

JAMIA HAMDARD

HAMDARD NAGAR, NEW DELHI - 110062

Telephone: 011-26059688-5374

TENDER DOCUMENT

FOR

**Design, Supply, Installation, Testing & Commissioning of EPABX
System at Jamia Hamdard Campus**

Submitted by:

Name:

Address:

Contact No:

Email ID:

JAMIA HAMDARD
(DEEMED TO BE UNIVERSITY)
HAMDARD NAGAR, NEW DELHI-110062

NOTICE INVITING QUOTATIONS

Date: 25.08.2025

Jamia Hamdard, New Delhi invites sealed items rates Tenders in **Two bid system** from reputed contractors registered with Govt. Semi Govt. or State Govt. organization or reputed Public Sector or worked/working in Jamia Hamdard or any Govt./reputed/academic institute for the below mentioned work. Tender Documents are attached herewith. Last date of submission of the Tender is 17.09.2025 **up to 3:00 PM**. The bidders are also advised to visit the site to satisfy themselves before submitting the Bids. Bidders not fulfilling the Eligibility Criteria will be rejected. Eligibility Criteria is mentioned at Tender clause 2.

NAME OF WORK	Design, Supply, Installation, Testing & Commissioning of EPABX at Jamia Hamdard
ESTIMATED COST	Rs. 22 Lakh (GST Included)
EARNEST MONEY	Rs. 44000.00/- Demand Draft in favour of “Jamia Hamdard” New Delhi
TENDER COST	Rs. 2000/- Demand Draft in favour of “Jamia Hamdard” New Delhi
TIME PERIOD	45 Days from the 2nd day of the receipt of the work order.
Date of Pre bid meeting	10.09.2025 at 3:00pm in the office of the Executive Engineer

Note: If the bidders has any query regarding the tender documents, they are advised to send their queries on tender.tel.exchange@jamiahamdard.ac.in one day before the date of pre-bid meeting.

The sealed quotations duly filled should be dropped in the Tender Box kept in Purchase Section, Admin. Block, on or before 17.09.2025 **up to 3.00 PM** along with demand draft of earnest money & Tender fee in sealed envelope clearly specifying the name of work. The DDs shall be in favor of “Jamia Hamdard” payable at New Delhi. The bids shall be opened on 17.09.2025 at **3.30 PM** by the tender committee in presence of available interested parties. Jamia Hamdard reserves the right to reject any or all tenders without assigning any reason. In this regard, decision of Jamia Hamdard will be the final and binding on all bidders.

Registrar

1. SCOPE OF WORK

The successful tenderer must have competent and shall be in a position to Design, Supply, Installation, and Testing & Commissioning of EPABX System at Jamia Hamdard as per BOQ given on Annexure 'A' and make cited on Annexure 'C' respectively. The agency must ensure warranty for at least one year or as per OEM warranty period.

2. ELIGIBILITY CRITERIA

- 2.1 Bidders must have worked with Govt. Semi Govt. or State Govt. organization or reputed Public Sector or worked/working in Jamia Hamdard or any Govt./reputed/academic institute for such works. Bidders have to submit the related copies of the documents for justifying the eligibility criteria along with their Tender. The original documents will have to be produced when demanded for verification.
- 2.2 Contractors should have executed similar nature of works of at least one contract of Rs. 17.60 Lakh or two contracts of similar nature of works of Rs. 13.6 Lakhs or three contacts of similar natures of works Rs. 8.80 Lakhs in the last 5 years in any institutional Buildings, Universities and produce credentials in support thereof.
- 2.3 Certified documents of having successfully completed similar works during the last 5 years as on 31.07.2025 should also be attached.
- 2.4 The bidder must have their office in Delhi-NCR to provide an early service support.
- 2.5 The Bidders must have GST, PAN, etc.
- 2.6 The Bidder must submit the OEM authorization certificate (MAF).

3. SUBMISSION OF BIDS

Tenders should be submitted in **Two bids** form with sealed envelopes, super-scribing NIT & Name of work, due date for opening, bidder's name & address. The sealed tender duly filled should be dropped in the tender box kept in the Central Purchase Section. It should not be handed over to any employee of the Jamia Hamdard. No tender shall be accepted later than the time schedule specified above. Any clarifications/amendments/corrigendum etc., to NIT before last date of submission of bid will only be available on our website: www.jamiahamdard.ac.in. Therefore, bidders are advised to keep visiting our website.

A: The bidder shall submit the following in the **Technical bid envelope**:

- a. Covering letter on Company's Letter head
- b. Tender Fee
- c. Earnest Money Deposit.
- d. Copies of GST, PAN & other related documents.
- e. Copies of work orders for similar nature of works as per criteria for eligibility mentioned above.
- f. Entire NIT and document (without price bid) duly signed & stamped by the bidder.
- g. Completion certificate submitted should be issued / signed by an officer not below the rank of Executive Engineer/Assistant Engineer.
- h. Filled copy of Annexure 'D'

B: The bidder should submit the following in the **financial bid envelope**.

- i. BOQ of Design, Supply, Installation, and Testing & Commissioning of EPABX System work is cited on Annexure “A” and make is cited on Annexure ‘C’ respectively.
- j. Bidders are required to quote their item rates in the above said attached BOQ in accordance with the scope of works, terms & conditions & technical specifications enclosed. **The rates/price quoted by contractor should be all inclusive i.e. should include all material cost, labour, drawing, design, services, plant/machinery/tools & tackles, ladders & scaffolding required for work, freight, Insurance, Octroi, Govt. duties & levies, GST, Service Tax, Sales Tax etc.), transport/cartage of materials/labour and all other expenses not specifically mentioned but reasonably implied. It is mandatory for bidder to quote all items rate as asked for in the BOQ/PRICE schedule.** Failure in not filling some item rates will lead to rejection of tender. The bidders should quote unconditional rates, typed and all pages should be duly signed & stamped. The rate should be clearly mentioned in figure and words both against each item.
- k. **Bidder not complying the bid & eligibility criteria is liable to be rejected.**

4. GENERAL TERMS & CONDITIONS

- I. **Earnest Money:** An earnest money of Rs. 44000.00 for the above works has to be enclosed along with the Tender. The Tender Fees and EMD shall only be in the form of Demand Draft in favour of “Jamia Hamdard” payable at “New Delhi”. No Cash/Cheque shall be accepted as EMD. The EMD of the successful lowest bidder (L-1) shall be held back and will be released after completion of the works and site clearance.
- II. **Validity of Tender:** Tender shall be valid for our acceptance without any change in rates and NIT conditions for a period of 90 days from the date of opening of price bid.
- III. **Escalation:** No escalation over and above items rates quoted by the bidder shall be paid during the execution of contract.
- IV. **Completion time:** The time shall be the essence of this contract and entire work as titled above is to be completed in all respects within a period of 45 **days** from the 2nd day of the receipt of the work order. Any delay in completing of work for the reasons attributable to the Contractor is liable for liquidated damages as per clause 4, “XII” Terms Conditions. Under the force-majeure conditions or delay due to reasons beyond control of the contractor, Jamia Hamdard may grant suitable time extension without penalty for which the contractor has to request along with the justification/ reasons well in advance to Jamia Hamdard for approval without any prejudice to price escalation. No time extension request shall be considered after the expiry of completion period/contract. The decision of the Executive Engineer regarding Time extension will be final and binding on the contractor.

- V. The rates shall be inclusive of all taxes (Service Tax, GST etc.) duties and cartage etc. All applicable taxes will be deducted as per prevailing Govt. norms and Jamia Hamdard Employee Relief Fund (JHERF) will be deducted @ 0.25% of the amount of total bill claimed.
- VI. **Deviations:** No deviation from the stipulated terms and conditions will be allowed. Tender will be unconditional.
- VII. **Site Conditions:** Contractors shall acquaint themselves fully with the site conditions and the working environment of Jamia Hamdard before quoting their rates. No Compensation on account of any site difficulties will be entertained, at a later date, after award of the work.
Before tendering, the Contractors shall visit and examine the site and satisfy themselves as to the site conditions, the correct dimensions of the work and facilities. In case of any doubt, it may be clarified from the office of the Assistant Engineer (Electrical).
- VIII. **Correspondence:** All the correspondence in respect of tender/award of work shall be made to Executive Engineer.
- IX. **Terms of Payment:** The payment shall be made on submission of the bills in proper format by the contractor after due certification by the Engineer responsible for supervision of the work. Contractor can submit one interim or running bills and one final bill after completion of work for claiming payment based on actual quantities of items of work executed as per BOQ and Engineer's instructions. 5% amount will be withheld towards the security deposit from the bill. The security deposit shall only be refunded after expiry of the defect & liability period which will be one year after satisfactory completion of all works
- X. **Labour Laws:** The contractor will abide by all the rules and regulations related to labour laws, accident, workmen compensation act, workmen insurance etc. This will be the sole responsibility of the contractor. Jamia Hamdard will not be a party at any stage in any of the disputes relating to the above. In case, Jamia Hamdard has to bear any expenditure due to non-conformance of the above provisions by the contractor, the same will be recovered from contractor's bills.
- XI. Rules governing the Contractor's employees working in the Jamia Hamdard Premises: The contractor's employees working inside the Jamia Hamdard campus will abide by the Centre's rules & regulations for works inside the campus. Any damage to the Jamia Hamdard property due to mishandling, carelessness on the contractor's or their workmen's part will be recoverable from the contractor's bills.
- XII. **Liquidated damages:** In case the work is delayed beyond the specified completion period for reasons attributable to the contractor and without any genuine reason, deductions on account of Liquidated damages @ 0.5% of the contract value per week will be deducted subject to a maximum of 5% of the contract value. However, during the delayed period, Jamia Hamdard also reserves the right to get some portion of work done by any other contractor at the risk and cost of the existing contractor and amount to that effect along with 10% overhead charges will be deductible from their bills/dues.

- XIII. **Extra or substituted item:** If any extra or substituted item appears in the work, contractor shall submit its rate analysis supported with documents which shall be approved by concerned Engineering Department. Analysis of rates will be based on DSR-2022 document of CPWD or based on market rates for determining item rate and pay to contractor accordingly.
- XIV. **TYPE OF CONTRACT:** The Contract shall be an item rate contract. The Contractor shall be paid at the contract rates, for the actual quantity of work carried out by them in accordance with the Contract documents as measured.
- XV. **Defect Liability period:** Defect liability period shall be one year from the actual date of completion of work. Any defect arising in this period due to contractor's fault will be rectified by them at their own cost. Failure to do so, shall lead to forfeiture of security deposit.
- XVI. **Security Deposit:** A security deposit equal to 05% of the value of work will be deducted from Contractor's bill and shall be refunded after the completion of defect liability period of one year after ensuring successful performance of the system executed by the contractor.
- XVII. Contractor should depute a qualified Engineer/Supervisor dedicated for this work, who will monitor and coordinate the works from contractor's side and interact with the Jamia Hamdard Engineers, responsible for supervision of work, on regular basis.
- XVIII. Contractor will take due permission for entry of all their workmen in Jamia Hamdard. No unauthorized person will be allowed to work inside.
- XIX. The contractor will arrange all necessary materials, tools, equipment, access ladders & scaffolding, measuring instruments and working consumables etc. needed for execution of the works. Safe custody of all such material will be contractor's sole responsibility. No extra charges will be paid for the same. Watch and ward of all material till the system is taken over by Jamia Hamdard shall be the sole responsibility of the contractor and pilferage etc. shall be entirely to their account.
- XX. During execution of work, Engineer can make minor changes in the scope of work as per site conditions or other reasons. Contractor will have no extra claim in their rates for the same.
- XXI. If during the execution of works, any damage is caused to Jamia Hamdard property by contractor's/contractors' workers, contractor will duly make good the loss. Jamia Hamdard has the right to make suitable deduction from contractor's bills along with penalty, if contractor fails to make good the loss.
- XXII. During execution of work, the contractor should follow all the standard norms of safety measures/precautions as per relevant IS codes and CPWD specifications to avoid accidents/damages to man, machines and buildings, at their own cost. Contractor will have their own arrangement to escort the labour to the nearest hospital for treatment in case any injury happens to any worker during execution of work.
- XXIII. Manpower deployed by the contractor at our site for carrying out contract works is strictly prohibited being associated with any other works on the campus.

- XXIV. During execution of the work, contractor should dispose off waste material on regular basis and should keep the area of work properly cordoned off and neat and clean as far as possible. After completion of work, contractor should clear the site completely of all unwanted and junk material before submitting their final bill.
- XXV. Jamia Hamdard will provide electricity, if needed. The electrical energy meter will be provided by the contractor and necessary deduction will be made as per the actual consumption of electricity (at the rates paid by JH to BSES) during execution of work. The contractor has to make their own arrangements for water.
- XXVI. Tender once submitted will remain with the Jamia Hamdard and will not be returned to the bidders.
- XXVII. **Termination of Contract:** The Jamia Hamdard reserve the right to terminate the contract on account of poor workmanship, failure to mobilize site within 15 days, non-compliance of specifications for the works, abnormal delay in progress of work, violation of any contract provisions by the contractor. In such case, contractor's EMD and security deposit deducted so far will be forfeited.
- XXVIII. The contract can also be terminated on the request of contractor. In such cases the contractor is liable to pay Liquidated damages @ 5% of tendered value besides forfeiture of EMD & security deposit recovered so far.
- XXIX. Any dispute arising out of this contract will be subjected to jurisdiction of New Delhi/Delhi.
- XXX. Tenders not complying with any of the provisions stated in this tender document are liable to be rejected. Jamia Hamdard also reserves the right to accept or reject any or all the tenders without assigning any reason and does not bind to accept the lowest tender or split the work in two or three parts.
- XXXI. That in the event of any difference, or dispute arising between the parties to this Agreement for any reasons whatsoever relating to the contract, whether during the substance of this Agreement or their after, it has specifically been agreed that the party will endeavor to amicably resolve the difference, but in case if dispute or differences still remain unresolved, the same shall be referred to the sole Arbitrator appointed by the Vice Chancellor of Jamia Hamdard and the Arbitrator decision shall be final and binding upon the parties concerned.

5. Special terms & Condition

- 5.1 The OEM should have existing capability and infrastructure to provide technical support at least for 5 years and should have their own factory in India.
- 5.2 As per Mandatory Testing and Certification of Telecommunication Equipment (MTCTE) guidelines, EPABX System and Phones should be TEC ER Certified. The bidder should submit the certificates.
- 5.3 OEM should not be blacklisted by any Central/State Govt. Organization, PSU, Public Listed Company.
- 5.4 Proposed OEM should have dedicated, toll-free telephone numbers for after-sales support.

Signature and Seal of Tenderer

Financial Bid

BOQ for Design supply, Installation, Testing & commissioning of EPABX System at Jamia Hamdard

SN	Description	Qty	Unit	Rate	Amount	Applicable GST %	GST Amount	Compliance (Yes/No)
1	Design, Supply, Installation, Testing & Commissioning of IP PBX with minimum 1000 SIP users (non-blocking) with 728 no's Analog extension port, 32 no's of Digital/IP extension port/24 SIP User Extension, 40 no's of PSTN trunk port. The contractor must supply IP PBX with configured for Open VPN SIP Trunk, Managed SIP Trunk, 40 Analog Trunk Lines Connectivity; It should be capable of Interfacing with BSNL/MTNL network via IP (Open VPN), & analog trunks, (SIP Trunk, PRI using inbuilt/external Media Gateway) & minimum 256 hours of call recording capacity/storage. The offered system must be tested for IPv4 & IPv6 with SIP terminals and SIP Trunks both from day. The systems should be redundant which offer 100% duplication of power supply and CPU card. In the event of failure of the main power supply or CPU card, the standby will take over without disruption of on-going calls.	1	Set					
	IPPBX System must be equipped with following :							
	a) The IP-PBX/PABX/Communication System shall employ IP at its core with IP switching technology and 100% non-blocking.							
	b) It should be possible to reach the capacity of the system to minimum 1232 analog and 2000 IP users without any add-on CPU or chassis/hardware platform.							
	c) The system should have VoIP and VMS.							
	d) The architecture of the system shall be capable of seamless migration to its maximum capacity by simply adding peripherals cards/modules or *Gateways (refer: Annexure 'B') in the system.							
	For Gateways system: The system must support integration of both in-built and external media gateways (to be supplied from the same OEM or certified third-party partner). Gateways must: Be SIP/VoIP-compliant with support for IPv4 and IPv6 Allow connectivity with Analog trunks, PRI							

<p>(E1/T1), and Open/Secure SIP trunks Support protocols such as MGCP, H.248, SIP, RTP/RTCP Be manageable from the central IP PBX Management Console</p>									
<p><u>For Modular Card-Based System (Interface Cards)</u> The communication system must support a universal slot architecture or backplane bus that allows: Analog Subscriber Cards (FXS) Digital Subscriber Cards (BRI/PRI/ISDN) Trunk Cards (FXO, E1, T1) VoIP Cards (for media processing) All cards must be: Hot-swappable and auto-detected Supportable in any slot or as CPU-mounted modules, as long as functionality is achieved Scalable, with the ability to expand up to the maximum required configuration without chassis-level architectural changes</p>									
<p>e) The system should support the DTMF for analog port/instrument.</p>									
<p>VoIP module(s) should support up to 248 VoIP channels, 99 SIP trunks and 2000 SIP/IP users (SIP/IP Phone, Mobile softphones, UC Client). The system should have a high-density VoIP module of 64 channels to save on real-estate.</p>									
<p>g) Telephony system should support basic UC features such as Call Parking, Follow Me, Find Me, Boss Secretary Feature, Call Pick Up, Ring Group, Call Queue, Call Forward, Call Transfer, Call Hold.</p>									
<p>h) Should have HA Functionality inbuilt.</p>									
<p>i) IPPBX's, Gateways & IP phones should also be managed using necessary software telephony automation and monitoring application provided by the same OEM of IP PBX, Gateways and IP Phones.</p>									
<p>j) System power supply should be built-in and SMPS type with input ranges from 100 – 240 VAC, 47-60 Hz OR 48VDC +/- 15%</p>									
<p>k) It shall have distributed processing architecture, SLIC and SMT Design.</p>									
<p>l) It should support up to 248 IP-TDM calls and 500 IP-IP calls (without transcoding in Relay RTP Mode) and 55 IP-IP video calls (without transcoding).</p>									
<p>m) IPv4 & IPv6 Compatibility</p>									
<p>n) The communication system including Operating System, System Software, Media Gateway etc. must be IPv6 complaint and protocols on both IPv4 and IPv6 modes of operation. It should also support protocols such</p>									

	as Static IP, DHCP (server & Client) N2N VPN, Open VPN, ICMP , NAT, DNS, PPPoE, SMTP, ARP, VLAN, NTP, TFTP, SSH, HTTPS							
	o) It should have built-in multi-party conferencing without any software licensing. It should be possible to carry out 15 conferences of 3-participants at a time. The maximum number of participants required in a single conference would be 21.							
	p) The system should have built-in outgoing Call Log buffer of minimum 9000 calls, incoming call log buffer of 9000 and call log buffer of 1500 internal calls.							
	q) The IP PBX should be certified as per TEC and RoHS directives.							
2	IP Phones	Digital Phone						
	SITC of IP Phones with Caller ID and Display. Screen, Wi-Fi and PoE Enabled, 2 SIP Accounts, 10/100 Mbps Ethernet Ports. Specifications, Feature requirement for IP PHONE	SITC of Digital Phone with following specification						
	• 128 x 64–pixel Graphical LCD	240 x 64 – Pixel Graphical LCD with Backlit						
	• 2 SIP Accounts	LED for Incoming/Ongoing Call, Mute, Hold						
	• 2 DSS / BLF Keys	16 memory/speed dial keys						
	• HD Voice	Should be able to use server integrated directory						
	• Opus Codec	backlight display panel						
	• 2 x 10 x 100 Mbps Ethernet Port PoE	LED for Incoming/Ongoing Call, Mute, Hold						
	• Stand with 3 Adjustable angles.	Add on 32 key module support, maximum 4 key modules shall be supported						

	• 2.4Ghz Wi-Fi	Should be possible to connect additional key modules up to 128 keys							
	• AP Hot Spot Feature	Should be able to attach a headset to the operator console							
	• Wall Mountable	Intuitive User Interface with Icons							
	• Phone Book (2000 Records)	Multiple Languages Caller ID with Name, Number							
	• XML/LDAP Remote Phonebook	45 or more keys including 4 Context Sensitive Hard Keys							
	• 3 Feature Keys: Headset, Mute, Hands-free speaker phone	RJ9 Handset Port, RJ9 Headset Port							
	• 4 Context Sensitive Keys	3.5 mm Headset Port							
	• 2 Line keys, Function such as navigation, Call Appearance, feature status	Installation: Wall Mount, Table-top,							
	• Volume Control Keys	TEC, CE, FCC-15. RoHS certified							
	• Power Over Ethernet (IEEE 802.3af)	Mute, Call Hold, Do Not Disturb, Speed Dial, Hotline							
	• 1 x RJ9 Handset port	Redial, Call Back, Auto Answer, Call Forward, Call Waiting, Call Transfer							
	• DC Power Jack with adapter Codec: G.722, G.711(A/μ)	Room Monitoring, Conference, Directory, Call Logs ,Dial-by-Name							
	• G.729, G.726, G.723	Message wait Lamp, Ringer Lamp. Voice Mail ,Call Pickup – Group and Selective							
	• DTMF: In-band, Out-of-band								
	• (RFC 2833) and SIP INFO								
	• Full Duplex Speakerphone with VAD, CNG, AEC, AJB & AGC								
	Product should have valid MAC ID authorized by IEEE on the name of Manufacturer /OEM.								
	IP Phones should be same OEM of IP PBX for Better Functionality and Features use. Bidder								

	must Submit (MAF) OEM Authorization Certificate.							
	IP Phones must be both TEC and WPC certified.							
3	Supply of CDR, Call Recording, Call Audit, Channel Status, Paging & Announcement Dashboard, SMS Monitoring & Management. Telephony Automation/Monitoring Application (should be from OEM that manufactures IP PBX)	1						
	Real-time CDR							
	Call Record Monitoring							
	Call Audit							
	IP PBX Channel Status							
	SIP User Status							
	Call Alerts/Reports on email							
	Voice Broadcast							
	Paging & Announcement Dashboard							
	Role and permission management							
4	ACCESSORIES SITC of Krone M.D.F (1000 Pair, 2 units) with Back Frame, Strips & connecting Cords & Rack 42 U (With accessories) etc. for above EPABX System complete in all respect.	1	Job					
5	SITC of AC to DC Converter with accessories for providing DC Power Supply without Battery Backup complete in all respect.	1	Job					
6	Programming, Commissioning & Implementation of above EPABX System Complete in all respect	1	Job					
	TOTAL Amount without GST							
	TOTAL GST AMOUNT							
	TOTAL AMOUNT INCLUDING GST							

Signature and Seal of Tenderer

**B. AMC for the next 5 years starting after expiry of warranty & maintenance period
(excluding applicable taxes).**

			Rate	Amount without GST
i.	1 st year of after warranty	Rate only		
ii.	2 nd year of after warranty	Rate only		
iii.	3 rd year of after warranty	Rate only		
iv.	4 th year of after warranty	Rate only		
v.	5 th year of after warranty	Rate only		
	Total without GST			

Signature and Seal of Tenderer

Annexure 'B'

FXO/FXS Gateway Requirements (Media/PRI/Analog/SIP):

If the bidder is quoting rates of FXO/FXS Gateway supported IP-PBX System, the technical specification of the gateways are given below. Please note that the price of these items must be included in the BOQ/Financial Bid cited at Annexure 'A'.

A	Technical Specification of 48 port FXO gateway	1		Price must be included in the item at S.no. 1 of BOQ
	FXO Gateway should be Rack Mountable			
	Should have 48 FXO ports for connecting PSTN			
	Should support SIP as per RFC 3261.			
	Should support T.38 /Fax and Pass-Through over IP			
	It should support voice codecs: G.711 (a-law/u-law), G.722, G.729a, G.726.			
	Should support IPv4 and IPv6.			
	Should have 4 Giga ethernet 10/100/1000 port to connect to LAN and WAN			
	Should have 1 SFP port (Giga Port)			
	Should support 802.1p			
	Should have Suppression Comfort Noise Generation(CNG)			
	Should have inbuilt-dial planner for simple call routing capabilities.			
	Should be possible to configure the gateway using telnet/SSH/HTTP			
	Should support call features such as - 3Party conference, MOH, Call hold, Call forward, call transfer, call waiting			
	Should support Caller ID – DTMF/FSK			
	Should support Configuration Backup/Restore			
	Should support SNTP			
	Should support remote logging through a syslog server.			
	FXO Gateway should support OpenVPN			
	Should support DHCP Client and DHCP Server			
	Extended Operating Temperature Range 0 to 60 degree Celcius			
	It should work on 230 VAC Power supply.			
	OEM should be ISO 9001:2015 and ISO 14001:2015 certified.			
	Connectivity through Rj 11 + Rj 21			
	Should have Valid MAC ID registered with IEEE on the name of India Manufacturer/OEM.			
	Manufacturer form India with MSME and DIPP/DITP certificate will have preference according to the government policy.			
B	Technical Specification of Analog VoIP FXS Gateway to connect to the analog end points existing at the customer establishment.	15		Price must be included in the item at S.no. 1 of BOQ
	FXS Gateway should be Rack Mountable			
	Should have 48 FXS ports			
	Should support SIP as per RFC 3261.			
	Should support T.38 /Fax and Pass-Through over IP			
	It should support voice codecs: G.711 (a-law/u-law), G.722, G.729a, G.726.			
	Should support IPv4 and IPv6.			
	Should have 4 Giga Ethernet 10/100/1000 port to connect to LAN and WAN			
	Should mandatorily have 1 SFP port (1 Giga Port)			
	Should support 802.1p			
	Should have Suppression Comfort Noise Generation (CNG)			
	Should have inbuilt-dial planner for simple call routing capabilities.			
	Should be possible to configure the gateway using telnet/SSH/HTTP			
	Should support call features such as – 3 Party conference, MOH, Call hold, Call forward, call transfer, call waiting			
	Should support Caller ID – DTMF/FSK			
	Should support Configuration Backup/Restore			
	Should support SNTP			
	Should support remote logging through a syslog server.			

Should support DHCP Client and DHCP Server			
Extended Operating Temperature Range 0 to 60 degree Celcius			
It should work on 230 VAC Power supply.			
OEM should be ISO 9001:2015 and ISO 14001:2015 certified.			
Connectivity through RJ 11 + RJ 21 via Telco Connectors is mandatory			
Should have Valid MAC ID registered with IEEE on the name of India Manufacturer/OEM.			
Manufacturer form India with MSME and DIPP/DITP certificate will have preference according to the government policy.			

Signature and Seal of Tenderer

Annexure 'C'

Specification of Approved Make of items mentioned in BOQ

S No	Specification	Make
1	EPABX Systems	Avaya, Alcatel, Matrix, Neron, Neos
2	Digital phone	Avaya, Alcatel, Matrix, Neron, Neos
3	MDF Box	Krone
4	Telecommunication Cable 50 Pair	Delton, Finolex, Polycab
5	Analog phone	Panasonic, Matrix
6	Other Material	Prior Approval of Engineer Incharge

Signature and Seal of Tenderer

ANNEXURE 'D'

Fill the following table and this is to be attached with Technical Documents (for technical Evaluation of bids).

S.No.	Name of the OEM	Default Warranty of the EPABX System (in years)	Year of Discontinuation of the Sale	Year of Discontinuation of Technical support with spare parts/update etc	Remarks if any

(Signature of Proprietor/Partner/Chief Executive)

(With Seal)