



University of Calcutta

ITEM RATE E-TENDER

**REGISTRAR DEPARTMENT
DARBHANGA BUILDING**

87/1 College Street
Kolkata - 700073

University of Calcutta

Notice Inviting e-Tender

(Bidding through e-tendering mode only)

E-Tender No. : R/195/25 (2nd call)

Dated: 07.07.2025

The University of Calcutta invites e-tenders for the following work from experienced & bonafide firms/ organizations having credential of similar nature of work in any Government/ Semi-Govt./State Aided University/Autonomous Govt. aided Institution.

Name of Work: Supply and installation of CCTV surveillance camera (13 nos.) connectivity (As per Annexure-A, Annexure-B, Annexure-C, Annexure-D) in the University Guest House, Ballygunge Science campus University of Calcutta, Ballygunge Science Campus, 35, Ballygunge Circular Road, Kolkata - 700019.

- 1) **Earnest Money (EMD):** Rs 7000/- only. **(To be deposited Online).**
- 2) **Exemption of EMD is not allowed in any case.**
- 3) No interest will be paid on the EMD (if any).
- 4) **Completion time of the work:** 30 days from the date of issuing work order.
- 5) **Bid Validity Period:** 180 days.
- 6) **Name of the Concerned Department:** Office of the Registrar Department, University of Calcutta.
- 7) **Eligibility criteria for participation in the tender (up to date as on date):**

- I. The intending bidder must attach the photo-copies of all the relevant documents such as **Valid Trade License in similar nature of work**, P.Tax, GST & PAN and credential for satisfactory completion of **similar nature of job amounting to 75% of the quoted value** in a single tender in the last three (03) financial years in Government, or Government Undertaking or any State Aided University. **Only completion certificate of the work will be considered as Credential of works.** Original documents **(up to date as on date)** may be asked for verification of technical checking on the date of tender opening. Failing to produce original documents, the tender will be rejected.

N.B: – Completion certificate should contain a) Name of work, b) Name and address of Client, c) Amount put to tender, d) Date of commencement of work e) Date of completion of work.

- II. **The bidder must have credentials (only completion certificate is valid) of similar nature of work in State aided University/ State Govt. Departments/ semi-Govt. Departments. Failing which, the bidder will be rejected.**
 - III. **The bidder must have a registered office in Kolkata or its surrounding districts in West Bengal. A copy of the address proof as per GST is to be submitted with the tender documents.**
- 8) **BOQ for the respective work should be uploaded along with valid trade license, P.tax, PAN, GST & completion certificate for last 03 financial years etc. (up to date as on date) including above mentioned documents. **Failing which, the bidder will be rejected.****

- 9) Consortium is not allowed and No Partial Quote will be accepted.
- 10) **Time Extension:** Time is the essence of the contract, generally no time of extension will be allowed. But, in case of Force Majeure, the extension of time may be considered on the basis of actual situation and subject to consideration of the Tender Inviting Authority.
- 11) **Liquidated damage:** Liquidated damage will be charged to the contractor, if they fail to complete the work within the stipulated time as per contract@0.01% per day to a maximum limit of 10 % of the contract value.
- 12) **Defect & Liability Period:** The defect & liability period will be for a period of **six (06) months** from the date of completion of the job. Any defects pointed out during said period has to be mending good damages by the agency at their own cost failing which the retention money will be forfeited.
- 13) **No extra payment to be paid beyond the tendered amount.**
- 14) The Tender Inviting Authority reserves the right to accept or reject any tender without assigning any reasons.
- 15) **The intending bidder must quote all item/s rate on the BOQ, failing which his/her tender, will be cancelled. The Bidder should inspect the site for the mentioned work before bidding of the tender.**

B.O.Q:-

Name of Work: Supply and installation of CCTV surveillance camera (13 nos.) connectivity (As per Annexure-A, Annexure-B, Annexure-C, Annexure-D) in the University Guest House, Ballygunge Science campus University of Calcutta, Ballygunge Science Campus, 35, Ballygunge Circular Road, Kolkata - 700019.

Annexure - A

Sl. No.	Item Description	Make	Quantity	Unit	Unit Price	Total Amount (Including all taxes, loading, unloading, carriage etc. all complete)
1	4MP Bullet Camera	Hikvision or equivalent	4	Nos		
2	4MP Dome Camera	Hikvision or equivalent	9	Nos		
3	16 Channel NVR with 2 nos Sata	Hikvision or equivalent	1	Nos		
4	4TB surveillance HDD	Seagate or equivalent	1	Nos		
5	24P POE switch, 300W	D-Link or equivalent	1	Nos		
6	8P non-POE switch, 90W	D-Link or equivalent	1	Nos		
7	6U Loaded Rack	Valrack or equivalent	2	Nos		
8	1 KVA offline UPS	Numeric or equivalent	1	Nos		

9	600VA offline UPS	Numeric or equivalent	1	Nos		
10	Cat 6 UTP Cable (305 Mtr in a box)	D-Link or equivalent	3	Box		
11	32" LED TV with wall mount kit	LG or equivalent	1	Nos		
12	Mouse	Logitech or equivalent	1	Nos		
13	5M HDMI Cable	ISI Standard	1	Nos		
14	RJ45 Connector	D-Link or equivalent	36	Nos		
15	20MM PVC Pipe with all accessories	ISI Standard	85	Meter		
16	25MM PVC casing with all accessories	ISI Standard	112	Meter		
17	*HDPE Pipe with all accessories	ISI Standard	100	Meter		
18	*Pole Mount Bracket with accessories	ISI Standard	8	Nos		
19	*10 ft long 40 MM Dia G.I. Poll with civil materials	ISI Standard	2	Nos		
20	*Earth cutting	Service	30	Meter		
21	Camera Fixing Box	ISI Std	13	Nos		
22	Camera Fixing with configuration	Service	13	Nos		
23	NVR installation with configuration	Service	1	Nos		
24	Rack fixing & dressing	Service	2	Nos		
25	**Cat-6 cable laying, pipe/casing laying	Service	410	Meter		
Total Amount (Including all taxes, loading, unloading, carriage etc. all complete) :						

**** UTP Cable, 20mm PVC pipe, 25mm PVC casing quantity may vary as per actual consumption at the time of installation.**

Measurement sheet for point to point UTP cable, 20mm PVC pipe and 25mm PVC casing use must be submitted along with invoice.

*** As per installation/implementation requirement.**

- N.B.:**
- 1. Bidder(s) is/are requested to visit the proposed site before taking part in tender.**
 - 2. Camera position be fixed in consultation with the Assistant Secretary (UCSTA), Ballygunge Science Campus, C.U.**
 - 3. Earth cutting/G.I pole/ HDPI pipe be fixed in consultation with Assistant Secretary (UCSTA), Ballygunge Campus.**


 Registrar
 University of Calcutta
 REGISTRAR
 UNIVERSITY OF CALCUTTA

INSTRUCTIONS TO BIDDERS

Earnest Money (EMD):- Intending bidders are requested to deposit Rs. 7000/- online through his net banking enabled bank account, maintained at any bank or: offline – through any bank generating NEFT/RTGS challan from the e-tendering portal. Intending bidder will get the beneficiary details from e-tender portal with the help of Digital Signature Certificate and may transfer the EMD from their respective Bank as per the Beneficiary Name & Account No., Amount, Beneficiary Bank name (ICICI Bank) & IFSC Code and e-Proc Ref No. Intending bidder who wants to transfer EMD through NEFT/RTGS must read the instruction of the Challan generated from E-Procurement site.

(Bidders are also advised to submit EMD of their bid, at least 3 working days before the bid submission closing date as it requires considerable time for processing of Payment of EMD.)

N.B.: During evaluation of the tender, the bidder may be requested to produce original hard copy of any of the documents for verification, failing which his/her tender will be liable to rejection.

Important Dates:

Sl. No.	Items	Publishing Date (s)
1	Date of uploading of N.I.T. & Tender documents (online) from this end	07.07.2025; 06:00 P.M
2	Documents downloading, Starting date (online)	07.07.2025; 06:00 P.M
3	Bid submission, starting date (online)	07.07.2025; 06:00 P.M
4	Bid submission, closing date (online)	15.07.2025, 01:00 P.M
5	Bid opening date for Technical Proposal (online)	17.07.2025, 01:00 P.M
6	Date of uploading of the list of Technically qualified Bidder (online)	To be communicated later
7	Date and Place for opening of Financial Proposal (online)	To be communicated later
8	Date of uploading of the list of bidders along with the approved rate	To be communicated later

Instructions / guidelines for electronic submission of tenders have been annexed for assisting the contractors to participate in e- tendering.

- I. Registration of Bidder:** - Any bidder willing to take part in the process of e –tendering will have to be enrolled & registered with the Government e – Procurement system through logging on to <https://wbtenders.gov.in>. The bidder is to click on the link for e – Tendering site as given on the web portal.
- II. Digital Signature Certificate (DSC):** - Each bidder is required to obtain a class - II or class – III Digital Signature Certificate (DSC) for submission of tenders from the approved service provider.
- III. Collection of Tender documents:** - The bidder can search & download NIT & Tender documents electronically from computer once he/she logs on to the website mentioned in Clause 1 using the Digital Signature Certificate. This is the only mode of collection of Tender documents.
- IV. Cost of Earnest Money (EMD)**

Earnest Money (EMD) Quoted INR
Rs. 7000/- (To be deposited Online)

V. Submission of Tenders:-

- a. General process of submission:** - Tenders are to be submitted through online to the website <https://wbtenders.gov.in> in two folders at a time for each work, one is Technical bid and other is Financial Bid, before the prescribed date and time using the Digital Signature Certificates.
- b. Technical Bid:-** Technical Bid contains scanned copies of the followings further in two covers (folder)
- c. Online bid submission (Bidder/Contractor) process in <https://wbtenders.gov.in> portal,** download the pdf file.
<https://wbtenders.gov.in/>

VI. Statutory Cover Containing

- i. For NIT and Corrigendum if any (Download the NIT and upload the same by through digital signature).

VII. NON-STATUTORY DOCUMENTS containing the following documents (Up to date as on date):

Sl.No.	Category	Sub Category	Sub-Category Description
A.	Certificates	Certificates	1. PAN Card
			2. Professional Tax Registration Certificate
			3. GST Registration Certificate
			4. Valid Trade License in similar nature of job.
B.	Credential	credential for satisfactory completion of similar nature of job amounting to 75% of the quoted value in a single tender in the last three (03) financial years in Government, or Government Undertaking or any State Aided University. Only completion certificate of the work will be considered as Credential of works.	
C.	Financial Information	P/L AND BALANCE SHEET FOR LAST 03 (three) FINANCIAL YEAR.	

Rejection of Bid:

Tender Committee reserves the right to accept or reject any Bid and to cancel the Bidding processes & reject all Bids at any time prior to the award of Contract without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the ground for Tender Committee's action.

Note: Failure of submission of any of the above mentioned documents, the tender will be rejected.

VIII. Financial Bid:- BOQ in INR (in excel sheet)

- i) The financial bid should contain the following documents in one cover (folder) i.e. Bill of Quantities (BOQ). The Bidder has to quote the rate through online in the space marked for quoting rate in the BOQ.
- ii) Only downloaded copies of the above documents are to be uploaded, virus scanned & digitally signed by the contractor.

IX. Opening & Evaluation of Tender:-

Opening of Technical Bid:

- i) Technical bid will be opened by the Central Tender Committee. Intending bidders may remain present if they so desire. Statutory Cover (folder) would be opened first & if found in order and correct Non Statutory Cover (folder) will be opened. If there be any deficiency in the Statutory & Non statutory documents the tender will summarily be rejected.
- ii) Decrypted (transformed in to readable formats) documents of the non statutory cover will be downloaded & handed over to the evaluation committee.
- iii) List of technically qualified bidders would be uploaded.

NB: While evaluation, the Tender committee may invite the bidders & seek clarification/ information or additional documents or original hard copy of any of the documents already submitted. For any anomaly or deviation in this regard, his/her tender will be rejected.

X. Opening and evaluation of Financial Bid:

Financial bid of bidders declared technically eligible by the Committee will be opened electronically from the web portal on the prescribed date and time.

XI. Penalty for suppression / distortion of facts:

Submission of false document by bidder is strictly prohibited and will be liable for rejection of the tender and blacklisted.

Sd/-
Registrar
University of Calcutta

GENERAL TERMS AND CONDITIONS OF THE CONTRACT

1. The intending bidder must attach the photo-copies of all the relevant documents such as **Valid Trade License in similar nature of work**, P.Tax, GST & PAN and credential for satisfactory completion of **similar nature of job amounting to 75% of the quoted value** in a single tender in the last three (03) financial years in Government, or Government Undertaking or any State Aided University. **Only completion certificate of the work will be considered as Credential of works.** Original documents (**up to date as on date**) may be asked for verification of technical checking on the date of tender opening. Failing to produce original documents, the tender will be rejected.

2. The rate should be quoted after inspection of the site and inclusive of all incidental charges i.e. freight, insurances, labour insurances, handling charges, necessary government taxes, duties etc as well as the Water, Electricity charges which are to be paid as per rules.

3. The contractor shall be responsible to ensure compliance with the provision of minimum wages act 1948 as modified up to date and the rules made in respect of any employees, employed by the contractor directly or through the petty or subcontractor for the purpose of carrying this contract. The contractor shall be responsible for any damage, injury or loss caused by the work or workmen to any person, animal or material during the progress of work.

4. **Time Extension:** Time is the essence of the contract, generally no time of extension will be allowed. But, in case of Force Majeure, the extension of time may be considered on the basis of actual situation and subject to consideration of the Tender Inviting Authority.

5. **Refund of Earnest Money Deposit (EMD):** Earnest Money Deposit (EMD) furnished by all unsuccessful bidders should be returned to them without any interest whatsoever, at the earliest after the expiry of the final bid validity period but not later than forty five days after the award of the contract. Earnest Money Deposit (EMD) of the successful tenderer should be returned, without any interest whatsoever, after receipt of performance security Deposit from him as stipulated in the contract.

6. **Forfeiture of Earnest Money Deposit (EMD):** Earnest Money Deposit (EMD) of a tenderer shall be forfeited, if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of his tender. Further, if the successful tenderer fails to furnish the required performance security within the specified period, his Earnest Money Deposit (EMD) shall be forfeited.

7. **Security Deposit :** The University authority will retain a sum amounting to 10% of the bill of the contract for a period of six months from the date of completion of work as **Security Deposit**. This will be released after a period of six months from the date of completion of the work on application.

8. **Refund of Performance Security:** Performance Security will be refunded to the contractor without any interest, whatsoever, after he/she duly performs and completes the contract in all respects but not later than sixty days of completion of all such obligations under the contract.

9. **Forfeiture of Performance Security deposit :** Performance security will be forfeited and credited to University of Calcutta in the event of a breach of contract by the tenderers, in terms of the relevant contract.

10. **Verification of the Bank Guarantees:** Bank Guarantees submitted by the tenderers as Earnest Money Deposit (EMD)/Performance Security need to be immediately verified from the issuing bank before its acceptance, through written communication.

11. Work is to be carried out as per specification laid in the B.O.Q as per instruction of the Database Administrator or his representative.

12. The materials brought to site for execution of the work should by no means be taken out of site without the permission of the Database Administrator C.U.

13. The University will not be bound to accept the lowest bidder.

14. The University will not supply any materials to the contractor.

15. The contractor will work under the strict supervision of the Database Administrator.

16. The contractor will have to take necessary instruction from the Database Administrator regarding the execution of work.

17. After issuing the work order to the successful tenderer, if he/she fails to commence the work or unable to complete the work, then the EMD and Performance security amount of the said tenderer will be forfeited and no claim will be entertained.

18. Termination Clause:

- i. Failing to supply and commissioning of the items as per work order within the stipulated time, the contract will be rejected except application of Force majeure Clause and EMD will be forfeited.
- ii. If any deviation of quality and specification from the stipulated specification as per B.O.Q observed, the purchase order will be cancelled and EMD will be forfeited.
- iii. In case of deterioration of service the Work order will be cancelled as per rule and EMD may be forfeited.

19. Force majeure Clause: If the work(s) be delayed for the following reasons:-

Due to war, internal emergency and other conditions such as abnormally bad weather, flood, cyclone natural calamity or serious loss or damage by fire or civil commotion, the contractor shall immediately give notice thereof in writing to the Central Tender Committee but shall nevertheless use constantly his/her best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Central Tender Committee to proceed with the works.

20. Mode of payment: -

After completion of the work as per work order or any subsequent work order against the original work order the triplicates bills (R/A or Final bill) duly checked and verified by the concern department with the completion certificate by the concern department and should be submitted to the office of the undersigned within 10 days after completion of the work. The bill (R/A or Final) to be processed by the office of the Database Administrator accordingly.

Sd/-
Registrar
University of Calcutta

Annexure-B

Technical Specification 4 Megapixel Fixed Lens Dome Camera				
Sl. No	Technical Specification :		Compliance (Yes/No)	Deviations (if any)
1	Image Sensor	1/3" Progressive Scan CMOS		
2	Min. illumination	Color: 0.01Lux (AGC On), 0 Lux with IR		
3	Image Resolution	4MP (2560 × 1440)		
4	Shutter Time	1/3 s to 1/100,000 s		
5	Day & Night	IR Cut Filter		
6	Digital Noise Reduction	3D DNR		
7	WDR	120 dB		
8	BLC	Supported		
9	Lens	Fixed Lens : 2.8mm/ 4mm (as per site requirement)		
10	IR range	min. 40m IR		
11	Streaming Type	Should Support Three stream		
12	Privacy Masking	4 programmable polygon privacy masks		
13	Video Compression	H.265, H.264		
14	Image Enhancement	BLC, HLC, 3D DNR, Auto-White Balance, Privacy Mask		
15	Ethernet Port	1 x RJ45 10M/100M Ethernet port		
16	Network Protocol	TCP/IP, ICMP, DHCP, DNS, HTTP, RTP, RTSP, NTP, IGMP, IPv6, UDP, QoS, FTP, SMTP, HTTPS, DDNS, UPnP, 802.1X		
17	Preferable analytics	Motion detection (support alarm triggering by specified target types (human and vehicle)), video tampering alarm, Line crossing detection, intrusion detection		
18	ONVIF	Profile S & T should be supported		
19	User/Host	Up to 32 users 3 user levels: administrator, operator, and user		
20	Power Supply	DC12V, PoE		
21	Operating Conditions	-30° C ~ + 60° C		
22	Ingress Protection	IP67, IK10		
23	Certification	CE, FCC, BIS		
Technical Specification 4 Megapixel Fixed Lens Bullet Camera				
1	Image Sensor	1/3" Progressive Scan CMOS		
2	Min. illumination	Color: 0.01Lux (AGC On), 0 Lux with IR		
3	Image	4MP (2560 × 1440)		

	Resolution			
4	Shutter Time	1/3 s to 1/100,000 s		
5	Day & Night	IR Cut Filter		
6	Digital Noise Reduction	3D DNR		
7	WDR	120 dB		
8	BLC	Supported		
9	Lens	Fixed Lens : 2.8mm/ 4mm (as per site requirement)		
10	IR range	min. 40m IR		
11	Streaming Type	Should Support Three stream		
12	Privacy Masking	4 programmable polygon privacy masks		
13	Video Compression	H.265, H.264		
14	Image Enhancement	BLC, HLC, 3D DNR, Auto-White Balance, Privacy Mask		
15	Ethernet Port	1 x RJ45 10M/100M Ethernet port		
16	Network Protocol	TCP/IP, ICMP, DHCP, DNS, HTTP, RTP, RTSP, NTP, IGMP, IPv6, UDP, QoS, FTP, SMTP, HTTPS, DDNS, UPnP, 802.1X		
17	Preferable analytics	Motion detection (support alarm triggering by specified target types (human and vehicle)), video tampering alarm, Line crossing detection, intrusion detection		
18	ONVIF	Profile S & T should be supported		
19	User/Host	Up to 32 users 3 user levels: administrator, operator, and user		
20	Power Supply	DC12V, PoE		
21	Operating Conditions	-30° C ~ + 60° C		
22	Ingress Protection	IP67		
23	Certification	CE, FCC, BIS, RoHS		

Annexure-C

Technical Specification : 16 - Channel Network Video Recorder (NVR) with 2 -HDD Slot				
Sl. No	Technical Specification		Compliance (Yes/ No)	Remarks
1	Operating system	Embedded Linux		
2	IP video input	16-channel IP Video input		
3	Two-way audio	should support		
4	Incoming bandwidth	Min. 150 Mbps		
5	Outgoing bandwidth	Min. 150 Mbps		
6	Display interface	min. 1 x HDMI , min. 1 x VGA		
7	HDMI-1 / VGA-1 : output resolution	4K (3840 × 2160)/30Hz, 2K (2560 × 1440)/60Hz, 1920 × 1080/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz		
8		1920 × 1080/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz		
9	Audio output	1-ch, RCA (2.0 Vp-p , 1 KΩ)		
10	Split-Screen display	it should support multi split-screen live view on connected monitor.		
11	Recording resolution	12MP / 8 MP/ 6MP / 5MP / 4MP / 3MP/ 1080p / UXGA / 720p / VGA / 4CIF / DCIF / 2CIF / CIF / QCIF		
12	Decoding format	H.265/H.265+/H.264+/H.264/MPEG4		
13	Facial Detection and Analytics	Face picture comparison, human face capture, face picture search		
14	Facial Recognition	Yes		
15	Motion Detection 2.0	All channels, 4 MP (when enhanced SVC mode is enabled, up to 8 MP) video analysis for human and vehicle recognition to reduce false alarm		
16	Perimeter Protection	video analysis for human and vehicle recognition to reduce false alarm		
17	Synchronous playback	16-channel		
18	Smart Search option	Yes		
19	Security & Permission : User Level (Login)	The NVR shall support multi-user level management with password protection. Three-level user management; admin user is allowed to create many operating accounts and define their operating permission, which includes the limit to access any channel.		
20		The NVR shall not have a default admin password for enhanced cyber security. NVR shall require a secure password to be created and confirmed upon first connecting to the network.		
21	Network Protocols	TCP/IP, DHCP, IPv4, IPv6, DNS, DDNS, NTP, RTSP, SMTP, SNMP, NFS, iSCSI, UPnP™, HTTP, HTTPS		
22	SATA interface for HDD	Should support 2 x SATA interfaces		

23	HDD Capacity	10 TB capacity for each HDD or better		
24	Network interface	1 RJ-45 10/100/1000 Mbps self-adaptive Ethernet interfaces		
25	USB interface	atleast 2 × USB 2.0;		
26	Alarm in/out	atleast 4 input / 1 output		
27	Power supply	12V DC		
28	Consumption (without hard disk)	≤15 W (Without HDD)		
29	Working temperature	-10 to +55°C (14 to 131°F)		
30	Working humidity	10 to 90 %		
31	Certification	CE, FCC, UL/ BIS, ONVIF		
Camera & NVR should be from same OEM for smooth integration.				

Annexure-D

Sl. No.	Minimum Required Specification	Compliance (Yes/No)
PoE Switch		
1	Layer-2 Managed Switch having minimum 24 x 10/100/1000BaseT PoE ports & 4x 10G SFP+ slots	
2	Switching Capacity: Minimum 128Gbps (Must have non-blocking architecture)	
3	Packet Forwarding Rate (For 64-bytes packet size): Minimum 95Mpps	
4	The switch should support both IEEE 802.3af & IEEE 802.3at standards. It should have PoE power budget of atleast 370Watt.	
5	OEM should have Secure Product Development Lifecycle Process Requirement Certification in accordance with IEC 62443-4-1: 2018 standard. Certificate must be submitted along with the bid otherwise it may cause for rejection of bid.	
6	The Switch should have following L2 features:	
7	1. MAC Address Table size: Atleast 16K, support atleast 256 static MAC	
8	2. Flow Control: IEEE 802.3x in full duplex, back pressure in half duplex & HoL blocking prevention	
9	3. Jumbo Frame Support (Atleast 12000 bytes)	
10	4. IGMP v1 v2 with atleast 256 IGMP snooping groups, Per VLAN IGMP Snooping, port based IGMP snooping fast leave.	
11	5. LLDP, LLDP-MED, IPv6 Neighbor Discovery.	
12	6. IEEE802.1D STP, 802.1w RSTP, 802.1s MSTP, Root guard or equivalent feature.	
13	7. The switch should be able to avoid the loop occuring in a single port connected to an unmanaged switch/hub by shutting down the corresponding port or corresponding VLAN	
14	8. IEEE 802.3ad Link Aggregation with atleast 8 ports per groups & 8 groups per switch.	
15	9. Port mirroring for Tx/Rx/Both. One-to-One mode, Many-to-one mode	
16	10. IEEE 802.1Q VLAN, atleast 4094 Static VLANs, Voice-VLAN	
17	11. The switch should have 802.1p support with 8 queues per port. Support strict & WRR queue handling technique.	
18	12. The switch should have Port-based ingress & egress bandwidth control with minimum granularity of atleast 16kbps	

19	13. The switch should have standard & extended Access control list	
20	14. The switch should have the following security features: Broadcast, Multicast & Unicast storm control, port security feature with atleast 64 MAC per port, traffic segmentation, ARP spoofing prevention, IEEE 802.1x, DHCP server screening, RADIUS server.	
21	15. The switch should have feature to protect the CPU from protocol control packet attack.	
22	16. The switch should have cable diagnostic feature to check the status of connected RJ45 cables.	
23	17. The Switch should have following Management features from day-1: Web-based GUI, Web based GUI for IPv6, Physical console port for Out of band CLI management, Telnet Server, Telnet Server IPv6, TFTP Client, TFTP client IPv6, SNMPv1v2cv3, SNMP IPv6, SNMP trap, BootP/DHCP Client,SNTP, trusted host, trusted host IPv6, RMONv1, Syslog, Syslog IPv6.	
24	18. The switch should have Energy saving green technology based on cable length & link status. IEEE 802.3az	
25	OEM offered must be in steady and profitable business in India at-least for each of the last 10 Financial years (FY 2013-14 to 2022-23) . Bidder shall have to submit audited Balance Sheet in support of their claim.	
26	OEM should have valid ISO 9001, ISO 14001 & ISO 45001:2018 certified for design and development of LAN and WAN products, all the relevant certificates must be submitted along with the bid.	
27	OEM should have Average Annual Financial Turnover not less than 500 Crores for their business in India for the last five financial years for data networking products.	
28	The OEM must not be blacklisted or banned by any State/Central Government, Semi Government or PSU and any other GOVT. organization in INDIA and Globally.	
29	OEM should not have filed for bankruptcy and should have profitable balance sheet for at least each of the last 10 (ten) consecutive financial years.	
30	OEM should have a registered office in India and should be directly present for last 15 years in India and globally, from date of RFP publication.	
31	The bidder/prime bidder shall quote only one specific make and model from only one specific OEM, for each of the quoted product. Providing more than one option shall not be allowed and subject to rejection of bid.	
32	OEM should have valid ISO/IEC 27001: 2013 Information Security Management System Certification. Certificate must be submitted along with the bid otherwise it may cause for rejection of bid.	
33	OEM should have Inventory of Green House Gas Emission verification certificate in accordance with ISO 14064-1: 2006. Certificate must be submitted along with the bid otherwise it may cause for rejection of bid.	
6U Loaded Rack		
1	6U, 19" 550 mm Width, 450 mm Depth, Wall Mount Networking Enclosure	
2	It should confirm to DIN 41494 or equivalent standard	
3	It should be welded construction with steel frame	
4	Lockable toughened glass front door	
5	19" mounting angle made of formed steel	
6	Powdered coated standard finish	
7	Top & Bottom welded cover with vented & cable entry exit cut outs	
8	19" mounting rails	
9	1U Cable Manager	
10	Roof Mounted Fan Unit	
11	230V AC, 6 way, 5/15 Amp Power Distribution Unit	
12	Mounting Hardware	
13	OEM should have valid ISO 9001 & ISO 14001 & ISO 45001 for design & development of networking products. Documents need to be submitted along with the tender.	
14	OEM should be in the business in India for last 15 years as on the date of release of the RFP.	

	Document need to be submitted.	
15	OEM should have Average Annual Financial Turnover not less than 250 Crores in India for each of the last five financial years. Document need to be submitted.	
16	OEM should have their own sales office & own service centre in West Bengal. OEM declaration / document need to be submitted.	
17	OEM should have one single order of rack for min. 1000 nos. from any Govt Dept / PSU / Govt. undertaking within last seven financial year from the date of RFP. Document must to be submitted.	
18	OEM must not be blacklisted or banned by any State/Central Government, Semi-Government or PSU and any other GOVT. organization in INDIA	
19	OEM should have Inventory of Green House Gas Emission verification certificate in accordance with ISO 14064-1: 2006. Certificate must be submitted along with the bid otherwise it may cause for rejection of bid.	
Cat6 UTP Cable - Box of 305Mtr		
1	Category 6 Unshielded Twisted Pair 4 pair cable shall be compliant with ANSI/TIA-568-C.2 channel performance	
2	The 4 pair Unshielded Twisted Pair cable shall be UL Listed, ETL Verified	
3	All Category 6 cables shall meet or exceed the following characteristics:	
4	Mechanical Characteristics	
5	Construction: 4 twisted pairs separated by internal X shaped, 4 channel, full separator. Half shall not be accepted.	
6	Conductor dia: 23 AWG	
7	Insulation: High density polyethylene	
8	Pairing: Two insulated conductor twisted together	
9	No. of Pair: 4 pairs	
10	Color of sheath: FR-PVC GREY- Single sheath	
11	Rip Cord should be available	
12	Sequential meter marking should be available	
13	Temperature Rating: (- 20 to +60 C)	
14	Packing : 305 Mtrs.	
15	OEM should have Inventory of Green House Gas Emission verification certificate in accordance with ISO 14064-1: 2006	
16	Low Frequency Electrical Parameter	
17	Conductor Resistance: ≤ 9.38 OHMS/100 MTR	
18	Resistance Unbalance: 5% Max	
19	Mutual Capacitance: < 5.6 nF/100 mtrs	
20	Capacitance Unbalance: 330pF/100M	
21	Delay Skew: < 45 ns	
22	Generally confirming to EIA/TIA 568-C.2 and ISO 11801 Class E	
23	OEM offered must be in steady and profitable business in India at-least for each of the last 10 Financial years (FY 2013-14 to 2022-23). Bidder shall have to submit audited Balance Sheet in support of their claim.	
24	OEM should have valid ISO 9001, ISO 14001 & ISO 45001:2018 certified for design and development of LAN and WAN products, all the relevant certificates must be submitted along with the bid.	
25	OEM should have Average Annual Financial Turnover not less than 500 Crores for their business in India for the last five financial years for data networking products.	
26	OEM must not be blacklisted or banned by any State/Central Government, Semi Government or PSU and any other GOVT. organization in INDIA and Globally.	

27	OEM should not have filed for bankruptcy and should have profitable balance sheet for at least each of the last 10 (ten) consecutive financial years.	
28	OEM should have a registered office in India and should be directly present for last 15 years in India and globally, from date of RFP publication.	
29	OEM should have their Own service centre running & operational within the state of installation (West Bengal) with minimum manpower of 5 personals for at least last five years. Documentary evidence must be submitted along with the bid.	
30	The bidder/prime bidder shall quote only one specific make and model from only one specific OEM, for each of the quoted product. Providing more than one option shall not be allowed and subject to rejection of bid.	
31	OEM should have valid ISO/IEC 27001: 2013 Information Security Management System Certification. Certificate must be submitted along with the bid otherwise it may cause for rejection of bid.	
32	OEM should have Inventory of Green House Gas Emission verification certificate in accordance with ISO 14064-1: 2006. Certificate must be submitted along with the bid otherwise it may cause for rejection of bid.	
33	OEM should have Secure Product Development Lifecycle Process Requirement Certification in accordance with IEC 62443-4-1: 2018 standard. Certificate must be submitted along with the bid otherwise it may cause for rejection of bid.	


 Registrar
 University of Calcutta
 REGISTRAR
 UNIVERSITY OF CALCUTTA