Registrar, IIA/27, New Town, Rajarhat, Kolkata – 700 160. (The Bid Opening date and time is tentative and could be open on availability of Concerned Committee Members)	To be notified later

Sd/-
Registrar

ANNEXURE I: GENERAL TERMS & CONDITIONS

- Supply and Installation of NETSIM software, Single user, Academic version** to be done at **Department of Mechanical Engineering, Aliah University New Town Campus, IIA/27, New Town, Kolkata – 700 160, West Bengal** within 21 working days of issuing work order.
- The Tenderer should bear all the transportation & insurance **risk** till the on door delivery point. Selected bidder shall take all possible care for Govt. Property & of any damages due to negligence of his workers; the bidder/Agency shall be responsible for all such damages & repair the same at his own cost.
- The rates** so quoted must be inclusive of GST, Central Excise, customs Duty if any, packing freight to destination, Insurances, installation (if any), warranty and levies and necessary delivery at designated places

at Aliah University and all charges. No extra charges will be entertained. Prices can be quoted in Indian Currency only (₹). No extra payment will be made for carrying of materials involving head load/ trolley etc.

4. **Warranty as per OEM. Warranty document (if any) must be delivered with the Article.**
5. All necessities cables and adapters for functioning of the equipments to be supplied
6. Supply of Items will be made in conformity with the specification & time as mentioned in the work order as decided by the authority. **No deviation in specification** will be accepted. After delivery of the materials to the respective points by selected bidder (s), authority reserves the right to collect the samples of supply the materials at random basis and send those materials for testing to ensure the quality of products etc. If it is found that materials are not according to the specification, the authority has every right to cancel the total lot or otherwise forfeit the security money, blacklisting the respective Manufacturer / Supplier and terminate the contract.
7. If any part of the service in respect of the work assigned and undertaken by you not rendered/delivered in time, Aliah University shall be entitled to levy and recover liquidated damages/ penalty at 1% per week or part thereof the delay/ default, subject to 5% maximum, on the payment due to the agency/contractor for the particular stage. Any delay beyond scheduled dates may attract higher penalty to be decided by the Aliah University
8. **Partial quotations not allowed for this tender i.e. bidder may quote in individual item. For each item lowest bidder (L1) will be selected.**
9. All disputes are subject to exclusive jurisdiction of competent Court and Forum in Kolkata, India only.
10. Any dispute arising out of this contract shall be referred to the Registrar, Aliah University, and if either of the parties hereto is dissatisfied with the decision, the dispute shall be referred to the decision of an Arbitrator, who should be acceptable to both the parties, to be appointed by the Vice-Chancellor of the University. The decision of such Arbitrator shall be final and binding on both the parties.
11. Payment Condition:-The prices shall be inclusive of all taxes & levies including GST and other statutory duties as applicable. Rate of taxes should be indicated separately in the Price Bid. Contract Price specified in Price Bid should be based on the taxes & duties and charges prevailing at the date one day prior to the last date of Bid submission. Statutory deduction, wherever applicable, shall be made from invoice as per government rules. Necessary certificate will be issued for such deductions. Bidder submitting a bid shall produce valid statutory documents / certificates with respect to GST, Income Tax, ROC, Prof. Tax, Trade Licence, etc. All such documents / certificates shall remain valid on the last date of tender submission. GST component of the invoice of the bidder may be kept on hold in case there is any mismatch / irregularity in GST return filling on the part of the bidder. 100% payment will be released after receiving of items in good order and condition and installation (if any) duly certified by the concern authority and immediately on receipt of payment from the Govt. Department (within 60 days from the submission of bills). Successful vendor should arrange to submit a performance security deposit in form of Performance Bank Guarantee to the tune of 10% amount of the total purchase value at the time of submitting the bill. This performance security deposit should be issued from any Nationalized Bank and validity of the same will be till 1 year/warranty period +60 days whichever is higher from the date of delivery of the material. The payment will be made by RTGS / FUND Transfer mode only. Advance payment not allowed. Hence, following information must be clearly written in the Price Bid for RTGS / FUND TRANSFER:;
 - A. Name of the Firm with complete postal address
 - B. Name of the Bank with Branch where the Account exist
 - C. IFSC CODE
 - D. ACCOUNT No
 - E. PAN No
12. The Tenders are liable to be rejected if the fore going conditions are not complied with. The bid should be complete in all respects and duly signed wherever required. Incomplete and unsigned offer will not be accepted.
13. The products asked for should be of very high standard and preferably reputed brand and/or with **B.I.S/I.S.I** code.
14. All bidders must submit all Technical Documents as per Annexure II otherwise their bid may be cancelled.

Annexure II : Technical Bid Application Format
(Please attach all relevant documents)

To, The Registrar
Aliah University
IIA/27, New Town,
Kolkata-700 160

Sub: Application for 1. Supply and Installation of NETSIM software, Single user, Academic version for Department of Mechanical Engineering, Aliah University New Town Campus. (Second Call against NIT No. 047/AU/REG/NIT/18-19)

Ref: - _____ N.I.T. Nodated

Sir,

1. ABOUT THE ORGANIZATION	
1.1	Name of the Organization
1.2	Name of Authorized Person
1.3	Registered Office Address with telephone no. & email address
1.4	Authorized Service Station Name, address, contact person name, phone number, e-mail
2. TECHNICAL DOCUMENTS	
2.1	Company Registration No./Trade License No./Partnership Deed No. (Please attach documentary evidence)
2.2	PAN Registration No (Please attach documentary evidence)
2.3	GST Registration No (Please attach documentary evidence)

ANNEXURE III COMPLIANCE STATEMENT AND PRICE BID

Sl	Item Description	QTY and UNIT in Nos	Compliance to Tender specification whether YES/ NO	BASIC RATE (Unit Price X Unit)	GST in Amount and in %	TOTAL AMOUNT With Taxes Altogether
1	<p>NETSIM software, Single user, Standard version</p> <p>Component 1 - Internetworks Ethernet – As per IEEE 802.3, CSMA / CD, ARP, Fast and Gigabit Ethernet. Ethernet Switching with STP as per IEEE 802.1 D Wireless LAN – As per IEEE 802. 11 a, b, g, n, ac, e & p standards. CSMA/CA protocol with RTS / CTS exchange. Infrastructure BSS and DCF mode TCP – Old Tahoe and Tahoe flavors as per IETF RFC 2001. Retransmission timer management and RTT Variance estimation using Jacobson’s algorithm. Exponential RTO backoff and dynamic window sizing on congestion. Reno (Fast Recovery), New Reno (retransmission during the Fast recovery), BIC and CUBIC algorithms, Window Scaling and Selective Acknowledgement. UDP – As per IETF RFC 768 with encapsulation Routing – Routing Information Protocol (RIP) implemented as per IETF RFC 1058. Open Shortest Path First (OSPF) implemented as IETF per RFC 2328. Queuing and implementation of periodic time, update time, invalid timer and flush timer. Routing tables</p>	01 No				

containing source, destination, next hop cost and interface.

Component 2 – Advanced Switching and Routing IGMP, PIM, VLAN, ACL, NAT, Layer 3 Switch Protocol C Source Code Library.

Component 3 – Advanced Wireless Networks (MANET, Wi-Max)

MANET: Dynamic Source Routing (DSR) implemented as per RFC4278 and Adhoc on Demand Distance Vector Routing (AODV) per RFC 3561. Mobility is via the Random waypoint model, Random Walk, Group mobility, File Based Mobility, which is designed to describe the movement pattern of mobile users, and how their location, velocity and acceleration change over time. Zone Routing Protocol (ZRP) per Section 10 of RFC 2026 and Optimized Link State Routing (OLSR) per RFC 3626

WiMAX: implemented as per IEEE802.16d-2004. Traffic is via Erlang B call model. Analysis of Call blocking probability, DL-MAP/UL-MAP scheduling, Call admission control.

Component 4 – Software Defined Networks (SDN)Open flow v1.3 Compatible Protocol C Source Code Library.

Component 5 – Internet of Things

Wireless Sensor Network, Internet of Things and Zigbee per IEEE 802.15.4 MAC and PHY. 802.15.4 PHY: Change radio state, Received power calculation, Shadow Loss, Path Loss Error, Bit Error Rate, Channel Formation, Clear Channel Assessment, SINR Calculation. 802.15.4 MAC: Locate back-off boundary, Super Frame, Beacon mode, Back-off Calculation, GTS, Unslotted CSMA / CA, Slotted CSMA / CA

RPL Routing protocol covering Local DODAGs Route Discovery, Rank Properties, Loop Avoidance, RPL Instance, ICMPv6 RPL Control Message, Sequence Counters, Upward Routes, Downward Routes, Non-Storing Mode, Packet Forwarding and Loop Avoidance/Detection, Maintenance of Routing Adjacency.

Component 6 – LTE and LTE-Advanced Networks

LTE Network layer, Data link and physical layer implementation is as per standards 3GPP 36.xxx. UE, eNB with MME can be used for the scenario building and simulation.

Network layer: Handover Decision, Handover Initiation, Handover routing, MME routing Handover control packet processing

Data Link layer: PDCP init, Header compression/Uncompression, Data sequencing, RRC Connection establishment – Paging, T300 expiration, RLC - RLC SDU formation, Data forwarding, Mac Scheduler - Round Robin, Max CQI, Proportional fair scheduling,

<p>GBR Queue, Non GBR queue Physical layer: Received Power Calculation, Path Loss – Fading, Shadowing, SINR calculation, BER calculation, CQI Reporting, CQI_MCS mapping, MCS_TBS mapping Mobility is via the Random waypoint, Random Walk, Group mobility LTE-A Network layer, Data link and physical layer implementation is as per standards 3GPP 36.xxx. UE, eNB, Relay with MME can be used for the scenario building and simulation. Physical layer: Carrier Aggregation, Transmission index – MIMO concept, and featuring relays nodes LTE D2D (where UEs can communicate directly with each other) and LTE Femtocell with HNB gateways are implemented.</p> <p>Component 7 – Vehicular Adhoc Networks VANET: implemented as per IEEE 1609 WAVE, Basic Safety Message (BSM) protocol per J2735 DSRC. Dynamic interfacing with SUMO through TraCI API's</p> <p>License Type:- Perpetual and Floating License No of User :- Single User External Interfacing: Interfacing with SUMO, MATLAB and Wireshark Manufacturer Authorization mentioning our NIT No should be submitted with bid. Delivery , Installation and Training Delivery:-Shipping and Handling Fees should be quoted ,delivery will be at Aliah University. Installation:- Installation should be done at Aliah University. Training:-Onsite Training for Two days required covering basics with study Material and Video Tutorial. Complete source code should be provided for all programming exercise.</p>				
Total Amount in Rupees				
Total Amount in Word				

Declaration

I, Sri/Smt. The Managing Director/Proprietor (etc.) of the Firm.,..... (Name of the firm) At (address)..... do hereby solemnly affirm and declare as follows:

1. That I have not ever been convicted of any offence making myself liable to be disqualified to provide any goods/services/work to any Educational Institutions/Govt. or Govt. undertaking Organization /Institution in the State of West Bengal or other State or States.

2. That no case is pending against me or against my firm in any criminal court of law or blacklisted/debarred/banned to provide similar items to the Educational Institutions / Govt. or Govt. undertaking Organization / Institution in the State of West Bengal or other State or States (If any case is pending, state the details).

3. That, I also declare that if any information subsequently found incorrect or false will it automatically render the tender submitted by me cancelled and make me liable for penal/legal action as per law of the country.

4. That I do further affirm that the statements made by me in this tender are true to the best of my knowledge and belief and all the documents attached are genuine & correct.

5. I/We agree to supply the above goods/equipment/products in accordance with the technical specifications for a total contract price of Rs..... (Amount in figures) (Rupeesamount in words) within the period specified in the invitation for Quotation. We confirm that the normal commercial warranty/guarantee of mentioned in this Quotation shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the invitation letter. We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery. Certify that all above information are correct to the best of my/our information, knowledge and belief.

Signature of the Bidder

Date _____

Name _____

Designation _____

Seal

Ref. No: 034/AU/REG/NIT/18-19

Dated: 13/06/2019

Copy to:

1. **Chairman, Departmental Purchase Committee, Dept of Mechanical Engineering, Aliah University**
2. **Notice Board at Aliah University**
3. **Website: www.aliah.ac.in**
4. **One Bengali News paper**
5. **Guard File**

**Sd/-
Registrar**