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TENDER DOCUMENT FOR
NETWORK RESEARCH LAB
AT INSTITUTE OF INFORMATICS AND COMMUNICATION
Ref. No. IIC/NRL/DSTP2015



Institute of Informatics & Communication
University of Delhi South Campus
Benito Juarez Road, New Delhi-110021

Tender Document

Sealed tenders are invited for furniture items for various laboratories/ classrooms at Institute of Informatics & Communication, University of Delhi South Campus from the leading manufacturers or their authorized partners.

The bidders are required to visit/inspect the site to understand the layout plan for proper installation of the furniture items.

Completed tender along with all the documents must reach the In-charge, Institute of Informatics & Communication, University of Delhi South Campus Benito Juarez Road, New Delhi-110021.

Tender/Bid Details:

Date of issue of Tender document on the University website http://web1.south.du.ac.in http://www.du.ac.in	05/03/2015
Last date and time for submission of tender	20 th March 2015 1300 hrs
Opening of Bids	21 st March 2015 1400 hrs
Ernest Money Deposit (EMD)	The Earnest Money Deposit of Rs. 25000/- must be attached in the following forms and shall be in favour of "Director, University of Delhi South Campus", payable at Delhi:- i. Demand Draft/Banker's Cheque ii. Fixed Deposit Receipt (FDR) The minimum validity of the EMD should be of 3 months.
Cost of the Tender	Nil
Address for communication	In-charge, Institute of Informatics & Communication, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021 Email: iicoffice@south.du.ac.in Phone: 011-24110237

Terms and Conditions of the Tender

1. Eligibility criteria

- Bidder should be Manufacturer/Authorized Partner/ Reseller of the manufacturer and a Letter of Authorization from manufacturer for the same and specific to the tender should also be enclosed.
- Bidder should be financially sound to execute the order. Certificate to this effect should be issued by any Nationalized/Scheduled bank showing its annual turnover of at least 50 Lakhs each in the last three financial years.
- The bidder shall provide the Registration number of the firm along with the LST/CST/ WCT No. and the PAN Number issued by the concerned authorities.
- The bidder must have experience of supplying similar orders with at least 3 orders of similar level. The bidder must also enclose documentary evidence of supplying and installation within the last 3 financial years for any organization preferably from Educational, R&D organization, Govt. Organization etc.
- The bidder must not be blacklisted by Delhi University. A certificate or undertaking to this effect must be submitted.
- Signed and sealed testimonials from institutions where installation have been made by the bidder, should be provided explicitly stating the quality of after-sales service.
- An undertaking, stating the compliance of the conditions should be attached.
- **Duly signed compliance certificate must be made available with the proposal. Non-submission would lead to rejection of bids/tender.**

2. Two Bid System Tender

Separate Technical and Commercial Bids duly sealed and superscripted '**Quotations for Network Research Lab**' shall be submitted as per bid details given below.

The tender not submitted in the prescribed format or incomplete in detail is liable for rejection. University of Delhi is not responsible for non-receipt of quotation within the specified date and time due to any reason including postal holidays or delays.

Envelope I (Technical Bid/Offer):

The technical offer should be complete in all respects and contain all information asked for, **except prices**. The Technical offer should include all equipment/components as per specifications given asked for in Annexure V. The suggested format for submission of technical offer is as follows:

- Index
- Covering letter as per Annexure I
- The Company profile as per Annexure II
- Details of 3 major projects as per Annexure III
- Warranty compliance statement as per Annexure IV
- Technical Offer with Specifications according to the information given in Annexure V. **It should not contain any price information.**
- Compliance Statement as per Annexure VI
- Technical Documentation (Product Brochures, leaflets, Drawings, Material Specifications etc.)

Envelope II (Commercial Bid/Offer)

The Commercial Offer (C.O) as per Annexure VII should give all relevant price information as per technical requirement (Annexure V). The Bid Form must be filled in completely, without any errors, erasures or alterations. The Commercial offer must not contradict the technical offer in any way.

3. Documentation

The vendor shall furnish, as part of its tender offer, documents establishing the vendor's eligibility to participate in the tender and its qualifications to perform the contract. The documentary evidence of the vendor's qualifications to perform the contract, shall establish to University of Delhi's satisfaction that the vendor is eligible as per the criteria outlined in the Eligibility Criteria above.

4. Offer validity Period

The offer should hold good for a period of 180 days from the closing date of the tender. Any offer falling short of the validity period is liable for rejection.

5. Bank Guarantee

Vendor must submit Bank Guarantee of the value of 10% of the total contract value in favor of "Director, University of Delhi South Campus" at the time of agreement.

6. Earnest Money Deposit and Cost of Tender Document:

The Earnest Money Deposit (EMD) of Rupees **Twenty Five thousand** must be attached. The Earnest Money Deposit shall be accepted with a minimum validity of 3 months in the following forms and shall be in favour of "Director, University of Delhi South Campus", payable at Delhi: -

- i. Demand Draft/Banker's Cheque
- ii. Fixed Deposit Receipt (FDR)

Cost of Tender: Nil

7. Costs

The offer should include the cost of all items and all required accessories inclusive of all taxes and statutory levies. Labour/ installation charges if any should be mentioned separately (inclusive of taxes leviable on them).

8. Clarification of Offers

To assist in the scrutiny, evaluation and comparison of offers, University of Delhi may, at its discretion, ask some or all vendors for clarification of their offer. The request for such clarifications and the response will necessarily be in writing. If deemed necessary, the vendor may be required to give presentation on the system offered.

9. Technical Inspection and Performance Evaluation

University of Delhi reserves its right to carry out a technical inspection and performance evaluation of the offers made by shortlisted vendors.

10. Verification

The University of Delhi reserves the right to verify any or all statements made by the vendor in the tender document and to inspect the vendor's facilities, if necessary, to establish to its satisfaction about the vendor's capacity to perform the job.

11. No Commitment to Accept Lowest or Any Tender

University of Delhi shall be under no obligation to accept the lowest or any other offer received in response to this tender notice and shall be entitled to reject any or all offers including those received late or incomplete offers without assigning any reason what so ever. University of Delhi will not be obliged to meet and have discussions with any vendor, and or to listen to any representations.

12. Evaluation of Proposals

University of Delhi will create a shortlist technically qualifying vendors based on technical compliance and the commercial offers of only shortlisted vendors will be opened. University reserves the right to decide whether the items being quoted are as per the requirements of the University and are of standard/leading benchmarks in the market.

University of Delhi reserves the right to decide which offer best suits the requirement.

Further, after opening Commercial Offers from the Short listed Vendors, if there is a discrepancy between word and figures, the amount indicated in words will prevail.

13. Completeness of the Contract

The contract will be deemed as incomplete until the installation is fully done. Until then the installation will be termed as incomplete and the warranty period will not commence. The warranty period will commence only on satisfactory installation report from the Head/ In-charge of the Institute.

14. Warranty/ Comprehensive Maintenance

The vendor shall undertake comprehensive support for at least 01(One) year. This would cover the replacement/repair of supplied items and accessories supplied by vendor at the place of installation and also complete installation and satisfactory operation of the supplied equipment.

15. Order Cancellation

University of Delhi also reserves the right to cancel the order in the event of one or more of the following circumstances:

- Serious discrepancy in the work being performed or installation being done or items/ accessories found defective during inspection by our experts.
- Breach by the tenders of any of the terms and conditions of the tender.
- Any action by the vendor, which is in breach of law or accepted practices in the commercial transactions.
- If the Vendor goes into liquidation voluntarily or otherwise.

16. Resolution of Disputes

University of Delhi and the vendor shall make every effort to resolve amicably, by direct informal negotiations, any disagreement or dispute arising between them under or in connection with the contract. If after thirty days from the commencement of such informal negotiations, University of Delhi and the Vendor have been unable to resolve amicably a contract dispute, either party may require that the dispute be referred for resolution by formal arbitration. The Vice Chancellor, University of Delhi, shall appoint a

sole Arbitrator of the dispute who will not be related to the contract and whose decision shall be final and binding.

17. Jurisdiction

The jurisdiction of the courts shall be Delhi.

18. Income Tax may be deducted at source as per rules

19. Vendors may be subjected to a financial viability check and may be required to take out a director's, bank or corporate guarantee.

20. The University may also opt not to purchase all the items mentioned and may change quantity of the items.

21. The University reserves the right to cancel the tender at any point of time without assigning any reason thereof.

Annexure I

(Letter to the University on the vendor's letterhead)

The Head / In Charge,
Institute of Informatics & Communication
University of Delhi South Campus
New Delhi-110021.

Dear Sir/madam,

Sub: Your tender for Network Research Lab at Institute of Informatics & Communication, University of Delhi South Campus.

With reference to the above tender, having examined and understood the instructions, terms and conditions forming part of the tender, we hereby enclose our offer for the supply of the following items as detailed in your above referred tender.

S.No.	Basic Item	Item Description	Brief Technical Details

We further confirm that the offer is in conformity with the terms and conditions as mentioned in your tender documents and its enclosures. We also understand that the University is not bound to accept the offer either in part or in full and that the University has a right to reject the offer in full or in part without assigning any reasons whatsoever.

We also hereby undertake that this firm or the manufacturer represented by us have not been black listed by University of Delhi.

Yours faithfully,

Authorised Signatories
(Name and Designation, seal of the firm)
Date:

Annexure II

Company Profile

Details filled in this form must be accompanied by sufficient documentary evidence, in order to verify the correctness of the information.

S.No.	Item	Details
1.	Name of Company	
2.	Mailing Address	
3.	Telephone and Fax numbers	
4.	Date of Registration of the Company	
5.	Year of Commencement of Business	
6.	Name and designation of the person authorized to make commitments to the University	
7.	Contact details of the person authorized to make commitments to the University	
8.	Sales Tax Number	
9.	Brief description of after installation service facilities available with the vendor.	

Signature (Name and Designation)

Date:

Annexure III

Details of the Similar Work Experience

Details of 3 projects executed for the work similar (and similar value) to the one proposed to be performed and quoted for.

Note: Please only quote projects, which are at least comparable to the work proposed to be performed.

Name of the Vendor _____

S.No.	Name of Client	Details of work carried out	Clients contact Details (including name, email phone and fax no. and address)	Remarks
1.				
2.				
3.				

Signature (Name and Designation)

Date:

Annexure IV

The Head / In Charge,
Institute of Informatics & Communication
University of Delhi South Campus
New Delhi-110021.

Dear Sir/madam,

**Subject: Your tender for Network Research Lab at Institute of Informatics
& Communication, University of Delhi South Campus.**

This bears reference to our quotation Ref. _____ Dated _____

We warrant that everything to be supplied by us shall be brand new, free from all defects and faults in material, workmanship and manufacture and shall be of the highest grade and quality and consistent with the established standards for materials specification, drawings or samples if any, and shall operate properly. We shall be fully responsible of its efficient operation.

We would provide free and comprehensive maintenance of the installed system for a period of _____.

Yours faithfully

Signature
(Name and Designation)
Date

Technical Bid

S.No.	Network equipment/Item	Specifications	Qty.
1	Network Simulator (1)	<p>OPNET Modeler Multi tier should support voice, HTTP,TCP IP,OSPF,BGP, EIGRP,RIP, RSVP, Frame Relay, FDDI, Ethernet, ATM, 802.11, wireless LAN, MPLS, PNNI, DOCSIS, UMTS, Ip Multicast, Circuit switch etc. with complete libraries and with min. following features:</p> <p>Fast discrete event simulation engine Component library with source code Object-oriented modeling Hierarchical modeling environment Scalable wireless simulations support 32-bit and 64-bit graphical user interface Customizable wireless modeling Discrete Event, Hybrid, and Analytical simulation 32-bit and 64-bit parallel simulation kernel Grid computing support Integrated, GUI-based debugging and analysis 12. Open interface for integrating external component libraries, multi user support Should support Linux, Mac OSX and Windows Perpetual License</p>	01
2	Network Simulator (2)	<p>QualNet Developer To work with wireless, wired and mixed-platform network and networking device performance and should support Real time evaluation of networks and network-centric systems</p> <p>QualNet Model Libraries should support specialized networks, such as WiFi, sensor networks, cellular, 3G/ UMTS, MANET, WiMAX, and satellite, to enabling powerful 3-D visualization, Model Libraries add significant capabilities. Should have following Model libraries:</p> <ul style="list-style-type: none"> • Developer Library • Wireless Library • Multimedia and Enterprise Library • Advanced WirelessLibrary • Cellular Library • Military Radios Library • Network Security Library • Propagation Library: ALE /ASAPS • Propagation Library: TIREM • Propagation Library • Satellite Library 	01

		<ul style="list-style-type: none"> • Sensor Networks Library • Standard Interfaces Library and • UMTS Library <p>multi user support, Should support Linux, Mac OSX and Windows Perpetual License</p>	
3	Network Performance Analyzer/Meter	Should support up to 4 Gigabit Ethernet ports, 16 10/100 Mbps Ethernet ports, 2 POS (Packet over SONET) ports, min. 2 Gigabit ports, or a mixture of these port types.	01
4	Network Load/Traffic Generator	<p>Portable form factor with integrated display, Flexible port configurations with up to (16) Gigabit Ethernet ports (RJ-45 or SFP SR/LR interface), 8x10G Ethernet ports (SFP+ SR/LR interface) or 4x40G Ethernet ports (QSFP+ interface), Multiple PCI Express slots for other functions such as storage adapters or other NICs, should support most common protocols, such as:</p> <ul style="list-style-type: none"> Ethernet/802.3/LLC SNAP VLAN (with QinQ) ARP, IPv4, IPv6, IP-in-IP: IP Tunneling (6over4, 4over6, 4over4, 6over6) TCP, UDP, ICMPv4, ICMPv6, IGMP, MLD Any text based protocol (HTTP, SIP, RTSP, NNTP, etc.) <p>Modification of any field of any protocol Stacking of protocols in any arbitrary order Creating and configuring multiple streams with different stream rates, bursts, and number of packets per stream Should support Open-source Linux and open-standards, modular platform. Support custom development, API toolkit, and other application integration services. With all accessories, cables and connectors</p>	01
5	Network Packet Capture Appliance/Device	Should Capture traffic from the network link up to 40 Gbps or higher and to-disk transfer speed up to 20 Gbps or higher, Plug-and-play operation automatically identifies applications, collects, and displays relevant statistics in user configurable and customizable dashboards, Auto-Multi segment network packet capture analysis, Performance Bottleneck Analysis to check problems in the server or the network, Provides QoS metrics, statistics and trending charts of application and flow levels for buffered and historical data, Real-time Video/Voice over IP metrics and troubleshooting, Portable form factor with RAID options and multiple terabytes of storage, Application-centric analysis drill down for root cause identification With all accessories, cables and connectors	01
6	HandHeld WiFi Test	Dedicated, handheld 802.11 a/b/g/n/ac Wi-Fi network tester, Detect and locate 802.11ac Access Points,	01

	tools	validate connectivity to 802.11ac infrastructure, Single button AutoTest, pass/fail indicator of the wireless environment, Wi-Fi network utilization, determination of 802.11 traffic or non-802.11, should quickly identify and locate wireless all access points. With all accessories, cables and connectors	
7	GPS navigation system	High Sensitive GPS Voice Command Support 2 GB Built-in Storage or higher 2 hrs Battery Life or higher min. 5 inch TFT Display Touchscreen Preloaded Street Maps Map Upload Support Photo Navigation, Go Beyond Navigation, Door-to-door Navigation Lifetime Map Updates Support for Google Maps	04
8	PTZ broadcast/conference Camera	1/2.7" CMOS Image Sensor Native 1920 x 1080 Sensor Resolution Wide angle lens 12x Optical Zoom Lens 300° Left/Right Pan / 180° Tilt 43° to 7° Angle of View Stream USB Video to Computer Encodes Video in MJPEG at up to 1080p IR Remote and RS-232 for Control OSX, Windows, and Mobile Compatible Includes Monitor Mount	02
9	Soldering Work Station	JBC CD-2BD T245C soft thermal Insulator handle, C-245-903 and C245-741 Cartridge With all accessories and connectors	01
10	Portable/Handheld Network Analysis	Should support wired and wireless network, network mapping and network path analysis, diagnosis of network vs. application problems, Line-rate network packet capture and analysis (1G / 10G) Assess network quality for VoIP/Video/UC, Support for 802.11 WLAN planning, deployment, troubleshooting With all accessories, cables and connectors	01
11	Router	Integrated access point Power over Ethernet (PoE) and Cisco Enhanced PoE 1 integrated 802.11n Wireless Access Point 2 Enhanced High-Speed WAN Interface Card WSMA, SNMP, RMON, Syslog, Netflow, TR069 Capability. IPv4, IPv6, static routes, OSPF, EIGRP, BGP, BGP Router Reflector, IS-IS, IGMPv3, PIM SM, SSM, DVMRP, IPSec, GRE, BVD, IPv4-to-IPv6 Multicast, MPLS, L2TPv3, 802.1ag, 802.3ah, L2 and L3 VPN. With all accessories, cables and connectors.	01
12	Gigabit Network	Dual Processors 128 Gbps Switching Fabric	01

	switch	<p>48 Ethernet 10/100/1000 PoE+ ports</p> <p>2 Ten Gigabit Ethernet SFP uplink,</p> <p>MPLS, MPLS VPN, EoMPLS, VLAN Mapping, PIM, IPV6, IGMP Proxy, Private VLAN</p> <p>With all accessories, cables and connectors</p>	
13	Servers	<p>4 Socket, 8 Cores, 128 GB RAM, 1TB internal storage</p> <p>Each server should be configured with a minimum of two (2) 8 core 2.6 GHz CPU or higher available in latest series, min 2.5MB per core</p> <p>The server should have up to 8 front-accessible, hot-swappable, SAS, SATA or SSD drives loaded with minimum 3x600GB SAS HDD with at least 10K RPM, server RAID controller should support RAID 0, 1, 5, 6, 10, 50 and 60, Should have at least 16 DIMM slots and scalable up to 512 GB memory with the 32 GB memory module. The server should be populated with 128 GB memory.</p> <p>Support for advanced memory redundant technologies like Advanced error-correcting code (ECC) and memory mirroring</p> <p>Should have 2x1 GbE LAN on Motherboard (LOM) for network connectivity, Should have 2*8 Gb FC ports for SAN connectivity, Each server should offer 2 PCI Express (PCIe) 3.0 slots, the integrated management controller should support web user interface for server management; remote keyboard, video, and mouse (KVM); virtual media; and administration with Virtual media support for remote KVM and CD and DVD drives (virtually local),</p> <p>Should have the following minimum ports for server connectivity:</p> <p>1 serial port, 2 USB ports, 1 VGA video port</p> <p>Supports hot swappable redundant fans</p> <p>Supports hot swappable redundant power supplies</p> <p>Server should support Windows 2008, 2012, RHEL6, Linux</p> <p>KVM switch & LCD console (optional, quote separately):</p> <p>1U Rack mountable 17" LCD console with touchpad & Keyboard (106 key)</p> <p>8port KVM switch option to connect USB keyboard & mouse</p>	02
14	AV Broadcast Appliance	<p>4:2:2 (Y/Pb/Pr), 8 bits (Internal Processing : 480/59.94p when set to NTSC, 576/50p when set to PAL)</p> <p>Sampling Rate : 24 bits/48 kHz</p> <p>VIDEO IN 1-4 (HDMI : Type A 19 pins)</p> <p>VIDEO IN 4 (RGB/Component : HD DB-15 type)</p> <p>VIDEO IN 1-4 (Composite : RCA phono Type)</p> <p>AUDIO IN 1-4 (XLR/TRS combo type, phantom power)</p> <p>AUDIO IN 5-6 (Stereo RCA phono type)</p>	01

		<p>AUDIO IN 7/8 (Stereo miniature type) MIC (Internal stereo microphones) VIDEO OUT (HDMI: Type A 19 pins) VIDEO OUT (RGB/component : HD DB-15 type) VIDEO OUT (Composite : RCA phono type) PVW OUT (HDMI: Type A 19 pins) AUDIO OUT L,R (Stereo RCA phono type) AUX OUT L,R (Stereo 1/4-inch phone type) PHONES (1/4-inch phone type) (headphones) PHONES (Stereo miniature type) (headphones) USB : B type x 1 (for streaming and remote control) Graphic Color LCD, 320 x 240 dots, touch panel Transition : Cut, Mix (3 patterns), Wipe (250 patterns) VIDEO FX : Strobe, Negative, Colorize, Finedge, Silhouette, Monochrome, Sepia, Emboss, Posterize, Color pass, Multi (11 types) Composition : Picture in Picture, Split, Quad, Luminance Key, Chroma Key Others : Output Fade, Freeze RGB/Component Input/Output Signal Level : 1.0 Vp-p (luminance), 0.7 Vp- p (chroma) Input/Output Impedance : 75 ohms Composite Input/Output Signal Level : 1.0 Vp-p Input/Output Impedance : 75 ohms XLR/TRS combo type Input Signal Level : -60—+4 dBu (Maximum: +22 dBu) Input Impedance : 10 k ohms (GAIN 0—23 dB), 5 k ohms (GAIN 24—64 dB) 1/4-inch/RCA phono type Input Signal Level : -10 dBu (Maximum: +8 dBu) Input Impedance : 15 k ohms Output Signal Level : -10 dBu (Maximum: +8 dBu) Output Impedance : 1 k ohms Miniature type Input Signal Level : -15 dBu (Maximum: +3 dBu) Input Impedance : 15 k ohms Headphones Output Signal Level: 25 mW + 25 mW Output Impedance : 10 ohms</p>	
15	Xbee modules	<p>802.15.4/Multipoint network topologies 2.4 GHz for worldwide deployment 900 MHz for long-range deployment Fully interoperable with other Digi Drop-in Networking products, including gateways, device adapters and extenders Common XBee footprint for a variety of RF modules Low-power sleep modes Multiple antenna options</p>	05

		Industrial temperature rating (-40o C to 85o C) long-range support	
16	Transceivers	Over the Air Programming (OTA) support, support long, medium, short range	05
17	Wireless sensors	Weather, temperature, pressure, humidity etc. Must follow Industrial Protocols, support Encryption Libraries	05 each
18	Prototype boards for quick fabrication and testing	Heavy Duty Phenolic Pre-Drilled Interface Board With Mounting Holes, cleaned, Easy to cut and drill, Smooth solder flow, Dimensions: 120x80mm	20
19	Data acquisition board	Support for Simultaneous operation of analog I/O, digital I/O, and C/Ts, high sampling rate, higher bit resolution, support for integration with linux system	05
20	USB board	Support built-in full-speed USB host controller , Complete USB Software onboard support, Easy to update the software using simple serial connection, led indicator, support for Linux and Mac	04
21	Open tablets (linux based)	Quad Core 64 bit, 1.6-1.8GHZ, OS: Linux/Sailfish, 7 inch or higher 16:9 wide TFT LED screen Resolution: HD Multi-touch capacitive screen RAM: 2GB, ROM: 32 GB + SD WIFI Support IEEE 802.11/b/g/n wireless internet Camera: Front minimum 2 MP, Rear 5MP or higher, Rechargeable battery with min. 4300mAh	05
22	WLAN controlled quadcopter drone	1GHz 32-bit ARM Cortex A8 processor and 1GB DDR2 RAM HD Camera 720p USB 2.0 port Wi-Fi enabled and comes with Ultrasound sensors for ground altitude measurement 720p - 30fps - H264 encoding base profile, low latency streaming feature and video storage on the fly with a remote device or USB flash drive view your flights in 3D and can control your drone through the map switch from the frontal camera to the vertical camera Remote control range min. 50 meters Reverse, Right, Forward, Left control,	01
23	Mobile GSM kits	GSM 900/1800EGSM, Rx Frequency Band : EGSM 925, 960MHz, GSM 900, 935, 960Mhz, Tx Frequency Band : EGSM 880, 890MHz GSM900, 890, 915MHz.	2
24	IoT Devices	panStamps Arduino UNO XinoRF OpenKontrol Gateway	2 each

		<p>Pinoccio Raspberry Pi -II BeagleBone Black Cubieboard WeIO mbed Microcontrollers – LPC1768 WI-Go Module pcDuino OpenPicus Flyport WiFi Hackberry UDOO LibeLium Wasmote Sensors</p>	
25	Micro PC	<p>System-on-a-chip processor, 512 megabytes (MB) of SDRAM, 2 gigabytes (GB) of flash memory and a WLAN WiFi, Bluetooth and FM module USB connectivity for power HDMI Jack Should support Android Gingerbread 2.3 or higher. Chrome OS, iOS 6.0 or higher Mac OS 10.7 or higher. Windows 7 or higher.</p>	04
26	Wireless IP Camera	<p>HD Camera with 720p resolution (1280 x 720) Infrared LEDs for clear pictures up to 7 meters in total darkness, 802.11n selectable dual-band (2.4 GHz/5.0 GHz), min. 2-hour battery back-up with rechargeable LI battery, MiniSD/MicroSD card slot for extended memory, H.264 compression, min 107-degree field of view, Integrated microphone with echo cancellation Built-in speaker, should support various mounting options for pan/tilt and flexible connectivity options</p>	04
27	Wireless Keyboard with touch pad	<p>Easy and comfortable typing on quiet keys with bold, easy-to-read characters Large (3.5-inch or bigger) touch-pad with multi-touch navigation for easier web browsing, min. 10 meter wireless range Plug and play unifying wireless receiver Should work with Mac OSX, Linux, Windows</p>	02
28	Cables, connectors, accessories	For all above mentioned items as applicable	As actual

Warranty: One year comprehensive onsite.

Note:

- 1. Kindly give technical details and specification and the make of the items/accessories as proposed by you. Your proposal should indicate the features that would be provided in addition to the above.**
- 2. Your Proposal should include a compliance statement and the detailed bill of material as per your plan.**

Signature (Name and Designation)

Date:

Technical Compliance Statement

S.No.	Network equipment/ Item	Compliance Statement	Deviation (if any)
1	Network Simulator (1)		
2	Network Simulator (2)		
3	Network Performance Analyzer/ Meter		
4	Network Load/Traffic Generator		
5	Network Packet Capture Appliance/ Device		
6	HandHeld WiFi Test tools		
7	GPS navigation system		
8	PTZ broadcast/ conference Camera		
9	Soldering Work Station		
10	Portable/ Handheld Network Analysis		
11	Router		
12	Gigabit Network switch		
13	Servers		
14	AV Broadcast Appliance		
15	Xbee modules		
16	Transceivers		
17	Wireless sensors		
18	Prototype boards for quick fabrication and testing		
19	Data acquisition board		
20	USB board		
21	Open tablets (linux based)		
22	WLAN controlled quadrocopter drone		
23	Mobile GSM kits		
24	IoT Devices		
25	Micro PC		
26	Wireless IP Camera		
27	Wireless Keyboard with touch pad		
28	Cables, connectors, accessories		

Signature (Name and Designation)

Date:

Annexure VII

Commercial Bid:

Kindly give detailed costing and terms of payment for the proposal submitted in technical bid, along with detailed bill of material with their costing.

Your proposal should include the cost of each item/equipment as per technical specifications and should be inclusive of all costs as per the following suggestive format:

S.No.	Item	Unit Cost (In Rs.)	Total Cost
1			
2			
3			
.			
.			
28			
Grand Total			

Signature (Name and Designation)

Date: