Prof. A. N. GILL
REGISTRAR(i/c)

IIITU/ICT/Network/Active Components-BoQ/2022−189   07, Mar.'22

NOTICE INVITING BIDS
FOR
SUPPLY AND INSTALLATION OF NETWORK ACTIVE COMPONENTS

IIIT Una is an Institute of National Importance established by the Ministry of Education, Govt. of India under Public Private Partnership (PPP) Model. The Institute is located at Saloh, Una, Himachal Pradesh. The Institute offers B.Tech. programs in three streams, viz., CSE, IT, and ECE. The current student/employee strength is around 600.

The Institute invites bids to supply and install active network component in the Institute. The bid is under non-split category which means a bidder should supply and install all the components. The General Terms and Conditions and requirements are annexed with this notice.

The sealed bids from the eligible bidders shall reach the office of the Registrar at the following address on or before 1.00hrs of 14, Mar.'22.

> **The Registrar**
> **Indian Institute of Information Technology Una**
> **Saloh, Una (HP)-177209**

The In-person classes are commencing from March'22. Hence, requests to extend the submission deadline are not admissible. The Institute will not be responsible for any postal delay. The bids received beyond deadline will be rejected straight away.

Any bid submitted after the specified time and with incomplete information will not be accepted.

The undersigned may be contacted at registrar@iiitu.ac.in for any genuine queries in this regard.

Canvassing in any form will straight away lead to blacklisting of the firm in the Institute.

Aman Nath Gill
07.03.22

REGISTRAR

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY UNA [HP]
An Institute of National Importance under MoE
Saloh, Una (HP)

Website: www.iiitu.ac.in

ICT/Network/Active Devices-Bid/2022/   07, Mar.'22

Bid Document: Supply and Installation of WiFi Solution
Bid Value = 35.00 Lacs
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OEM/Bidder Eligibility-Cum-General Terms and Conditions:

Sr. No.	Category Conditions/Descriptions	
1.	**Scope of Work**	
	The scope of the work includes supply and installation of active network components. The bid is under non-split category which means a bidder should supply and install all the components.	
2.	**OEM Eligibility Criterions**	**Admissible Documents**
	i.	**Active Components:** The OEM should be a renowned manufacturer of active components. The OEM should have supplied similar products/solution to IITs/IIMs/NITs/IIITs.	The bidder must attach copies of two work orders (for the OEM products quoted in this bid) from IITs/IIMs/NITs/IIITs. The work orders should not be older than 05 years.
3.	**Bidder Eligibility Criterions**	
	i.	The SI/Bidder should submit the Manufacturer Authorization Forms (MAFs) specific to the bid.	Bid specific MAF issued by OEM
	ii.	The SI/bidder should not have been blacklisted by anyState/Union Govt. Agency/Institute in any case. The SI	Self-declaration certificate signed by the competent authority.
	iii.	Compliance Form-I, Form-II, and Financial Quote – Form-III.	All the forms must be signed by the competent authority and must be submitted along with the bid.
4.	**General Conditions:**	
	i.	The Institute reserves the right to reject the bid based on the information gathered from the previous customer or in-case Non-satisfaction of the documents submitted at the time of bidding. The Institute reserves the right to verify the authenticity of the document submitted to IIIT Una.	
	ii.	The OEM/Bidder may be asked to demonstrate the functionality in question at the Institute. The expenses of the same have to be borne by the bidder itself.	
	iii.	Any false claims made by the OEM/Bidder in respect to technical specifications/functionality requested by the Institute will straight away lead to Blacklisting of the OEM/Bidder. The same will be communicated to the relevant departments of Union GoI for necessary action. Further, the appropriate legal action will be initiated in this regard irrespective of time and stage of the project. This clause is valid even after the completion of the project.	

	iv.	The Institute may impose the additional terms and conditions at the time of release of PO and as and when needed during execution or service period. The bidder is expected to comply the same.
	v.	IIIT Una reserves the right to reject the whole or any part of the bid without assigning any reason or to accept them inpart or full.
5.	**Bid Submission and Opening**	
	i.	The two-stage bid process will be followed. Technical Bid and Financial Bid should be placed in different sealed envelopes.
	ii.	The bids will be opened by a committee duly constituted for this purpose. The Bids will be opened at IIIT Una on 15, Mar.'22 at 3.00PM. The representatives of bidder are allowed to participate the bid opening meeting.
6.	**Earnest MoneyDeposit (EMD)**	
	EMD: 2.5% of the Bid Value (DD in favour of Director IIIT, Una, HP, Payable at Una, HP) Performance Guarantee: 5% of the Order Value	
7.	**Offer ValidityPeriod**	
	i.	The offer should be valid for 120 days from the last date to bid. The validity may be extended with mutual discussion due to unforeseen circumstances such as COVID.
	ii.	The product price quoted of each item should be valid for minimum 12 months from the date of first purchase order to meet the upcoming requirements of the Institute. The rate contract may further be extended for one year based on the mutual consent.
	iii.	The Institute reserves the right to increase or decrease the qty. at the time of releasing the Purchase Order.
8.	**Quotation of Price**	
	i.	The prices quoted by the bidder should be inclusive of GSTand other statutory levies (and should be explicitly shown)which will be paid by the Purchaser as per the prevailing rate on the date of supply as specified in the Acceptance of bidder. The percentage of tax, etc., included in the price should be indicated in clear terms. The price quoted will betreated as inclusive of all applicable taxes and accordingly comparison will be made with others. No inclusion or modification of tax components is possible at a later stage of the tender processing. The supplier shall stand by the quoted price for the supply, installation, and commissioning if the PO is awaited.
	ii.	The Institute may be eligible for the Concessional GST (e.g. 5% on products than 18%). The supplier (SI/OEM) should be in a position to supply/installation the products at concessional GST rates.
9.	**Evaluation ofBid and Award of Contract**	
	i.	The GEM technical bid will be first opened and evaluated. In the screening, the OEM Eligibility Criteria/SI eligibility criteria (mentioned above) and technical specification will be evaluated. Technical selection will be done on item wise technical evaluation.
	ii.	The bid will be straight away rejected in the following cases: - OEM does not meet the Eligibility Criteria - OEM has not supplied documents requested in OEM eligibility criteria section above - SI does not meet the Eligibility Criteria - SI has not supplied documents requested in OEM eligibility criteria section above

		- Product technical specification did not match the requested institute specification. - Partially filled/Unreadable Forms requested in Bid - Failure to comply with any of the instructions stated in this document or any unsatisfactory statements/attachments will lead to rejection. iii. The Price bid of only those bidders who have fully complied to the eligibility criteria and all the technical specification will be considered for final selection.
10	**ProductDelivery**	
		i. **The Product Delivery and installation should be ensured within 05 days from the date of issuance of Purchase Order for the same.** ii. The failure to meet the deadline may lead to cancellationof the PO. The decision of the Institute will be final in this regard. iii. The bidder who may not meet the deadlines due to any reasons are requested not to participate in the bidding process itself. This will avoid the unnecessary time wastage of both the parties. iv. The Institute has to run its academic activities in the Academic Block from the first week of March'22. Hence, no request to extend the submission deadline is admissible. v. The Institute will not pay separately for Transit Insurance. All the deliveries should be FOR IIIT Una, HP.
11.	**Payment**	
		i. No advance Payments will be made. Payment will be made only after delivery of all the components subject to satisfactory testing and inspection of the components. ii. The Institute ensures to release the payment within 02 weeks from the date of successful completion of the work. iii. The product acceptance date given by the technical committee of the Institute will be treated as the successful completion of the work.
12.	**Contact for any clarification**	
	vikram@iiitu.ac.in	
13	**Jurisdiction**	
	All questions, disputes, or differences arising under, out of orin connection with the contract, if concluded, shall be subject to the exclusive jurisdiction at Una Himachal Pradesh.	
14	**Force Majeure**	
	The Supplier/bidder shall not be liable for forfeiture of its performance security, liquidated damages or termination fordefault, if and to the extent that, it's delays in performance or other failure to perform its obligations under the Contractis the result of an event of Force Majeure. - For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier/bidder and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but arenot limited to, acts of the Purchaser either in itssovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes. If a Force Majeure situation arises, the Supplier/bidder shall promptly notify the Purchaser inwriting of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing,the Supplier/bidder shall continue to perform its obligations under the bid conditions as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.	

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INDIAN INSTITUTE OF INFORMATION TECHNOLOGY
UNA [HP]
An Institute of National Importance under MoE
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Website: www.iiitu.ac.in

Form-I
Bidder Eligibility Compliance Form
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Sr. No.	Description	Compliance (YES/NO)	Admissible Certificate / Document Attached (YES/NO)	Page No. of the attachment
1.	Active OEM Eligibility: The bidder must attach copies of two work orders (in favor of OEM quoted) for similar solution (Wi-Fi, Switching) from IITs/IIMs/NITs/IIITs. The work orders should not be older than 05 years. The order may be in the name of any bidder.			
2.	The SI/Bidder should submit the Manufacturer Authorization Form (MAFs) specific to the bid from OEM the product proposed.			
3.	The SI/bidder should not have been blacklisted by anyState/Union Govt. Agency/Institute in any case.			
4.	Compliance Form-II (Attached)			
5.	EMD (If MSME, exemption, please attach the Certificate) (Submitted)			
6.	Financial Quotation Form-III (Submitted)		NA	NA

Note:
1. All the supporting documents attached to this form should be numbered, signed and stamped.
2. Unreadable/Incomplete certificate/documents will lead to rejection of the bid straight away.

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Form-II (Product Compliance Form)

ITEM-I : WiFi-AP

S. No.	Indoor Access Points Hardware: (Wi-Fi 6)	Compliance (YES/NO)	Ref. Page No./line No.
1	Access Points proposed must include radios for 2.4 GHz and 5 GHz with 802.11ax Wi-Fi 6. Shall have min 1x5Ghz and 1x2.4Ghz radios with single channel and multi-channel hybrid mode or equivalent support.		
2	An access point must include a standard OEM provided mounting brackets for mounting on Celling or Rooftop.		
3	Access point must support spectrum intelligence across 20, 40MHz, or higher -wide channels to combat performance problems due to wireless interference. Should also support adaptive wIPS and Rogue AP detection.		
4	Access point must have Dual LAN ports with one port having speed of 100Mbps/1Gbps and another with 1Gbps/2.5Gbps speed Ethernet LAN port with RJ-45 connector. Or Access Point should have 1x 100, 1000, 2500 Multigigabit Ethernet (RJ-45)		
5	Must support 2x2 MU-MIMO 2.4GHz Internal antennas, 4x4 MU-MIMO 5GHz Internal antennas. OR AP must support 4x4 MU-MIMO on both 2.4GHz and 5GHz with Internal antennas.		
6	Must support off-channel scanning functionality		
7	Access point must support a minimum 2.9Gbps user throughput including both the radios.		
8	Must support minimum of 20dbm of transmit power in 5GHz radios and should follow the WPC norms. WPC certificate issued by government of India to be provided by the OEM at the time of bidding.		
9	Must support AP enforced load-balance between 2.4GHz and 5GHz band.		
10	Must incorporate radio resource management for power and channel.		
11	Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.		

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12	Must support Management Frame Protection.		
13	Access Points must support encrypted user data and management traffic between controller and Access point for better security.		
14	Should support QoS for voice over wireless.		
15	Must support 16 WLANs per AP for SSID deployment flexibility.		
16	Must support Power over Ethernet, and power injectors.		
17	Must support 802.11e and WMM.		
18	Certifications: Wi-Fi Certified, EN 60950-1, EN 300 328, EN 301 893, UL 60950-1		
19	Operating Temperature 0-40C		
20	**Warranty and License Cost**		
21	The price offered should cover warranty, License cost, software upgrade cost (if any required to run the services mentioned above) for at least 02 years from the data of Installation and successful commissioning of the Component (duly certified by the technical committee of the Institute) in the Institute.		
22	For compatibility and interoperability, the wired (core and edge switches) and wireless (wireless controller and wi-fi AP's) solutions should be from the same OEM.		

ITEM-II : Access Switch PoE 24-Port

Sl.No.	Description	Compliance (YES/NO)	Ref. Page No./Line No.
1	**Performance and Scalability**		
2	The switch should have minimum of 24*10/100/1G Ethernet Ports and 4*1/10G or better Uplink Ports in 1 RU fixed Form Factor		
3	The switch should have total 370W PoE budget.		
4	Switch should have non-blocking architecture and should work at line rate.		
5	Switching Bandwidth: The Switch should provide Switch Fabric Bandwidth Capacity of 128 Gbps or more and Forwarding Capacity: The Switch should provide Packet Forwarding Capacity of 95 Mpps or more		
6	Switch should have field replaceable power supplies and FAN trays		

7	Should support the following Advanced IPv4 and Layer 3 Routing features. • IPv4 and IPv6 Dynamic Routes • OSPF v2, OSPF v3 (IPv6) • Policy Based Routing (PBR)		
8	Switch should Provide persistent/constant PoE power even when switch is under maintenance		
9	Shall support modern modular operating system designed for scalability and reliability		
10	**L2 Feature**		
11	Shall support upto 16K MAC.		
12	Spanning Tree Protocol (IEEE 802.1.D, 802.1W, 802.1S)		
13	Switch should support VLAN Trunking (802.1q) and should support 4096 VLAN		
14	Switch should support basic Multicast IGMP v1, v2, v3		
15	Shall support Rapid Per VLAN Spanning Tree (RPVST+)		
16	Shall support 64 Link Aggregation Groups (LAG)		
17	Shall support 64 ports active/active layer2/Layer3 multipathing redundancy		
18	Shall support Port Mirroring		
19	Shall support Jumbo Frames 9216 Bytes		
20	Shall support 802.1AB Link Layer Discovery Protocol (LLDP)		
21	**Network security features**		
22	The switch should support IEEE 802.1x providing user authentication, authorization and CoA.		
23	The switch should support SSHv2, SNMPv3, TACACS+ and RADIUS		
24	The switch should support MAC address notification to allow administrators to be notified of users added to or removed from the network.		
25	Switch should support Ingress ACL Scale of 2K or better.		
26	Switch should support real time data collection with sflow/netflow.		
27	**Quality of Service (QoS) & Control**		
28	The switch should support 8 egress queues per port to enable differentiated management		
29	The switch should support Standard 802.1p CoS field classification and Differentiated services code point		

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Sl.No.	Description	Compliance (YES/NO)	Ref. Page No./Line No.
30	(DSCP) field classification		
31	The switch should support Rate Limiting function to guarantee bandwidth		
32	Switch should support IEEE 1588/NTP		
33	**Operation and Management**		
34	Switch should have dedicated management port and USB ports to upload configuration files and image		
35	**Management and Troubleshooting**		
36	Switch should support telnet, ssh, https, SNMPv3, configuration rollback feature for ease of management		
37	Switch may support API Driven configuration and support Netconf and Restconf using YANG data model. It may support automation tool like python		
38	Switch should support port mirroring based on Inbound & outbound, mirroring based on ports, vlans.		
39	Switches need to be provided with all software license from day-1 as per RFP specification		
40	Switch should support telemetry from day 1		
41	Switch should support telemetry or equivalent technology		

ITEM-III: Access Switch NoN-PoE

Sl.No.	Description	Compliance (YES/NO)	Ref. Page No./Line No.
1	**Performance and Scalability**		
2	The switch should have minimum of 24*10/100/1G Ethernet Ports and 4*1/10G or better Uplink Ports in 1 RU fixed Form Factor		
3	Switch should have non-blocking architecture and should work at line rate.		
4	Switching Bandwidth: The Switch should provide Switch Fabric Bandwidth Capacity of 128 Gbps or more and Forwarding Capacity: The Switch should provide Packet Forwarding Capacity of 95 Mpps or more		
5	Switch should have field replaceable power supplies and FAN trays		
6	Should support the following Advanced IPv4 and Layer 3 Routing features. • IPv4 and IPv6 Dynamic Routes • OSPF v2, OSPF v3 (IPv6) • Policy Based Routing (PBR)		

7	Switch should Provide persistent/constant PoE power even when switch is under maintenance		
8	Shall support modern modular operating system designed for scalability and reliability		
9	**L2 Feature**		
10	Shall support upto 16K MAC.		
11	Spanning Tree Protocol (IEEE 802.1.D, 802.1W, 802.1S)		
12	Switch should support VLAN Trunking (802.1q) and should support 4096 VLAN		
13	Switch should support basic Multicast IGMP v1, v2, v3		
14	Shall support Rapid Per VLAN Spanning Tree (RPVST+)		
15	Shall support 64 Link Aggregation Groups (LAG)		
16	Shall support 64 ports active/active layer2/Layer3 multipathing redundancy		
17	Shall support Port Mirroring		
18	Shall support Jumbo Frames 9216 Bytes		
19	Shall support 802.1AB Link Layer Discovery Protocol (LLDP)		
20	**Network security features**		
21	The switch should support IEEE 802.1x providing user authentication, authorization and CoA.		
22	The switch should support SSHv2, SNMPv3, TACACS+ and RADIUS		
23	The switch should support MAC address notification to allow administrators to be notified of users added to or removed from the network.		
24	Switch should support Ingress ACL Scale of 2K or better.		
25	Switch should support real time data collection with sflow/netflow.		
26	**Quality of Service (QoS) & Control**		
27	The switch should support 8 egress queues per port to enable differentiated management		
28	The switch should support Standard 802.1p CoS field classification and Differentiated services code point		
29	(DSCP) field classification		
30	The switch should support Rate Limiting function to guarantee bandwidth		
31	Switch should support IEEE 1588/NTP		
32	**Operation and Management**		

33	Switch should have dedicated management port and USB ports to upload configuration files and image		
34	**Management and Troubleshooting**		
35	Switch should support telnet, ssh, https, SNMPv3, configuration rollback feature for ease of management		
36	Switch may support API Driven configuration and support Netconf and Restconf using YANG data model. It may support automation tool like python		
37	Switch should support port mirroring based on Inbound & outbound, mirroring based on ports, vlans.		
38	Switches need to be provided with all software license from day-1 as per RFP specification		
39	Switch should support telemetry from day 1		
40	Switch should support telemetry or equivalent technology		

ITEM – 4: 24 PORT DISTRIBUTION SWITCH

Sl. No.	Description	Compliance (YES/NO)	Ref. Page No./Line No.
1.	**Hardware & Interface / Performance**		
2.	Switch should have 24 ports or more, capable of 1/10 GbE SFP+ and 2x40/100G uplinks		
3.	Shall support Non-blocking architecture and wire speed Layer-2 and Layer-3 forwarding		
4.	For SFP/SFP+, shall support 1/10 Gbe		
5.	Switch should have console port		
6.	Switch should have management interface for Out of Band Management with support for 100M/1G Speeds.		
7.	Shall Support USB port		
8.	Switch must support minimum 8Mb fully shared system buffer		
9.	**Operating System**		
10.	Should support modern modular operating system designed for Performance, scalability and reliability based on State full Architecture		
11.	Should support Industry standard CLI		
12.	Switch should support telemetry from day 1 or equivalent technology		
13.	**Layer 2 features**		
14.	Shall support up to 32K MAC or more.		

15.	Spanning Tree Protocol (IEEE 802.1.D, 802.1W, 802.1S)		
16.	Switch should support VLAN Trunking (802.1q) and should support 4096 VLAN		
17.	Switch should support basic Multicast IGMP v1, v2, v3		
18.	Shall support Rapid Per VLAN Spanning Tree (RPVST+)		
19.	Shall support 802.3ad Link Aggregation LACP with up to 64 ports/channel		
20.	Shall support 64 Link Aggregation Groups (LAG)		
21.	Shall support 802.1AB Link Layer Discovery Protocol (LLDP)		
22.	Shall support Port Mirroring		
23.	Shall support 802.3x Flow Control		
24.	Shall support Jumbo Frames 9216 Bytes		
25.	Switch should have 4GB RAM and 4 GB Flash Memory		
26.	Shall support active/active layer-2 topology without STP where host are dual homed to switch using vPC or MLAG Or Shall support Hitless failover and switchover from master to standby stack controller and Layer 3 VRRP/VRRP-E protocol redundancy for active/active topology.		
27.	Switch should provide gateway level of redundancy in Ip V.4 and IP V.6 using VRRP or equivalent		
28.	**Layer 3 features**		
29.	Shall support 17K or more IPv4/v6 Routes.		
30.	Shall support upto 8K IPv4 Multicast entries.		
31.	Shall support minimum 8K or more ACL		
32.	Shall support basic Layer-3 Routing		
33.	Shall support OSPF, OSPFv3, BGP, MP-BGP, IS-IS, and RIPv2,		
34.	Shall support PIM-SM and SSM multicast routing		
35.	Shall support BFD		
36.	Shall support EVPN		
37.	Switch must support Precision Time Protocol/Network time protocol		
38.	**Advanced Features and Network Virtualization**		
39.	Shall be VxLAN ready and capable of doing VxLAN		
40.	Switch should support Open Flow/Open Day light/Open Stack controller.		
41.	**Quality of Service (QoS) Features**		

42.	Up to 8 queues per port		
43.	802.1p based classification		
44.	DSCP based classification and remarking		
45.	Rate limiting		
46.	Switch should support for different type of QoS features for real time traffic differential treatment using Strict Priority Queuing		
47.	Switch should support to trust the QoS marking/priority settings of the end points as per the defined policy		
48.	Switch should support control plane policing to protect switch CPU from DoS attack		
49.	**Security and Network Management features**		
50.	Shall Support security ACLs		
51.	Shall Support TACACS+/RADIUS		
52.	Switch should support IP Source guard, ARP inspection, DHCP Snooping		
53.	Shall Support SNMP v2, v3		
54.	Shall Support Management over IPv4, IPv6		
55.	Switch should provide remote login for administration using:		
56.	a. Telnet		
57.	b. SSHV2		
58.	Shall Support Syslog		
59.	Shall Support AAA		
60.	Shall Support Port Mirroring		
61.	Shall Support sFlow / NetFlow		
62.	Switch should support for management and monitoring status using different type of Industry standard NMS using:		
63.	a. SNMP V1 and V.2		
64.	b. SNMP V.3		
65.	Switch should support for basic administrative tools like:		
66.	a. Ping		
67.	b. Traceroute		
68.	**Monitoring, Provisioning**		
69.	Shall support Advance Event Management for proactive network monitoring or equivalent		
70.	Shall support Restoration of Operating System & Configuration from USB		
71.	**High Hardware Availability; Air Flow and Power**		

72.	Switch should have N+1 level of redundancy for power supply and fans		
73.	Switch should support in-line hot insertion and removal of different parts like modules/ power supplies/ fan tray etc and should not require switch reboot & should not disrupt the functionality of the system.		
74.	Switch should be rack mountable and support side rails if required		
75.	**Miscellaneous**		
76.	Switch should support the complete STACK of IP V4 and IP V6 services		
77.	The Switch and different modules used should function in line rate and should not have any port with oversubscription ratio applied.		

Guarantee & Warranty on all the above-mentioned products:

i. Five years guarantee including device replacement and repair. All active components need to be from single OEM and End of support from OEM for Five Years.

ii. Minimum 05years comprehensive warranty, Next Business day support with 24x7x365 by OEM. If required engineer should be available on-site on next business day.

iii. Post installation, 5-year support and warranty for both device and software directly by OEM for above solution and should reflect in the support web site of the OEM.

iv. No Third-party support will be accepted. OEM Should provide contact number of supports centers along with the support email I'd.

v. In case of HARDWARE breakdown, service calls must be attended by OEM engineer directly.

vi. All deployment must be done by the bidder.

vii. **All the above-mentioned components should be of same OEM.**

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Form-III
Financial Quotation

Sr. No.	Product Description	Qty. (Nos.)	Unit	Base Price Per Unit (Rs.)	Tax @ 18%	Total Price (Rs.)
1.	Wireless Access Points	35	Nos			
2.	Access Switch-PoE	08	Nos			
3.	Access Switch-Non-PoE	07	Nos			
4.	Distribution Switch	01	Nos			
5.	1G Fiber Modules	30	Nos			
					Grand Total	

Note: The price quoted should include all taxes, levies, installation, transit insurance, etc.