



NATIONAL INSTITUTE OF FASHION TECHNOLOGY
(A Statutory Institute under NIFT Act 2006)
NIFT Campus, Doorbhash Nagar, ITI Premises, Rae Bareli – 229010
(Tel: 0535-2702426)

9826(12)/NIFT/RBL/IT-Network Infrastructure/2018-19

Date: 17.1.2019

Notice Inviting E-Tender

National Institute of Fashion Technology (NIFT), Raebareli invites online e-Tender in two Bid systems for **“Supply, installation and commissioning of Network Equipment”** for upgradation of old Network Infrastructure at old Hostel in NIFT Rae Bareli Centre from the Manufacturers, Authorised Dealers of the same equipments as per details of e-tender document. The e-tender notice and e-tender document is also available for viewing on the “tenders” link of the NIFT website i.e. <https://nifttenders.eproc.in> and <https://www.nift.ac.in/raebareli>. The Tenderers are requested to read the instructions in the e-Tender; Terms and conditions carefully before quoting the rates in quotations/Tender schedule and comply with the same there after amendments made if any. Application to this tender will be accepted only through the online mode <https://nifttenders.eproc.in>. No other mode of tender shall be considered an such tender shall not be accepted.

Commencing date of tender : from 17.00 Hr. on 17.1.2019

Last date for receipt of tender online : 8.02.2019 up to 14:00 hrs

Date of opening of tender online (Technical bid) : at 15:00 hrs on 8.02.2019

Earnest Money Required: Rs. 25,000/- in the form of DD in favour of NIFT, payable at Raebareli. The original DD of EMD amount must be reached in an envelop superscripted as “ Tender No./Date:..... & EMD to following address on or before 8.02.2019 at 14:00 hrs:

Joint Director, National Institute of Fashion Technology, Doorbhash Nagar, Raebareli-UP-229010

For applying online, the Firm should get itself registered at <https://nifttenders.eproc.in> by paying

- **Annual Registration Charges of Rs. 2000 + applicable taxes.**
- **Bid Processing Fee charges 800 + applicable taxes.**

(Purchase Officer)
NIFT-Raebareli

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9826(12)/NIFT/RBL/IT-Network Infrastructure/2018-19

Date: 17.1.2019

(E-Tender Document)
(Part-A)
(General Essential term & condition)

1. National Institute of Fashion Technology (NIFT), Raebareli invites online Tender in two Bid systems for **“Supply, installation and commissioning of Network Equipment”** for upgradation of old Network Infrastructure at old Hostel in NIFT Rae Bareli Centre from the Manufacturers, Authorised Dealers of the quoted equipments as per details under.
2. The interested bidders should apply online and submit their tender and bids along with scanned copy of all the relevant certificates and documents etc. in support of technical and price bids duly signed- on the <https://nifttenders.eproc.in> till 8.2.2019 upto 2.00 P.M. e-tender document is also available for viewing on the “tenders” link of the NIFT website i.e. <https://nifttenders.eproc.in> and /<https://nift.ac.in/raebareli>.
3. The Tenderers are requested to read the instructions in the e-Tender; Terms and conditions carefully before quoting the rates in quotations / Tender Schedule and comply with the same there after amendments made if any.
4. Application to this tender will be accepted only through the online mode <https://nifttenders.eproc.in>. No other mode of tender shall be considered as such tender shall not be accepted.
5. For applying online, the Firm should get itself registered at <https://nifttenders.eproc.in> by paying
 - **Annual Registration Charges of Rs. 2000 + applicable taxes.**
 - **Bid Processing Fee charges Rs. 800 + applicable taxes.**

Basic Requirements

The basic requirements for registration and applying for tender online are as under:

Operating System should be windows 7 or above .

Java version : Java 8 update 25.

Use Internet Explorer 11 version.

All java add-ons must be enabled in the system.

Always use Class III B Digital Signature Certificates (DSC) having Signing and Encryption both.

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6. In case, the tender document not received online in prescribed format and/or found incomplete in any respect, the tender offer will be summarily rejected.
7. Only the Technical Bids will be opened on the date of tender opening. Price bids of only those bidders will be considered for opening whose offer is complete and technically acceptable in all respects.
8. The name and address of the tenderer shall be clearly written in the space provided in e-tender. The tender should be filled in and submitted in strict accordance with the instructions laid down here in; otherwise the tender is liable to be ignored.
9. The tender is liable to be ignored if complete information is not given there-in, or if the particulars and data (if any) asked for in the Schedule to the tender are not filled in.
10. The bidder should have supplied similar work for supply, installation, commissioning of Network Equipment in at least two organizations (Govt. depts. /PSUs and Central Autonomous bodies) order value not less than Rs. 2.0 lakh each in last 5 years.
11. All firms who are not specifically registered for required stores as per Tender specifications either with MSME, Kendriya Bhandar or with NSIC, are required to submit **Earnest Money Deposit (EMD)** for amounting of **Rs. 25,000/-** (Rupees Twenty Five Thousand only) in shape of Demand draft favouring NIFT, Raebareli. **The original DD of EMD amount must be reached in an envelop superscripted as “Tender No./Date:..... & EMD for “Address System” to following address on or before 8.02.2019 at 14:00 hrs:**

Joint Director, National Institute of Fashion Technology, Doorbhash Nagar,
Raebareli-UP-229010
12. **Offers received without earnest money or with earnest money less than the amount specified above shall be summarily rejected.**
13. Firms claiming exemption from depositing earnest money must enclose copies of their registration details validity as on the date of tender opening along with all its amendments for the subject stores. Offers received without these details and without earnest money will liable to be ignored.
14. The Earnest Money of the successful tenderer shall be returned after the security deposit as required in terms of tender is furnished by the tenderer. The Earnest Money to other than lowest bidders will be returned after finalization of the L-1.
15. The Earnest Money deposited is liable to be forfeited if the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of his tender. If the successful tenderer fails to furnish the security deposit as required in the contract within the stipulated period, the EMD shall also be liable to be forfeited by the Purchaser.
16. **The supplier to whom order will be placed have to submit the Performance security (i.e. 5% of the value of contract/items) in the form of Demand Draft/BG drawn in favour of NIFT, payable at Rae Bareli & should be valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier. Else 5% amount of the value of the contract shall be retained from the final bill of the supplier as a performance security which will be released after 60 days beyond the date of completion of all contractual obligations (till the warranty period) of the supplier. In case of successful Tenderer,**

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Earnest Money Deposit if paid, may be adjusted towards Performance Security payable.

17. Late tenders or tender without original DD for the required EMD will not be considered.
18. Dispute, if any, arising out of the supply of Items shall be settled by mutual discussion or arbitration by sole Arbitrator to be appointed by NIFT as per the provisions of the Indian arbitration and Conciliation Act, 1996 and the Rules framed thereunder. Any Arbitrator appointed shall not have the jurisdiction to pass any interim awards, or to grant interest higher than 8% charged simply on the award amounts, or amounts payable to either party.
19. Tender shall be accompanied by the relevant documents covered in the tender.
20. The full & final payment shall be made after delivery and successfully installation of all the equipments at NIFT Raebareli Centre.
21. The supplier shall ensure that he himself or his authorized representative is available for proper handing over the supplies/consignments at NIFT Raebareli.
22. The agreement will be valid for the delivery as incorporated in the tender document. This should be strictly adhered to.
23. The specification of items required as per Annexure "B" of Technical bid and the evaluation of bid will be on the basis of total bid value. The rates quoted should be on the basis of free delivery to the consignee.
24. Prices may be quoted for the items as per annexure "C" of Price bid.
25. The rates quoted should be on FIRM & FIXED basis.
26. Make and Model of the quoted items must be required to clearly mentioned as required as per Annexure 'B for items sr. no. 1-11, If they are not found in the technical bid, the bid shall be rejected.
27. Delivery and installation is required to be completed within 60 days from the date of issue of supply order.
28. For any imported item(s) the vendor/Agent should have an authorization certificate from the Manufacturing company and should enclose a copy with the Technical bid.
29. The NIFT is registered with the DSIR for the purpose of availing customs duty exemption in terms of Govt. Notification No. 51/96-Customs and Central Excise duty exemption in terms of Govt. Notification no. 10/97-Central Excise as amended from time to time. The duty charges to be paid accordingly in case of imported items.
30. Bidder must be registered for GST, PAN etc. and should enclose copies of relevant certificates
31. The bidder must have successfully executed the similar type of work/ purchase order at least two orders for supply, installation, commissioning of Network System/equipment ordered value of not less than Rs. 2.0 Lakhs each in the last five years in any State/Central govt. Institute/organization/PSU. The Bidder must submit documentary evidence in support of the above statement. (Copy of purchase/work order should be enclosed)
32. The equipments and accessories supplied should be New and Unused.

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33. **Successful vendor should furnish three years warranty and vendor should provide free onside service from the date of installation/commissioning whichever is later for any manufacturing defects during that period.**
34. Lowest bidder to whom supply order will be issue must ensure that delivery must be completed within the stipulated time, failing of which to 0.5 % (Half Percent) of the value of delayed goods will be levied per week subject maximum of 10% of the ordered value. If requested by the Tenderer it is the discretion of the Director, NIFT, Rae Bareli to grant extension of time with penalty/without penalty and to purchase the stock from any other source at the prevailing market rate at the risk and responsibility of the successful tenderer and to claim any loss sustained by NIFT, Rae Bareli in the transaction from the tenderer besides forfeiting Earnest Money Deposit /Security Deposit.
35. Installation of the Network Equipment will be carried out free of cost by supplier at consignee's place (NIFT, Raebareli).
36. NIFT, is statutory Institute under NIFT Act 2006, governed under the Ministry of Textiles, Govt. of India. The equivalent will be used for educational purpose, if any educational discount is applicable, may be mentioned clearly in price bids.
37. **Tenderer must have to quote each and every item given in the tender, the consolidated rates will not be considered and tender may be rejected.**
38. **The supply order will be issued to the bidder on the basis of overall total quoted lowest price.**
39. The Purchase order may be split up for any items depending upon the rate quoted without prejudice/claim of any supplier.
40. NIFT Raebareli reserves the right to change the quantity/drop any item or part thereof at any time before placing the purchase order.
41. A penalty as decided by the Competent Authority of NIFT for the items shall be payable & the same shall be deducted from his bill or security deposit as the case may be, for any defect in the equipment later on during the currency of warranty not set right or for non compliance of any terms & conditions other than time clause by the supplier.
42. Tenderer must be OEM or dealer for the quoted brand of Network Equipment. The authorization dealer certificate from the OEM for the quoted brand of equipment must be attached as per technical terms.
43. National Institute of Fashion Technology reserves the right to accept or reject any or all the offers either fully or partly without assigning any reasons.
44. **In case of any doubt during technical evaluation, clarification may be sought by NIFT after the approval from the competent authority.**

For online procedure:

For More enquiries / For Helpdesk officers :- Mr.Sandeep Bhandari , E-mail :-
sandeep.bhandari@c1india.com Phone No.:- 0124-4302033 &36

(Purchase Officer)
NIFT-Raebareli

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(E-Tender Document)
(Part-B)
Other Technical Term & condition

1. The bidder is required to supply, install and commission the Network Equipment at NIFT-Raebareli, as per the specifications and conditions specified in the different parts of this Tender document.
2. Bidder/ OEM must have their 24x7 support center in India. Details for the same must be given along with bid document
3. All components & equipments including cable must be ISI / IEEE standard or equivalent
4. Make and Model of the quoted items must be required to clearly mentioned as required as per Annexure 'B for items sr. no. 1-11, If they are not found in the technical bid, the bid shall be rejected.
5. Bidder must submit the MAL (Manufacturer Authorization letter) from the OEM's of all Active Networking Equipment(for items sr. no. 1-11) for participating in the bid and support commitment from OEM for the Warranty period of 03 Years
6. The successful bidder shall give comprehensive hands on Training to the officials of NIFT-Raebareli on operations, preventive maintenance, configuration of Network system.
7. Workmanship and material used should be of the best quality.
8. Bids shall be considered only in those cases where the bidder has quoted for the entire scope of the work.
9. Pamphlets and specifications of quoted items should necessarily accompany the offer.
10. The vendor should have the qualified engineers/ staff to attend to after sales service at the NIFT Raebareli center.
11. Successful vendor should furnish three year warranty and vendor should provide free service from the date of installation/commissioning whichever is later for any manufacturing defects during that period.
12. All the electrical services/ points/ socket should be installed/fixed by vendor if required during installation of Networking Equipment.
13. If civil work will required during the installation of equipment vendor/Firm will required do that.
14. All Bidders should furnish OEM authorization letter (Active & Passive Components) specific to this tender number/requirement.

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15. Bidder must provide OEM support contract with serial no, with support duration/support coverage, as part of delivery. The support should include access to OEM Technical Support Centre via email, web & phone.
16. All passive component & work measurement given is approximate & will be measured as per actual measurement of work & items. Payment will be made accordingly.
17. After expiry of warranty period of 3 years, further period of maintenance/support may be taken from the selected firm on mutually agreed terms & conditions & looking at firm's satisfactory performance during the warranty period.
18. In case of any specification given in tender for various equipments/components are found out to be OEM propriety in nature the same will not be considered for eligibility of technical specification and participating firms will be required to meet all the specifications as provided in the tender document.
19. All the Bidders may inspect the location where the Network Equipment are to be installed at NIFT Raebareli centre and quote accordingly.



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Annexure 'A'

TECHNICAL BID

1. Name of the Company.....
2. Name of the authorized person (who signs on the tender document).....
3. Address of the Company.....
.....
4. E-mail ID:.....
5. Phone No. (Mob.).....Fax.....

Eligibility Criteria for Selection:

Sl. No	Particulars	Proof Required	Attached at Pg. No.
1.	e-Tender documents (1 to 24 pages) duly completed and signed but without indicating the rates as a mark of compliance of the bid conditions.	To be filled and signed	
2.	The specification of items is required as per Schedule of Quantity as per Annexure "B" , must be attached along with Technical Bid.	Supporting Documents (i.e. Brochures/ Catalogues etc) in support of Technical Specification of the quoted item(s).	
3.	Earnest Money deposit Rs. 25,000 (Date of DD must be after the publication of tender)	DD Date: Amount:	
4	Bid processing charge Transaction ID: Date:	User id: Transaction ID: Date:	
5.	Copy of GST Registration certificate	Registration no: Validity up to:	
6.	Copy of the PAN no. of the Firm	PAN No.:	
7.	Delivery and installation Period (Maximum 60 days)	To be mentioned	
8.	Copy of two Purchase Order for supply of similar Network Equipment in at least two Govt. organizations/PSU/ Central Autonomous organization/institute for value not less than 2.0 lakh each in last 5 years.	Proof Required	
9.	Copy of Dealer/OEM authorization certificate for the quoted brand for item sr. no. 1-6 as per Annexure 'B'	Copy to be submitted, if not OEM	
10	Copy of Pamphlets/specifications sheet of quoted items should necessarily accompany the offer.	Copy to be submitted.	

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Annexure 'B'

**Schedule of Quantity (Technical Bid)
(Technical Specification)**

S. N.	Item Description	Qty.	Specification	Brand & Model (To be quoted)
1	24*10/100/1000 base PoE managed switch with minimum 2 SFP port	05 Nos.	As per Annexure"1"	
2	Indoor Access Point	14 Nos.	As per Annexure"2"	
3	Media Converter	05 pair.	As per Annexure"3"	
4	24 port CAT6 Patch Panel	05 Nos.	As per Annexure"4"	
5	9U Network Rack with power DB	05 Nos.	As per Annexure"5"	
6	1000VA Line interactive UPS	05 Nos.	As per Annexure"6"	
7	CAT6 STP Cable (305 Mtr.)	08 Nos.	As per Annexure"7"	
8	CAT6 I/O BOX with SMB and keystone	45 Nos.	As per Annexure"8"	
9	12 core SM Armoured optical fiber cable	700 mtr	As per Annexure"9"	
10	12 port fiber Termination box fully loaded	06 Nos.	As per Annexure"10"	
11	OFC SM Patch cord duplex (2 Mtr.)	10 Nos.	As per Annexure"11"	
12	HDPE pipe (2 inch)	700 mtr.	STANDARD	
13	OFC SM Pigtail with SC connector	72 Nos.	STANDARD	
14	1" PVC conduit Pipe	1400 mtr.	STANDARD	
15	Digging Charges	700 mtr	STANDARD	

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16	Laying charges of STP cable in PVC conduit/HDPE pipe	2440 mtr.	STANDARD	
17	Laying Charges of OFC in HDPE	700 mtr.	STANDARD	
18	OFC Splicing Charges	72 Nos.	STANDARD	
19	Indoor AP fixing Charges	45 Nos.	STANDARD	
20	Switch Fixing Charges	05 Nos.	STANDARD	
21	Patch Panel fixing charges	05 Nos.	STANDARD	
22	I/O fixing charges	045 Nos.	STANDARD	
23	Rack Fixing Charges	05 Nos.	STANDARD	
24	Installation Charges	01 Job	STANDARD	

Note: 1. Make and Model for item sr. no. 1-11, must be clearly mentioned in the technical bid. If they are not found in the technical bid, the bid may be rejected.

2. Tenderer must have to quote each and every item in the above, the consolidated rates will not be considered and tender will be rejected.

3. The supply order will be issued to the bidder on the basis of overall total lowest quoted price. The Purchase order may also be split up for any items depending upon the rate quoted without prejudice/claim of any supplier.

4. Tenderer must ensure that the items quoted by them are as per the specifications mentioned above duly filled the compliance statement.

5. All the Cable is of consumable nature, and payment for that may be made as per actual consumption.

6. Installation charges include equipment installation, wire laying of other passive component of work, digging of soil, documentation & configuration of entire network & training)

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**(Details Technical Specification)****Annexure "1"**

Layer 2 Manageable Gigabit PoE Switch - 28 Port	
S. No.	Specification
Switch Hardware Specification	
1	Switch with at least 24 X RJ-45 Gigabit PoE Ethernet Ports and 4 combo Ports.
2	Switching capacity should be 56Gbps or higher or non-blocking architecture.
3	Switch packet forwarding rate should be 41.7Mpps or higher or non blocking architecture.
4	IEEE802.3af and IEEE802.3at Support
5	Power budget 193W or above
6	Switch MAC table should be at least 8K or higher
7	Switch should be standard 19 inch 1U rack mountable.
8	Support for the Energy Efficient Ethernet (IEEE 802.3az) standard.
9	Power input should be 100 to 240 VAC, 50/60 Hz, internal power supply.
10	Operating temperature should be -5 degree celsius to +50 degree celsius.
11	Certification: CE, FCC, BSMI, RoHS and cUL.
1	Should support Head of Line blocking prevention for lower latency and better performance
2	Support Jumbo Frame up to 10K Bytes or higher.
3	Should support IGMP Snooping, Able to create 250 or more IGMP groups and require support for IGMP Snooping Fast Leave,IGMP Snooping Querier
4	Should support MLD Snooping, Able to create 250 or more MLD groups, Per VLAN MLD Snooping and require support for MLD Snooping Fast Leave.
5	Should have 802.1D STP, 802.1w RSTP and 802.1s MSTP Spanning Tree Protocol.

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	Should support Spanning tree Root restriction
6	Should support Loopback detection (LBD) to detect the loop created by a specific port.
7	Should support Multicast Filtering to filters or forward all unregistered groups.
8	Switch should support IEEE 802.1Q VLAN tagging for Ethernet frames.
9	Different type of VLAN like Port based, Auto Surveillance, Auto Voice, Asymmetric Vlan etc. should be available for configuration.
10	Switch should support QoS (quality of service) IEEE 802.1P for traffic prioritization. It should support 8 queues per port.
11	Different type of QoS priority like Strict Priority Queue and Weighted Round Robin.
12	Port based ingress / egress rate limit function should be available with limit in increments as low as 16 Kbps.
13	Switch should support Neighbor Discovery (ND) protocol for IPv6.
14	Switch should support to create atleast 4 IP interface
15	Should support default routing and static routing with minimum 100 IPv4 static route entries and minimum 50 IPv6 static route entries.
16	Support at least 700 access control entries. Each entry should be applied on single / multiple ports with permit / deny action.
17	Should support port security to secures the access port based on MAC address
18	should have broadcast, multicast, and unicast storm control to prevents faulty end stations from degrading overall systems performance.
19	Support Traffic Segmentation to restricted traffic flow from a single or group of ports, to a another group of ports.
20	Should have SSH and SSL for IPv4 and IPv6.
21	Require prevention of DoS attacks, which include Land, Blat, TCP Null Scan, TCP Xmas Scan and TCP SYNFIN.
22	Should support 802.1X port based authentication.
23	Should support ARP spoofing prevention.
24	Should support DHCP snooping and DHCP server screening.
25	Switch should able to create a binding table for IP + MAC + Port to prevents a malicious user from spoofing or to restrict the unauthorized users.
26	Should support 802.1X RADIUS and local server database authentication.
27	Should have option to check the status of copper cables using the cablediagnostics time domain reflectometer (TDR).
28	Able to manage trough Web-GUI, Compact CLI and Telnet.
29	Should support SNMP v1, v2c, v3 and SNMP Traps and Remote Monitoring (RMON).
30	Should have dual Image support to reduced down time for the switches.
31	Switch should support dynamic host configuration protocol (DHCP) auto configuration of multiple switches through a boot server eases switch deployment.
32	Should have SNTP/NTP protocol for time synchronization.
33	Switch should be IPv6 Ready Compliance.
34	Should support Link Layer Discovery Protocol (LLDP) and LLDP-MED
Note	
1	Switch should be supplied with the all necessary components like Power cord, Rack-mount bracket, Installation Guide, etc. and necessary software image file to fulfil all above mention feature set from day 1.

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Annexure “2”

Access Point	
S. No.	Specification
1	The AP should be capable of supporting controller-less deployments for minimum up to 25 access points and 100 concurrent devices per AP
2	AP should support 300 Mbps (2.4GHz)/867 Mbps (5GHz) bandwidth
3	AP should support 2x2 MIMO with 2 special streams
4	AP should support power save option
5	AP should support minimum 23dBm transmit power
6	AP should support 20MHz, 40MHz, 80MHz channelization
7	AP should support Dual-band concurrent (2.4GHz/5GHz) 802.11ac
8	AP should support minimum Rx sensitivity up to -99dBm
9	AP should support adaptive antenna technology and advanced RF management
10	AP should support standard 802.3af Power over Ethernet (PoE)
11	AP should have IP multicast video streaming support
12	AP should support up to 8 BSSIDs per radio (16 BSSIDs per access point) with unique QoS and security policies
13	AP should support advanced QoS packet classification and automatic priority for latency-sensitive traffic
14	AP should support dynamic, per-user rate-limiting for hotspot WLANs
15	AP should support WPA-PSK (AES), 802.1X support for RADIUS and Active Directory
16	AP should support Ethernet 802.1x port-based authentication (authenticator and supplicant)
17	AP should support BYOD, Zero-IT and Dynamic PSK
18	AP should support Admission control/load balancing
19	AP should support bandsteering and airtime fairness

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20	AP should support captive portal and guest accounts
21	AP should support guest access service
22	AP should support application Recognition and Control
23	AP should be Wall, desktop or ceiling mountable
24	AP should be support operating temperature: 0°C - 40°C

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Annexure “3”

Media Convertor	
S. No.	Specification
1	Supply of Gigabit Ethernet media convertor.
2	Copper Gigabit to fiber Gigabit
3	1000 BASE-T to 1000 BASE-LX Signal Conversion
4	Up to 10 Km Signal- mode fiber cable distance
5	SC Connector
6	External Power Adapter should be supplied

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Annexure “4”

24 Port Patch Panel	
S. No.	Specification
1	The Cat-6 transmission performance is in compliance with the ANSI/TIA/EIA 568C.2 standard.
2	Allow for a minimum of 200 re-terminations without signal degradation below standards compliance limit.
3	Have port identification numbers on the front of the panel.
4	Should have self-adhesive, clear label holders and white labels with the panel Panel should be of 1U height with 24 port pre-loaded IO.
5	IDC: Suitable for 22-26 AWG stranded and solid wire compatible with both 110 & Krone punch down tools
6	Each port / jack on the panel should be individually removable on field from the panel.
7	IDC cap : ABS, UL 94V -2 and Phosphor bronze with tin plated and Made of powder coated steel
8	Plastic Housing: Polycarbonate, UL94V-0 rated or equivalent
9	Jack Bracket set ABS , UL94V-0 rated
10	Operating Life: Minimum 750 insertion cycles
11	Contact Material: Copper Alloy
12	Contact Plating: 50μ” Gold plated on plug contact area
13	Contact Force: 20N max (IEC 60603-7-4)
14	Plug Retention Force: 15 lb.

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Annexure “5”

9U Rack	
S. No.	Specification
1	Wall Mount 9U x 550 W x 450 D ,
2	Front Glass Door (tinted,Toughened) with Lock & Key,
3	2 pairs of 19" Mounting Rails with U-Marking
4	Welded Side Walls
5	Standard Accessories
6	1U Cable Manager (1), Hardware Packet (1 Pkt)
7	6 Socket 5 Amp. Power Distribution Unit (1 No)
8	Roof Mounted Fan Unit / 90 CFM /230V AC (1 No)

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Annexure “6”

	1000 VA Line Interactive
S. No.	Specification
1	1 KVA LI UPS
2	Input frequency Range support : 50+/-10%,
3	Input frequency : 140-300 vac
4	Output Voltage : 230+/- 8%
5	Battery : 12V/7AH x2 SMF Batteries
6	Cold Start
7	BIS Certified

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Annexure “7”

Cat6 STP Cable	
S. No.	Specification
1	Category 6 Unshielded Twisted Pair 4 pair 100Ω cable shall be compliant with ANSI/TIA/EIA-568-C.2 Additional Transmission Performance Specifications for 4-pair 100Ω Category 6Cabling.
2	Category 6 SFTP cables shall extend between the work area location and its associated telecommunications closet and consist of 4 pair, 23 AWG, SFTP.
3	The 4 pair Shielded Twisted Pair cable shall be UL® Listed
4	All Category 6 cables shall meet or exceed the following characteristics:
5	Construction: 4 twisted pairs separated by internal X shaped, 4 channel, polymer spine / full separator. Half shall not be accepted.
6	Conductor Solid bare Copper
7	Conductor Diameter 0.56±0.005mm (23 AWG)
8	Insulation :High Density Polyethylene
9	Jacket FR PVC , UL-94V-0
10	Shielding : Aluminium/ Polyester Foil + Tinned copper Braiding
11	Outer Diameter 7.1 mm nominal
12	Temperature Range -20° to +70°C

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Annexure “8”

I/O Box	
S. No.	Specification
1	INFORMATION OUTLET should support Category 6, ANSI/EIA/TIA568 C.2 and 568A/B configuration
2	All information outlets for 100 Ω , 22-26 AWG copper cable shall: Use insulation displacement connectors (IDC)
3	Allow for a minimum of 200 re-terminations without signal degradation below standards compliance limits.
4	Be constructed of high impact, flame-retardant thermoplastic with color and icon options for better visual identification.
5	IDC Contact Plating: Phosphor bronze with tin plated and Housing PC + glass fiber (UL 94 V-2)
6	Insertion force: 20N max (IEC 60603-7-4)
7	Contact Plating: 50 μ inches gold on plug contact area
8	Information outlet (RJ45 jack) should be covered under ETL Verification program for compliance with TIA568.C.2
9	Operation Temp: -10 C to 60 C
10	Plastic Housing: Polycarbonate, UL94V-0 rated or equivalent
11	Operating Life: Minimum 750 insertion cycles
12	Contact Material: Copper alloy
1	Single square plate (86*86mm) , Quad in Rectangular shape (146*86mm) (ABS, UL94-HB)
2	Write on labels in transparent plastic window – supplied with plate PC (UL94V-2)
3	Screw hole covers – to be supplied with plate M3.5 x L25mm

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4	It should have clear label for application identification and inbuilt shutters for protection against dust (ABS, UL94-HB)
5	Should be able to support variety of jacks – UTP5e, UTP6, UTP6A and STP

Annexure “9”

Fiber cable (12 Core)	
S. No.	Specification
1	General:
2	The fiber type is a Matched Cladding Single Mode
3	Fiber dual coated with acrylate coating.
4	The fiber is optimized for operation at 1310 nm and at 1550 nm.
5	Should fulfil the requirements of:
6	• IEC 793-2: 1992,
7	EN 188101
8	ITU-T Recommendation G.652
9	Testing methods are in accordance with the following standards:
10	• ITU-T G.652.D
11	• IEC 793-1
12	• EN 188 000
13	GEOMETRICAL PROPERTIES:
14	Nominal mode field diameter: 9.2 μm
15	Mode field diameter tolerance: $\pm 4\%$
16	Cladding diameter tolerance: 125 μm
17	Cladding diameter tolerance: $\pm 1 \mu\text{m}$
18	Mode field concentricity error: $< 1 \mu\text{m}$
19	Cladding non-circularity: $< 2 \%$
20	CORE: Germanium doped core with no phosphorus i.e. reduced tendency for hydrogen degradation.
21	COATING: UV-curable dual layer acrylate coating, which ensures excellent micro bending and abrasion resistance.
22	MATERIALS
23	Stripping force after conditioning at $23 \pm 5^\circ\text{C}$ at 40 - 60 % RH for 24 h., Min.: 1.0N, Max.: 3.5 N
24	Stripping force after ageing in water at $70 \pm 5^\circ\text{C}$ for 168 h. , Min.: 1.0N, Max.: 3.5N
25	Attenuation (of cable with fibers):
26	At 1310 nm: $\leq 0.36 \text{ dB/km}$
27	In the range 1285- 1330 nm: $\leq 0.40 \text{ dB/km}$
28	At 1550 nm: $\leq 0.22 \text{ dB/km}$
29	Cut-off wavelength λ_c :
30	High limit: 1330 nm
31	Low limit: 1180 nm
32	Cut-off wavelength λ_{cc}
33	High limit: 1260 nm
34	Loss increase at 1550 nm for 100 turns of fiber loosely wound with a 37.5 mm radius: Max. 0.1 dB
35	Loss due to hydrogen:
36	Maximum induced permanent loss after 1000 h at 137bar H ₂ at 70 °C and out gassing for 72 h at 70°C (valid both at 1310 nm and at 1550 nm): 0.2 dB/km

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38	Dispersion:
39	Zero dispersion wavelength: 1310 nm
40	Tolerance of zero dispersion
41	Wavelength: -10/+12 nm
42	Zero-dispersion slope:
43	Max. 0.092 ps/(nm ² • km)
44	ps/(nm ² • km) Chromatic dispersion coefficient:
45	In 1285 nm - 1330 nm interval: Max. 3.5ps/km • nm
46	In 1270 nm - 1340 nm interval
47	Max. 6 ps/km • nm
48	At 1550 nm: Max. 18 ps/km • nm
49	Polarisation Mode Dispersion (PMD):
50	Max. <=0.2 ps/km
51	In homogeneity of OTDR trace for any two 1000 meter fiber lengths: Max. 0.1 dB/km
52	Proof test level : 1%

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Annexure “10”

Fiber Termination Box			
S. No.	Specification	Make & Model	Remark
1	Have sufficient slots accommodate Simplex SC adapters individually.		
2	Aluminum base material for light mounting		
3	Should have Splice Tray & Cable Spool provision inside		
4	Accessory kit consists of cable ties, mounting ear screw earthling and spiral wrap tube.		
5	Panel cover should be slide out for easy maintenance		
6	Can Include 12 Terminations		
7	Removable Rear & Front cover for better access to interior of LIU		
8	1 mtrs SC Pigtail as per above LIU requirement		

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Annexure “11”

Fiber Patch Cord (Minimum 2 Mtrs.)	
S. No.	Specification
1	All optical fiber patch leads shall comprise of Single mode 9/125µm fiber with SC/LC, fiber connectors terminated at each end. The optical fiber patch leads shall comply with the following specifications:
2	Optical Fiber – Corning Single Mode
3	Connector: Zirconia ceramic ferrule
4	Pre-radiuses and pre-polished ferrule
5	Simplex / Duplex
6	Color-coded Yellow for SM
7	Insertion Loss -
8	Cable: 9/125, SM
9	Repeatability - < 0.2 db
10	Durability – 1000 mating cycle
11	Working Temp : -40 deg C.to + 85 deg. C
12	Standard : G652D, G 657A & G 657B
13	Length: Minimum 2MTRS.

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Annexure 'C'

(PRICE BID)

S.N.	Particular	Specification & Brand & Model	Qty	Unit rate	Total value in Rs.
1	24*10/100/1000 base PoE managed switch with minimum 2 SFP port	As per technical bid quoted	05 Nos.		
2	Indoor Access Point	As per technical bid quoted	14 Nos.		
3	Media Converter	As per technical bid quoted	05 pair.		
4	24 port CAT6 Patch Panel	As per technical bid quoted	05 Nos.		
5	9U Network Rack with power DB	As per technical bid quoted	05 Nos.		
6	1000VA Line interactive UPS	As per technical bid quoted	05 Nos.		
7	CAT6 STP Cable (305 Mtr.)	As per technical bid quoted	08 Nos.		
8	CAT6 I/O BOX with SMB and keystone	As per technical bid quoted	45 Nos.		
9	12 core SM Armoured optical fiber cable	As per technical bid quoted	700 mtr		
10	12 port fiber Termination box fully loaded	As per technical bid quoted	06 Nos.		
11	OFC SM Patch cord duplex (2 Mtr.)	As per technical bid quoted	10 Nos.		
12	HDPE pipe (2 inch)	As per technical bid quoted	700 mtr.		
13	OFC SM Pigtail with SC	As per technical bid	72 Nos.		

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	connector	quoted			
14	1" PVC conduit Pipe	As per technical bid quoted	1400 mtr.		
15	Digging Charges	As per technical bid quoted	700 mtr		
16	Laying charges of STP cable in PVC conduit/HDPE pipe	As per technical bid quoted	2440 mtr.		
17	Laying Charges of OFC in HDPE	As per technical bid quoted	700 mtr.		
18	OFC Splicing Charges	As per technical bid quoted	72 Nos.		
19	Indoor AP fixing Charges	As per technical bid quoted	45 Nos.		
20	Switch Fixing Charges	As per technical bid quoted	05 Nos.		
21	Patch Panel fixing charges	As per technical bid quoted	05 Nos.		
22	I/O fixing charges	As per technical bid quoted	045 Nos.		
23	Rack Fixing Charges	As per technical bid quoted	05 Nos.		
24	Installation Charges	As per technical bid quoted	01 Job		
	TOTAL				
	Taxes/GST, if any				
	G. Total				

(Total cost in word Rupees _____)

Note:

1. Total price should be indicated clearly both in Figures as well as in Words with all taxes, duties and delivery and installation charges. No Extra charges shall be paid over and above of quoted amount.
2. Tenderer must have to quote each and every item in the categories, the consolidated rates will not be considered and tender will be rejected.

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